

**Does Traditional Knowledge Have Gender? Unmasking the Experience of
Female Traditional Knowledge-Holders in the Production of Iranian Saffron
and Handwoven Carpets**

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List of Abbreviations

ABS	Access and Benefit Sharing
CAQDAS	Computer Assisted Qualitative Data Analysis
CBD	Convention on Biological Diversity
CEDAW	Convention on the Elimination of all Forms of Discrimination against Women
COP	Conference of Parties
DDO	Disclosure of Origin
ECOSOC	Economic and Social Council
EIGE	The European Institute for Gender Equality
FAO	Food and Agriculture Organization
FPIC	Free and Prior Informed Consent
GDP	Gross Domestic Product
GIs	Geographical Indications
GIA	Gender Impact Assessment
GIAHS	Globally Important Agricultural Heritage System
GIPIID	Global Intellectual Property Issues Division
GPA	Global Plan of Action
GRs	Genetic Resources
ICCPR	International Covenant on Civil and Political Rights
ICESCR	International Covenant on Economic, Social and Cultural Rights
IFCD	International Fund for Cultural Diversity
IGC	Intergovernmental Committee on IP, GRs, TK and Folklore
ILCs	Indigenous and Local Communities
ILO	International Labour Organization
IP	Intellectual Property
IPRs	Intellectual Property Rights
ITPGRFA	International Treaty on Plant Genetic Resources for Food and Agriculture
KPSI	Knots Per Square Inch
LINKS	Local and Indigenous Knowledge Systems in a Global Society
MAT	Mutually Agrees Terms
MSMEs	Micro, Small, and Medium-size Enterprises
PCT	Patent Cooperation Treaty
SDL	Sexual Division of Labour
SMART	Simple Method to Assess the Relevance
TCEs	Traditional Cultural Expressions
TK	Traditional Knowledge
TKDL	Traditional Knowledge Digital Library
TRIPs	Agreement on Trade-Related Aspects of Intellectual Property Rights
TVTO	Technical and Vocational Training Organization
TWAIL	Third World Approaches to International Law
UDHR	Universal Declaration of Human Rights
UN-SWAP	UN System-Wide Action Plan
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme

UNDRIP	United Nations Declaration on the Rights of Indigenous People
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHO	World Health Organization
WIPO	World Intellectual Property Organization
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization

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Abstract

One of the key international policy challenges in the intellectual property (IP) regime is the issue of traditional knowledge (TK) protection. TK has a bearing on debates around biodiversity, food, agriculture, health, expressions of folklore, trade and development, and human rights. In the policy and academic debates around TK protection, a critical gender perspective is often underdeveloped. Guided by feminist legal methodology, an approach founded on women's experience of exclusion, and using two feminist methods of gender impact assessment and qualitative interviews, the thesis makes a case for mainstreaming gender in TK law and policy.

In most Indigenous and local communities around the world, women play a significant role in the generation, transmission, and use of TK. There are different contributions by Indigenous and local women to the TK system, and there is also differential impact of TK misappropriation on these women. Critical evidence to support the importance of gender as an influential factor in TK protection is based on in-depth examination of two case studies, namely Persian handwoven carpets and saffron. My fieldworks in Kashan, "the city of handwoven carpets", and Khorasan, "the province of saffron" enabled me to examine the role of Iranian local women and their TK in handwoven carpet and saffron production. Iran is the undisputed centre of saffron production, where the tradition dates back over 3,000 years. The superiority of Iranian saffron comes not only from the climatic conditions but also the rich heritage of TK in growing and processing the crop with Iranian local women as the main performers in different stages of saffron production. Persian hand-woven carpet as an icon of Iranian culture, dating back about 2000 years, is another illuminating example of products in which women and their TK play a major role.

From carpet weaving workshops to saffron farms, I found one common theme: the invisibility of women's TK that is taken for granted while it is the very basis of production. Lack of proper attention to women's TK in these sectors and its potential for women's empowerment, has led to many local women and most of the younger generation losing their interest in carpet weaving and saffron production, which in the long run can put the TK in danger of becoming forgotten. Moreover, with the rural outmigration due to lack of employment opportunities, the knowledge of the older generations in handwoven carpet and saffron production is often no longer passed on to the younger generation. Therefore, if women's TK is to remain alive and deliver its potential for empowering Indigenous and local women, which indeed should be among the main objectives of any TK instrument, these women should be incentivized through gender-responsive TK law and policy to continue practising their TK.

Building on the fieldwork results, this research reconceptualizes the TK issue as a gender issue to which TK law and policy fora should respond with gender-sensitive instruments, implementation plans, and adequate resources. The objective of the research is to call for and contribute to a policy change in the realm of TK by translating fieldwork insights (as a knowledge-based gender advocacy) into policy recommendations for a gender-responsive alternative approach to TK laws and policy. More specifically, the thesis provides recommendations for gender mainstreaming in both the process of crafting, and the contents of legal modalities for TK protection.

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Dedication

To Indigenous and local women around the world whose traditional knowledge and traditional knowledge-based contributions are products of their world view, which like their geography is diverse and colourful, and like their life is complex, and like their deprivation is deep.

CHAPTER 1: RESEARCH BACKGROUND



Figure 1

Two local Iranian women sitting on a handwoven Persian carpet picking saffron stigmas.
Photo credit: unknown

1.1 Introduction to the Research: Traditional Knowledge and Women

This dissertation deals with the issue of ‘traditional knowledge and women’ and engages with questions of whether and how protection of traditional knowledge (TK) should be regulated in a gender-responsive manner. This chapter begins with a description of saffron and carpet production as two examples that are intended to facilitate discussions of ‘traditional knowledge and women’ throughout this thesis.*

1.1.1 Case Studies and the Reason for Their Selection

* Please note that all titles whose original source language is in Farsi are translated into English in the citations. The bibliography includes both the English translations and the original titles in Farsi.

As part of my Ph.D. journey, I travelled to Kashan, the city of handwoven carpets, and Khorasan, which, due its reputation for producing high-quality saffron, is called “the province of saffron in Iran.” From saffron farms to carpet weaving workshops, where I witnessed the daily life of saffron producers and carpet weavers, I found one common theme: the invisibility of women’s traditional knowledge that is taken for granted while it is the very basis of production. Traditional knowledge refers to content or substance of knowledge resulting from intellectual activity in a traditional context, and includes the know-how, skills, innovations, practices and learning that form part of traditional knowledge systems.¹ ‘Traditional knowledge’ and ‘Indigenous knowledge’ are often used interchangeably. I should clarify at the outset that my research focuses on ‘traditional knowledge’ which can include but is not necessarily synonymous with the term ‘Indigenous knowledge’.² The term ‘traditional knowledge’ is preferred because of the inaccurate association of the term ‘Indigenous’ with colonization.³ Such association may in turn limit the discussions and any future protection mechanisms only to communities that have a history of colonization. This is significant because Iran, for example, was never formally colonized⁴ by European powers and yet has numerous local communities with a rich heritage of TK. It is noteworthy that the notion of Indigeneity does not necessarily entail a colonial history, especially

¹ See WIPO, *Glossary of Key Terms Related to Intellectual Property and Genetic Resources, Traditional Knowledge and Traditional Cultural Expressions*, WIPO/GRTKF/IC/26/INF/8, 26th Sess, at 44 WIPO <https://www.wipo.int/meetings/en/doc_details.jsp?doc_id=426069>.

² The relation between Indigenous knowledge and traditional knowledge can be drawn as two Venn diagrams where traditional knowledge is inclusive of Indigenous knowledge. For a comprehensive discussion on traditional versus Indigenous knowledge, see Chidi Oguamanam, *International Law and Indigenous Knowledge: Intellectual Property, Plant Biodiversity, and Traditional Medicine* (Canada: University of Toronto Press, 2006) at 20–25.

³ For the relationship between indigeneity and colonization see Oguamanam, *International Law and Indigenous Knowledge*, *supra* note 2.

⁴ *The Cambridge History of Iran*, vol 7 (Cambridge University Press, 1991), at 639. According to Moallem, while Iran was not formally colonized, European countries, especially Britain, and eventually the United States, controlled its resources such as oil. Minoo Moallem, *Persian Carpets : the Nation as a Transnational Commodity*, (New York: Routledge, 2018) at 82.

if we define Indigenous People as the First People of a specific regional area. However, the phrase “Indigenous People” has been used in the political discourse in a way that immediately brings to mind the notion of colonization. For example, Jose Martinez Cobo, Special Rapporteur for the UN describes Indigenous People, communities, and nations as groups that have a “historical continuity with pre-colonial societies.”⁵

Although the questions of TK and how to protect it have grown into their own subset of intellectual property (IP) scholarship, it is still an area where gender has remained remarkably invisible. Whereas “sex” refers to the biological differences between males and females, gender can refer to either social roles based on the sex of the person (gender role) or personal identification of one’s own gender based on an internal awareness (gender identity). The gender division of labour, which can be defined as allocation of responsibility for particular tasks on the basis of gender, leads to the different forms of knowledge that women and men hold.⁶ Although the specific roles vary across regions and cultures and even during different time periods, in many Indigenous and local communities (ILCs), there are well-defined gender roles in sectors covered by TK.⁷ Gender division of labour leads to the notion of ‘gendered knowledge’, which means the knowledge that is held either by men or by women, but not by both. As Howard asserts, “gendered

⁵ For more details see, Paulette F. Steeves, “Indigeneity” in *Oxford Bibliography* (29 November 2018), <<https://www.oxfordbibliographies.com/view/document/obo-9780199766567/obo-9780199766567-0199.xml>>.

⁶ See e.g. Patricia L. Howard, *Women and Plants: Gender Relations in Biodiversity Conservation and Management* (New York: Zed Books, 2003).

⁷ The terms “gender division of labour” and “sexual division of labour” are used interchangeably in the literature and also in the international organizations’s glossaries. See UN Women Glossary, online: <https://trainingcentre.unwomen.org/mod/glossary/view.php?id=36&mode=letter&hook=G&sortkey=&sortorder=>>. There are bodies of anthropological/sociological literature examining gender roles and sexual division of labour known as SDL) in various sectors. For division of labour in agriculture, see e.g. Michael L. Burton & Douglas R. White, “Sexual Division of Labor in Agriculture” (1984) 86:3 *American Anthropologist* 568; Jo Grace, *Gender Roles in Agriculture: Case Studies of Five Villages in Northern Afghanistan* (The Afghanistan Research and Evaluation Unit: 2004). Gender relations and women’s role with specific focus on environmental issues has also been addressed. See e.g. Susan Buckingham, *Gender and Environment* (Hoboken: Taylor & Francis, 2000).

knowledge exists because men and women do different things: gendered knowledge is therefore a direct reflection of the gender division of labour.”⁸ This view emphasizes experience and practice as a source of knowledge. Although a major role player, the gender division of labour (also known as SDL or sexual division of labour) is not sufficient to explain gendered knowledge because, as mentioned, gender roles and gender divisions of labour change over time due to economic and cultural factors.⁹ Moreover, not all knowledge is experiential and practical so that it can be justified under the gender division of labour. In response to these two challenges, Howard argues that religious and other values play a major role in creating gendered knowledge. She states that concepts of masculinity and femininity and social norms about appropriate behavior for men and women prescribe the type of activities, responsibilities and interactions that are appropriate for each gender. She then argues:

if men and women have access to different physical spaces and environments, it stands to reason that their environmental knowledge will also differ. If men and women relate differently to different groups of people (e.g., ‘mothers-in-law’, ‘male outsiders’), that is, they have different social networks, then their ‘knowledge networks’ also differ, which affects the type and quality of knowledge and knowledge transmission.¹⁰

She rightly concludes that “the gendered nature of knowledge, then, is not simply a function of the gender division of labour, but rather is embedded in cosmologies, beliefs, and norms about appropriate behaviours.”¹¹

1.1.1.1 Persian Carpets

⁸ Howard, *Women and Plants*, *supra* note 6 at 16.

⁹ For more detail about gender roles and the extent of their universality, see Alice Eagly’s works. She is one of the most prolific scholars using gender role theory. Among Eagly’s extensive publications, her 1987 book [Alice Eagly, *Sex-Differences in Social Behaviors: A Social-Role Interpretation* (Hillsdale, N.J.: L. Erlbaum Associates, 1987)] is probably cited most often as the fullest treatment of her theoretical perspective. See also, John Briggs, “Changing Women’s Roles, Changing Environmental Knowledge: Evidence from Upper Egypt” (2003) 169:4 *Geographical Journal* 313.

¹⁰ Howard, *Women and Plants*, *supra* note 6 at 16.

¹¹ Howard, *Women and Plants*, *supra* note 6 at 17.

Persian handwoven carpets are an illuminating example of TK-based products in which women and their gendered knowledge play a major role. Persian carpet weaving is an historical part of Iranian culture, dating back approximately 2,000 years. Persian carpets are well known for their rich colour and artistic designs. Carpet weaving is a labour-intensive process and to make large and top-quality carpets, weavers, who are dominantly women, spend months or even years working on a single carpet. Women comprise 82% of the carpet-weaver population in nine provinces of the country.¹² They make handwoven carpets using techniques of weaving that are several centuries old. There are many features of Iranian carpets that distinguish them from other types of carpets. The most significant features are the design and the plan of Persian carpets. These are rooted in traditional Iranian art and architecture. In addition, certain materials and weaving processes play a significant role. Specific types of weaving are applied and the carpets are woven by specific delicate methods and tools, which distinguish them completely from other types of carpets. For example, the type of knots used in Iranian carpets are different from those in Turkish carpets.¹³

1.1.1.2 Saffron

Saffron production also provides an example of a sector where women and their TK are two defining elements of production. Saffron, known as red gold, is the most expensive food product in the world and one of the oldest crops and medicinal plants. It is highly valued for its unique aroma, taste, colour and medicinal properties. The undisputed centre of saffron production

¹² According to the Assistant Director of Iranian National Standard Organization in Women's Affairs. "Standardization of Female Carpet Weavers' Production in Nine Province, 82 percent of Carpet Weavers are Female" *The Islamic Republic News Agency* (27 July 2015), <www.irna.ir/news/81696984/>.

¹³ The Turkish knot is a symmetrical knot sometimes referred to as the Ghiordes or Gordes knot. The Persian knot is an asymmetrical knot that also goes by the name Senneh knot. See more details in Chapter 2.

is Iran, where the tradition dates back over 3,000 years.¹⁴ The country contributes over 90% of the 250 tons of saffron produced worldwide each year.¹⁵ In Iran, Khorasan Province grows more than 90 % of the country's saffron.¹⁶ The unique ecological conditions of the country enhance the quality of this strong-flavored, aromatic crop with a variety of uses in local cuisine, cosmetics and traditional medicine.¹⁷



Figure 2

Source: <http://www.cnn.com/2015/06/03/middleeast/iran-saffron-red-gold/>
 FAO, World Bank: World's biggest Saffron Producers, 2013/2014, Tons

Highly suitable climatic conditions are not the only reason for the superiority of Iranian saffron. This also comes from a rich heritage of traditional knowledge and techniques in growing and processing the crop. For example, the timing of harvesting saffron plays an important role in

¹⁴ Seyedeh Zeinab Mousavi & Seyedeh Zahra Bathaie, "Historical Uses of Saffron: Identifying Potential New Avenues for Modern Research" (2011) 1:2 Journal of Phytochemistry at 57.

¹⁵ The FAO databases unfortunately do not provide information for the global annual production of saffron and each country's contribution to it. Emails to FAO and several follow-ups requesting saffron data have not been answered. Therefore, the figures mentioned here are based on various sources. See e.g. Kieron Monks, "Iran's Homegrown Treasure: The Spice that Costs More than Gold", CNN (3 September 2015) <<http://www.cnn.com/2015/06/03/middleeast/iran-saffron-red-gold/>>.

¹⁶ According to the Iran's Ministry of Agriculture's official website, 94.5 percent of the national production belongs to the great Khorasan area. Iran, Ministry of Agriculture Jihad, *Agriculture Statistics* 2017, vol. 2 (Iran: Ministry of Agriculture Jihad, 2018), [original in Farsi] <<https://www.maj.ir/Dorsapax/userfiles/Sub65/amarnamehj2-96-site.pdf>>. (last visited April 2019)

¹⁷ See e.g. Hamid Mollazadeh, Seyed Ahmad Emami & Hossein Hosseinzadeh "Razi's Al-Hawi and saffron (*Crocus sativus*): A Review" (2015) 18:12 Iran J Basic Med Sci. 1153. It examines the long history of saffron's medicinal applications and traditional healing for the treatment of a variety of ailments.

the quality of stigmas and Iranian saffron farmers know the specific time of the day during which the stigmas should be picked so that they retain the highest possible flavour and aroma. Rural women in the province of Khorasan have an active presence in different stages of saffron production from growing, harvesting, pistil removal, drying and storing, to final use. Due to lack of gender-disaggregated data, quantitative and qualitative data showing women's contribution and specific roles in saffron production are difficult to obtain mainly because much of this activity takes place outside the realm of the market.¹⁸ However, despite the lack of quantitative and qualitative data showing women's contribution and specific roles in growing, collecting and marketing saffron, it was clear throughout my interviews with local women¹⁹ and visits to the saffron farms that women are the main performers in all stages of saffron production.

Gender analyses of TK and case studies setting out women's roles in TK are limited and almost missing in the intellectual property literature. Yet, in most Indigenous and local communities around the world, women are among the important practitioners and custodians of TK and many cultural traditions are passed primarily or exclusively from one generation of women to the next.²⁰ Informed by the empirical case studies of saffron and carpet, this research aims to fill this gap and contribute to the discussions around TK by highlighting women's contribution to TK and articulating ways to ensure that their needs and interests are taken into account when modalities of legal protection for TK are being negotiated and crafted.

1.1.2 Protection of TK: The State of Affairs

¹⁸ Heather Gibb, "Gender Dimensions of Intellectual Property and Traditional Medicinal Knowledge" (2007) UNDP Asia-Pacific Regional Centre in Colombo, Discussion Paper; see also International Labour Organization (ILO)/Commonwealth Secretariat, "WTO TRIPS Agreement" (2001) ILO Globalization and Gender Briefs Series No.2. <http://staging.ilo.org/public/libdoc/ilo/2001/101B09_476_engl.pdf> (last visited March 2019).

¹⁹ For the list of saffron interviews, see Appendix B.

²⁰ There is no statistical quantification available in the existing literature on the role of women in transmitting customs and traditions.

For a long time, the specific knowledge of Indigenous and local communities around the world was seen as natural raw materials in legal and economic regimes, leading to a systemic devalorization. Informed particularly by the potential trade value of traditional knowledge, the critics of the current IP system have raised the question of what role the IP system should play in correcting the existing imbalances. The cross-cutting nature of TK has put the issue on the agenda of various international fora where each has a particular area of focus. Consequently, this has led to a complex regime²¹ of multiple international instruments dealing with the issue of TK.²² Despite the existence of these instruments, however, the status of legal protection for TK is still unclear. In fact, the qualifying language used in such instruments and their deferral to national legislation have led to the existing legal ambiguity where, for example, it is not clear how patent and TK instruments interact with each other.²³ In the case of saffron, the international patent application (PCT/ES2017/070237)²⁴ filed on April 17, 2017 by Pharmactive Biotech Products seeks a patent for a powdered composition obtained from an extract of saffron stigmas as a medicine effective in prevention of mood disorders related to depression. This is so, even though the antidepressant feature of saffron has been known by Iranian rural women, who have been nurturing the crop for generations. It is mentioned in one of the oldest medical references, ‘Razi’s Al-Hawi’, which shows the long history of saffron’s medicinal applications and traditional healing for the treatment of depression along with a variety of other ailments such as menstrual pain, menopausal problems,

²¹ Laurence R. Helfer, “Regime Shifting: The TRIPs Agreement and New Dynamics of International Intellectual Property Lawmaking” (2004) 29:1 Yale Journal of International Law 83.

²² Chapter 3 of the thesis examines the existing legal instruments. To name a few, the Convention on Biological Diversity (CDB), the Nagoya Protocol and Doha Declaration, UN Declaration on the Rights of Indigenous People (UNDRIP), The International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), The Earth Summit of 1992 and its Agenda 21.

²³ See Aman Gebru, “The Global Protection of Traditional Knowledge: Searching for the Minimum Consensus” (2017) 17 The John Marshall Review of Intellectual Property Law 42.

²⁴ For more detail see <https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2017182688> (last visited May 2019)

chronic diarrhea and neuralgia.²⁵ To obtain the patent, Pharmactive Biotech Products had to claim that the product is “an invention” of the company, which means that there will be no recognition or benefit sharing to the people from whom this knowledge originates if the patent is granted. The patent examiners did not consider the existing records, which in this case happen to be written in Razi’s book, as prior art,²⁶ and therefore the application has not been rejected due to lack of novelty.²⁷ Such examples highlight how the existing legal gaps in recognition of traditional knowledge impact Indigenous and local women where there is no requirement for disclosure of origin or access and benefit-sharing agreements in patent law.

While many governments have already devised national legislation for protection of TK with disclosure of origin or access and benefit sharing provisions, due to the territoriality of domestic laws,²⁸ the international protection of TK is still a necessity to prevent the cross-border misappropriation of TK, especially considering the economic significance of TK in today’s global economy.²⁹ In other words, globalization has put TK misappropriation on the list of issues that requires immediate attention in the international IP regime³⁰ mainly because of the increased

²⁵ Kitab al-Hawi fi al-tibb meaning “Comprehensive book on medicine” is the title of a major work on medicine in twenty-five volumes written by Abu Bakr Moḥammad bin Zakariyā’ Rāzi 865-925 CE born in Rey, Tehran, Iran. The book was translated into Latin in 1279 as *Continens* by Faraj ben Sālem (Farraguth) and presented to Charles of Anjou, king of Naples.

²⁶ Prior art has been defined as the entire body of knowledge which was available to the public before the filing or priority date for any patent, utility model, or industrial design.

²⁷ “Saffron Extract and Its Use for the Prevention of Mood Disorders Related to Depression”, ES Patent No. ES2573542B1 (18 April 2016). At the time of writing the PCT application has received Publication of WO2017182688A1.

²⁸ See e.g. Manuel Ruiz, “The International Debate on Traditional Knowledge as Prior Art in the Patent System: Issues and Options for Developing Countries” (2002) Trade-Related Agenda, Development and Equity Occasional Papers 9, at vii.

²⁹ For instance, according to the Commerce Secretary of India, Rita Teatia, traditional medicinal plants and their products account for an estimated US\$1.2 billion in exports. Rita Teatia, Inaugural Address delivered at the International Conference on the TRIPS/CBD Linkage: Issues and Way Forward, (15-17 March 2017), <<http://wtocentre.iift.ac.in/pdf/TRIPS%20CBD%20Linkage%202017.pdf>>.

³⁰ WIPO, WIPO Development Agenda, 18th Sess, WIPO Publication No. L1015/E (2007), <<https://www.wipo.int/publications/en/details.jsp?id=191>>.

commercial use of TK in a variety of sectors such as the agriculture, pharmaceutical and creative industries. Moreover, as a mostly prevalent resource in countries of the Global South, the fact that TK is not recognized under the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs), which is “the most important public international law covering intellectual property,”³¹ has led to less-developed countries’ demand for protection of TK.³² Put differently, the problem arises especially due to the long lasting tradition according to which copyrights, patents and trademarks have been the three main branches of intellectual property rights (IPRs). Despite the adoption of international minimum standards for five other categories³³ of IPRs through the TRIPS Agreement, subject matter like TK still does not clearly fit the mold of conventional IPRs.³⁴ This mismatch has left TK largely unprotected.³⁵ In fact, protection of TK has become a substantial issue in international IP because of the way in which international agreements for the protection of IPRs facilitate and even encourage misappropriation of TK.³⁶

³¹ Susan K. Sell, “The Quest for Global Governance in Intellectual Property and Public Health: Structural, Discursive, and Institutional Dimensions” (2004) 77:2 Temple Law Review 363 at 371.

³² See e.g. Tania Bubela and E. Richard Gold (eds), *Genetic Resources and Traditional Knowledge: Case Studies and Conflicting Interests* (Cheltenham: Edward Elgar Publishing, 2012); Peter Drahos, *Intellectual Property, Indigenous People and Their Knowledge* (Cambridge: Cambridge University Press, 2014); Christoph B. Graber, Karolina Kuprecht and Jessica C. Lai (eds), *International Trade in Indigenous Cultural Heritage: Legal and Policy Issues* (Cheltenham: Edward Elgar Publishing, 2012); Daphne Zografos, *Intellectual Property and Traditional Cultural Expressions* (Cheltenham: Edward Elgar Publishing, 2010).

³³ Including trade secrets, geographical indications, industrial designs, layout designs of integrated circuits, and plant variety protections.

³⁴ For arguments that the conventional IPRs do not fit TK, see e.g. Susan Scafidi, “Intellectual Property and Cultural Products” (2001) 81:4 Boston University Law Review 793.

³⁵ For arguments that the current (Western) system of IPRs unjustly fails to protect TK, see Graham Dutfield, “The Public and Private Domains: Intellectual Property Rights in Traditional Knowledge” (2000) 21:3 Science Communication 274 at 288-90. See also Oguamanam, *International Law and Indigenous Knowledge*, *supra* note 2; “Local Knowledge as Trapped Knowledge: Intellectual Property, Culture, Power and Politics” (2008) 11 Journal of World Intellectual Property 29; “Between Reality and Rhetoric: The Epistemic Schism in the Recognition of Traditional Medicine in International Law” (2003) 16:1 St. Thomas Law Review 59.

³⁶ For example, the attempted appropriation of the Neem tree of South Asia or Turmeric by Western companies is an iconic illustration of what has come to be known as “biopiracy”, that is, exploitation of a locally known natural resource for profit. For more detail about the Neem case, see e.g. Darrell Addison Posey & Graham Dutfield, *Beyond Intellectual Property: Toward Traditional Resources Rights for Indigenous Peoples and Local Communities* (IDRC, 1996) at 80 (giving a description of the Neem appropriation story). For more details about the Turmeric case, see e.g. Peter Drahos, “Indigenous Knowledge, Intellectual Property and Biopiracy: Is a Global Biocollecting Society the Answer” (2000) 22:6 E.I.P.R 245. For further discussion of

The history of the international attempts to protect TK is examined in a detailed manner in Chapter 3 of the thesis. In short, the analysis of ways forward at international fora like WTO and WIPO on the issues of IP and TK suggests that governments are involved in forum shopping.³⁷ Many developing countries,³⁸ for instance, consider the WTO, with its broad membership and dispute settlement mechanism, the right forum to tackle the issue.³⁹ Despite less-developed countries' and diverse TK stakeholders' pressure on the WTO to address the issue of TK, however, the efforts were nullified by developed countries through a regime-shifting strategy⁴⁰ that finally resulted in consigning the responsibility to negotiate TK to WIPO.⁴¹ Established in 2000, the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC) is, in accordance with its mandate, undertaking text-based negotiations with the objective of reaching agreement on a text(s) of an international legal instrument(s), which will ensure the effective protection of TK, traditional cultural expressions (TCEs) and genetic resources (GRs). The WIPO-IGC recently concluded its 40th session in June 2019. However, its progress has been slow, and it is still working toward an international agreement after 20 years of operation.⁴²

biopiracy, see Vandana Shiva, "Foreword: Cultural Diversity and the Politics of Knowledge" in George Jerry Sefa Dei, Budd L. Hall & Dorothy Goldin Rosenberg, eds, *Indigenous Knowledges in Global Contexts: Multiple Readings of Our World* (Toronto: OISE/UT in association with University of Toronto Press, 2000) vii–xi at vii.

³⁷ See generally Helfer, "Regime Shifting," (2004) *supra* note 21; "Regime Shifting in the International Intellectual Property System" (2009) 7:1 *Perspectives on Politics* 39.

³⁸ For WTO's countries classification, namely, *developed*, *developing*, and *least developed* see WTO's website, <https://www.wto.org/english/tratop_e/devel_e/d1who_e.htm>.

³⁹ Joshua Sarnoff & Carlos Correa "Analysis of Options for Implementing Disclosure of Origin Requirements in Intellectual Property Applications," (2006) in *An Overview of Relevant IP Developments in Various Fora*, Intellectual Property Quarterly Update, South Centre and Centre for International Environmental Law, First Quarter 1–100.

⁴⁰ Helfer, "Regime Shifting," (2004), *supra* note 21; Helfer, "Regime Shifting," (2009), *supra* note 37.

⁴¹ Pursuant to developing countries' request to revisit Article 27 of the TRIPS Agreement, TK-related concerns were consigned to WIPO through a regime-shifting strategy by developed countries. In other words, it has been argued that the emergence of the WIPO-IGC is perceived as a strategy by developed countries to move policy discussions on TK to "a powerless and obscure forum." For more detail, see Graham Dutfield, "Protecting Traditional Knowledge: Pathways to the Future" (2006) ICTSD Issue Paper No. 16.

⁴² The evolution of the negotiations at IGC is examined in Chapter 3 of this thesis.

1.1.3 Relevance of TK to Women

As an IP Policy matter focused on a target group defined in broad terms (i.e., Indigenous and local communities, without distinguishing between women and men), TK discussions have proceeded with a view that TK is a gender-neutral area. Traditionally, IP policy and legislation have been viewed as gender-neutral and value-free instruments, on the assumption that they benefit all members of the public equally. Feminist critics of IP, however, argue otherwise. According to them, the role of current IP law in ranking certain forms of knowledge and cultural production over others is not only hegemonic but also gendered. Due to the existence of multiple feminisms, there are many feminist avenues for criticizing IP. What unifies all of the strands under the umbrella of feminism, however, is their common opposition to gender oppression and hierarchy.⁴³ Mobilizing feminist IP critiques alongside discussions of TK protection opens the space to ask a series of fundamental questions such as *what counts as innovation/creativity? Why? Who does it and how? How do we provide incentives for it? How do we reward it?*

The following parts examine those feminist insights that can be translated into the issue of protection of TK. Before moving to the next part, I wish to highlight a caveat about the scope of this research. The focus of this thesis on women's TK does not detract from the importance of the obligation to respect and to ensure respect for *all* human rights to *all* people. Gender equality and respect for all human rights, are complementary and interdependent.

1.1.3.1 Feminist Epistemology

⁴³ A few types of feminist thought are: Marxist feminists, radical feminists, postmodern feminists, standpoint feminists, eco-feminists and first-, second- and third-wave feminists. These branches sometimes contradict each other. As Halbert [in Deborah Halbert, "Feminist Interpretations of Intellectual Property" (2006) 14 Journal Gender Social Policy & the Law 431 at 432] aptly puts it, "Feminist thought aligns loosely around themes regarding women's equality, but the multiplicity of feminism(s) at times overshadows the similarities."

Feminist epistemology examines how gender influences our concept of knowledge;⁴⁴ it studies how the knowledge production process systematically disadvantages women both as knowers and subjects of produced knowledge.⁴⁵ According to feminist epistemology, women's experience and knowledge have been relegated to the private sphere and considered less important than men's experience and knowledge in the public sphere.⁴⁶ The core insight of feminist epistemology is that women's location in the world as mothers, wives, daughters and sisters enables them to perceive and understand the world and human activities differently.⁴⁷ However, their knowledge and way of knowing have been overlooked by the mainstream paradigm of knowledge, which despite its claims to objectivity and neutrality, is inherently biased against women.⁴⁸ It was through critical examination of science that feminist epistemology originated; therefore, none of its arguments are originally made with the idea of IP in mind. However, when

⁴⁴ Susan H. Williams [in Susan H. Williams, "Feminist Legal Epistemology" (1993) 8 Berkeley Women's Law Journal 63] explains that feminist epistemology falls under the category of the social constructionist critique of Cartesian epistemology. Briefly, the social constructionist critique argues that knowledge is a human, and therefore social, artifact, deeply shaped by the particular social context in which it is created. Catharine MacKinnon is one of the most forceful and longstanding proponents of this epistemological critique. See, e.g., Catharine A. MacKinnon, "Feminism, Marxism, Method, and the State: Toward Feminist Jurisprudence" (1983) 8:1 SIGNS 635.

⁴⁵ The relationship between knower and known is one the characteristics that distinguishes feminist epistemology. Susan H. Williams [in Williams, "Feminist Legal," *supra* note 44] argues that Cartesianism is a system of epistemological assumptions that results in dichotomies and creates a model of knowledge as power. According to feminist epistemology, no longer is the relationship between knower and known a distant one, in which knowledge flows only in one direction and in which the known is seen as an object to be manipulated or controlled.

⁴⁶ Wendy Luttrell, "Different Women's Ways of Knowing: A Feminist Perspective on the Intersection of Gender, Race and Class in the Social Construction of Knowledge" (2003) Reproduced from 1988 Conference Proceedings, < <http://www.leeds.ac.uk/educol/documents/00002736.htm>>.

⁴⁷ To date, there have been so many studies from various disciplines that examine the specific characteristics that distinguish women's way of knowing, their understanding of the world and self. For how different men and women define "self", see Carole Gilligan *In a Different Voice: Psychological Theory and Women's Development* (Cambridge: Harvard University Press, 1993) and Catherine Keller, *From A Broken Web: Separation, Sexism, and Self* (Boston: Beacon Press, 1986).

⁴⁸ Uma Narayan, "The Project of Feminist Epistemology" in Sandra Harding, ed, *The Feminist Standpoint Theory Reader: Intellectual and Political Controversies* (New York: Routledge, 2004) 213–225 at 213. See also Patricia Fara, *Scientists Anonymous: Great Stories of Women in Science* (Duxford: Wizard Books, 2005). Ann Garry and M. Pearsall, *Women, Knowledge and Reality: Explorations in Feminist Philosophy* (London: Routledge, 1992).

feminists talk about the production of knowledge as gendered, or about how women have been excluded from knowledge production sites, or have had their work appropriated by men, their discussions can aptly be used to reveal how the existing IP system (as the primary regulation mechanism of knowledge production) is a product of such a gendered system. In other words, although not originally developed for criticizing the IP system, feminist epistemology discussions offer new insights into how the IP system has been shaped by gendered assumptions. As Debora Halbert states:

If the very construction of knowledge that is the basis for claims to copyright and patent protection is gendered, then what is protected is the outgrowth of a gendered system rendered invisible until a feminist lens sheds light on the politics of this otherwise “neutral” construction.⁴⁹

On one hand, the ability to define one way of knowing as the only way of knowing, or the best way of knowing, is a question of domination and power.⁵⁰ On the other hand, in today’s global knowledge economy where knowledge has become the main source of competitive power, the IP system is the main mechanism of rights allocation over knowledge. This has resulted in significance of the IP system as “*the currency of the global knowledge economy*.”⁵¹ The IP system determines what is protection-worthy and what is not, and by its reward mechanisms (allocating IPRs), it has shaped our understanding of what we know as knowledge, technology, creativity and innovation. Traditional knowledge as a category of knowledge, therefore, has been neglected mainly because it does not meet the criteria defined by the current IP system.

My argument about feminist epistemology in the context of TK is not meant to suggest that women as “women” are the only holders of TK, nor that their TK should be treated differently;

⁴⁹ Halbert, “Feminist Interpretations,” *supra* note 43 at 437–38.

⁵⁰ See Peter Drahos & John Braithwaite, *Information Feudalism: Who Owns Knowledge Economy?* (London: Earthscan, 2002). See also Peter Drahos & John Braithwaite, “Hegemony Based on Knowledge: The Role of Intellectual Property” (2004) 21:1 *Law in Context* 204.

⁵¹ Chidi Oguamanam, *Intellectual Property in Global Governance: A Development Question* (Milton Park, Abingdon, Oxon; New York: Routledge, 2012) at 3.

rather, it aims to criticize the existing hegemonic definition of innovation/creativity under the current IP system. Building on the insights of feminist epistemology, my research brings a gender lens to reveal how the existing power hierarchies based on gender play a role in the lack of legal protection of TK. In other words, mainstream IP ignores certain categories of creativity such as traditional knowledge not only because they are mainly held by the countries of South but also because in the binary of “modern v. traditional” knowledge, they are on the feminine side⁵² and therefore are not valuable enough to be recognized. Such attributed femininity comes 1) either from the gender of the knowledge holders or 2) from the feminization of the knowledge itself in the encounter with masculinized modern knowledge or 3) both as can be seen in the case of women’s TK.

1.1.3.2 Relational v. Individual Achievement

Individualism lies at the core of the philosophical and political foundations of the current IP system. Looking from a relational feminist perspective though, innovation and creativity are seen as products of a web of relations. It is in the nature of creative and innovative work to be built based on previous works.⁵³ For example, in the context of copyright, it is argued that all texts are necessarily reproductions of other texts since it is almost impossible to have an independent work.⁵⁴ It is due to its individualistic bias that we witness the existing unease and ignorance of the IP system with and toward communal and collective innovation and creativity. Such an uneasy relationship originates from what Catherine Keller calls the “fear of collective.”⁵⁵ TK as a

⁵² See section 1.1.3.3 on feminist dualism.

⁵³ Alan L. Durham, “Copyright and Information Theory: Toward an Alternative Model of “Authorship”” (2004) Brigham Young University Law Review 69 at 94.

⁵⁴ See Robert H. Rotstein, “Beyond Metaphor: Copyright Infringement and the Fiction of the Work” (1992/93) 68 Chicago-Kent Law Review 725 at 756. See also Marcus Boon, *In Praise of Copying* (Cambridge, MA: Harvard University Press, 2010).

⁵⁵ Keller, *From A Broken Web*, *supra* note 47 at 8.

collective mode of creativity leaves no option for the IP system but to confront a reality that it has been evading since its inception, that is, the relational nature of innovation and creativity. In the case of TK, this relational nature becomes bold and clear to the extent that makes it completely impossible to hold the same individualistic assumptions about innovation and creativity if any recognition mechanism is going to be developed for TK. In her book, *From A Broken Web: Separation, Sexism, and Self*, Keller writes, “As daughters, wives, mothers, sisters, and friends, women have been enmeshed in relational complexities that blur the boundaries of self and other.”⁵⁶ The resistance to date of the IP system toward protection of TK is due to what Keller calls “Fear of merger and self-dispersion.”⁵⁷ TK, however, is an area where the existing IP system must contend with parallel forms of ownership and distribution. Therefore, conventional IPRs built upon the individual notion of creativity lose their applicability once faced with the communal and collective nature of innovation and creativity.

Replacing an individualistic approach with a relational one leads to a shift in the function of the IP system, that is, a shift from building and reinforcing the “walls of private right”⁵⁸ to building capacity to structure relations of communication, and to establish the power dynamics that will shape these relations. A relational view of innovation and creativity invites us to revisit the IP system not only regarding the subject matter and scope of IPRs, but also with respect to their goals and consequences. Such an exercise requires us to go beyond a simple debate of

⁵⁶ Keller, *From A Broken Web*, *supra* note 47 at 8.

⁵⁷ Keller, *From A Broken Web*, *supra* note 47 at 8.

⁵⁸ Jennifer Nedelsky, “Reconceiving Autonomy: Sources, Thoughts and Possibilities” (1989) 1 Yale J. L. & Fem. 7 at 12. Nedelsky uses the phrase “a wall (of rights) between the individual and those around him.” She believes “in liberal thought, human relations are cast in terms of clashing rights and interests. In contrast, from a relational perspective, rights do not simply mediate the boundaries of individual self-interest; they encapsulate collective choices about the values that members of a society hold dear.

granting vs. denial of right; rather, it needs a focus on “the kinds of human relationships the right would structure, and the values that would be furthered by its guarantee.”⁵⁹

1.1.3.3 Feminist Dualism

Although largely attributed to utilitarian benefits, feminist IP scholars argue that a focused critical examination of the IP system reveals that much of its philosophical framework is built under influence of what they criticized as “dualism.”⁶⁰ According to feminists, dichotomies such as mind/body, culture/nature, reason/emotion, etc., affect social behaviors. They argue that, in the social context, the former half of the pairs is regarded as superior and masculinized, and the latter half is considered as inferior and feminized.⁶¹ The mind/body dichotomy, for example, originates from the belief that knowledge is a quality of the mind rather than of the body. The body, on the other hand, is the site of all of the countless qualities that direct us toward emotion and subjectivity. The superiority of “mind” over “body” is linked to the superiority of reason and objectivity.⁶² A closer examination of IP laws reveals that the mind/body assumption is at the core of the IP reward

⁵⁹ Crays Craig, Joseph Turcotte & Rosemary Coombe, “What is Feminist About Open Access?: A Relational Approach to Copyright in the Academy” (2011) 1:1 *Feminist@law* 1 at 11.

⁶⁰ See e.g. Laura A. Foster, “Situating Feminisms, Patent Law, and the Public Domain” (2011) 20 *Columbia Journal of Gender and Law* 261; Dan L. Burk, in “Feminism and Dualism in Intellectual Property” 15:2 *Journal of Gender, Social Policy & the Law* 183.

⁶¹ See Val Plumwood, *Feminism and the Mastery of Nature* (London; New York: Routledge, 1993) at 32, 42-43, 47; See also Genevieve Lloyd, *The Man of Reason: “Male” and “Female” in Western Philosophy* (First published in 1984 by Methuen & Co. Ltd) (Taylor & Francis e-Library, 2004) arguing that, traditionally, men were believed to be rational and superior to their irrational female counterparts. See Sandra Harding, *The Science Question in Feminism* (Ithaca: Cornell University Press, 1986) at 172 explaining that Euro-American imperialists considered non-Europeans as “others” and inferior, and that the notion of “otherness” extended to feminine categories also considered to be inferior.

⁶² Social practices or disciplines that valorize rationality may be particularly suspect, given the longstanding conceptual linkages between reason and canons of subordination. In his *Politics*, [Aristotle, *Politics: Book I and II* 75 (Trevor J. Saunders trans., 1995), “Aristotle: Politics,” in *Internet Encyclopedia of Philosophy*, <<https://www.iep.utm.edu/aris-pol/#SH7e>>] Aristotle justifies the practice of slavery by arguing that the mind or spirit is superior and should rule the body. Although Aristotle’s argument is in conflict with the principles of modern and democratic societies, feminists have shown that its premises of superiority are deeply embedded in the fabric of Western culture. See Susan Bordo, *The Flight to Objectivity: Essays on Cartesianism and Culture* (Albany: State University of New York Press, 1987) at 104.

system. In the IP system, the focus is on the mental part of innovative and creative activity with the view that it is a lone, extraordinary individual who is the source of creative and innovative work.⁶³ Such a view assumes separation between cognitive (masculine, innovative, high status) and manual (feminine, menial, low-status) work. In reality, however, these two parts are deeply entangled throughout the innovative and creative processes.⁶⁴ Moreover, as discussed in the previous section, creative/innovative works are the result of extended web-like processes. The resultant legal separation of creativity into oppositional mental and physical efforts (as can be seen in IP laws) gives rise to a hierarchical structure in the IP reward system that privileges a relatively small portion of the creative process.⁶⁵

The dichotomy of mind/body is not the only dualism that is scrutinized by feminist IP scholars. The culture/nature dichotomy has culture on one side that represents mind and reason.⁶⁶ On the other side, nature exists as a symbol of physical that is influenced by emotion or instinct rather than by reason. In this dichotomy, nature has been interpreted as (a) the natural material

⁶³ Burk, “Feminism and Dualism,” *supra* note 60 at p 190. According to Burk such a view is tied to the false picture of “heroic inventor” of patent law that is the sibling if not the identical twin of copyright’s “romantic author.”

⁶⁴ In my fellowship project at Ingenium museum, I examined women’s role in invention and production of core memory (an early form of computer memory) where women’s critical role in the development of this technological piece is unseen and unrecognized mainly due to false separation between manual v. cognitive work. The example of core memory shows how cognitive and manual work of weaving are deeply entangled. For more details see Ghazaleh Jerban, “Unseen and Unrecognized: Women’s Key Role in the History of Computer Memories”, (1 April 2019), *Ingenium Channel*, <<https://ingeniumcanada.org/channel/articles/unseen-and-unrecognized-womens-key-role-in-the-history-of-computer-memories>>.

⁶⁵ Ann Bartow, “Fair Use and the Fairer Sex: A Gendered Story of Copyright Law” (2006) 14 *American University Journal of Gender, Social Policy & the Law* 551 at 552; Hilary Rose, “Beyond Masculinist Realities: A Feminist Epistemology for the Sciences” in Ruth Bleier, ed, *Feminist Approaches to Science* (New York: Toronto: Pergamon Press, 1986) 57–76.

⁶⁶ Sherry B. Ortner, an anthropologist, was one of the first to raise the question about relationship between man/women and culture/nature in Sherry B. Ortner “Is the Female to Male as Nature to Culture?” in Louise Lamphere and Michelle Rosaldo, eds, *Woman, Culture, and Society* (Stanford, CA: Stanford University Press, 1974) 68–87. The nature/culture divide is one of the theoretical foundations of contemporary anthropology in which nature and culture are conceptualized as dichotomous (separate and distinct domains of reference). However, some scholars believe that the strict separation between culture and nature evaporates under close scrutiny. For more details, see e.g. Yrjö Haila, “Beyond the Nature-Culture Dualism” (2000) 15 *Biology and Philosophy* 155.

world over which man (as the representative of culture) rules (b) ‘uncivilized’ people of another nation or the subset of population who need to be controlled like women, the poor, minorities or even (c) the part of each individual that may cloud his rationality.⁶⁷ Similar to the opposition of mind/body, the opposition of culture/nature is a fundamental tenet of the IP system.⁶⁸ For example, Burk argues that the dichotomy of nature/culture plays a crucial role in defining the subject matter of patent law. Patentable subject matter excludes non-human-made products, or processes or what is known as “products of nature,” that is, materials drawn from nature in their original form or in a form that is not adequately changed by human intervention.⁶⁹ By such a standard, products and processes involving a higher degree of human intervention are more likely to be rewarded in the IP system compared to those involving a lower degree of intervention.

This may be in contrast with the IP system’s claim rationalizing its mechanism based on “public benefit,” as such rationale does not necessarily favour complex products and processes over simple ones.⁷⁰ Moreover, subsequently the IP system would encourage an innovation and creativity paradigm that rewards more complex, interventionist and expensive technologies available to the developed world rather than the traditional technologies (in the form of TK) available to the less-developed world. It eventually leads (as it already has) to the accumulation of IPRs on one side at the expense of the other. The practice of exploitation and enclosure of a locally-known, natural resource for profit proves the validity of such an argument, where a highly effective traditional plant extract does not pass the patentability criteria (seen as product of nature) while

⁶⁷ Williams, “Feminist Legal,” *supra* note 44 at 66–67.

⁶⁸ See Burk, “Feminism and Dualism,” *supra* note 60.

⁶⁹ *Diamond v. Chakrabarty*, 447 U.S. 303 (1980), patentable subject matter includes “anything under the sun that is made by man.”

⁷⁰ See Burk, “Feminism and Dualism,” *supra* note 60 at 204. Burk provides an example of medical technologies; “it is not at all clear that an expensive, highly interventionist new gene therapy to treat heart disease is preferable over a more mundane improved method or device to encourage exercise, the cost to benefit ratio in saving lives and promoting health might well favor the latter simpler development. This could suggest that the doctrine is misguided, or it could suggest that other interests besides the promotion of progress are at issue.”

presenting the same content in a way that involves high-tech isolation of the active component results in achieving a privatized right misappropriating the collective knowledge of a local community. Moreover, labeling particular subject matter such as TK as a “product of nature” and putting them in the public domain benefits those who are already privileged holders of IPRs. In other words, although the material in the public domain is open to free exploitation, it does not mean that any individual has the opportunity to equally benefit from free resources available in the public domain.⁷¹ In fact, those who are already in an advantageous position have a better chance to employ the resources that reside in the public domain.

The dichotomies of mind/body and culture/nature have resulted in seeing TK practices as a series of manual and menial work carried out by uncivilized people or the uncivilized subset of population as opposed to the cognitive and innovative work carried out by scientists. Therefore, TK is placed on the feminine side of the *modern v. traditional knowledge*. This is mainly due to both its association with the natural world and also the fact that most TK entails a degree of physical labour that distinguishes it from what scientists in white lab coats do. Therefore “women’s TK” is a knowledge category that is doubly gendered (via both the gendered philosophical associations with traditional knowledge and the gender of its holders) and thus doubly devalued. In other words, TK that already has experienced a layer of feminization in contrast to modern science⁷² can experience a further feminization due to the gender of its holder where it is local and

⁷¹ See generally Anupam Chander & Madhavi Sunder, “The Romance of the Public Domain” (2004) 92 California Law Review 1331 (lamenting the “tragedy of the commons”), arguing that in the parallel case of real property, the designation of some lands as “public” or “common” may ultimately facilitate further privatization, especially once valuable resources are found on what were previously designated as public or common lands. Designation of certain subject matter in intellectual property as “public” or “common” may have a similar effect.

⁷² See Sharmishta Barwa and Shirin M. Rai, “The Political Economy of Intellectual Property Rights: A Gender Perspective” in Peter Newell, Shirin Rai, Andrew. Scott, eds, *Development and the Challenge of Globalization* (London: ITDG, 2002) 41–57 at p 51 where they argue that, in the global market systems dominated by hyper-masculinized values that recognize only certain forms of knowledges, even male populations of Third World countries get feminized through economic emasculation.

Indigenous women who practice and hold the knowledge and not often male scientists. As a doubly gendered category of knowledge, women's traditional knowledge is often performed and considered as a part of household activities and is therefore unpaid. The lack of recognition of women's unpaid labour leads to an undervaluing of the same tasks when performed in the paid workforce, which means that even when women are employed in TK-based sectors, their wage is very low as is the case in carpet and saffron production.

1.1.3.4 Invisible Work

The critique of dualism is closely linked to the feminist critique of “invisible work,”⁷³ which targets the division of social roles into masculine/feminine and into public/private, as feminist analyses show that such division has relegated some roles and work to the private and feminine realm. Much of this work happens in the domestic sphere and is hidden from the public eye, even though it plays a crucial role in enabling farms, families, firms, etc. to function. Not surprisingly, it is mainly women who perform such work without proper recognition or payment. According to feminist scholars, the definition of what we know as “work” is gendered and consequently leads to marginalization of women's contribution in society.⁷⁴ Building upon the “invisible work” critique, I argue that a close examination of the IP system uncovers the same pattern in the realm of innovation and creative work. According to social constructivism, concepts like innovation, creativity, and technology are not gender neutral; rather, they are socially defined and therefore they entail gendered biases. Historically, innovation and creativity have been defined in such a way that many of the tasks that women have traditionally performed (e.g., weaving) are

⁷³ See generally Ruth Schwartz Cowan, *More Work for Mother: The Ironies of Household Technology from the Open Heart to the Microwave* (New York: Basic Books, 1983).

⁷⁴ See Maxine L. Margolis, *Mothers and Such: Views of American Women and Why They Changed* (Berkeley: University of California Press, 1984) at 262-63.

not defined as technical and innovative despite involving a high degree of dexterity and computation.⁷⁵ The argument can be supported by the studies showing that the concept of technology is bound to women and more specifically Indigenous women. The roles of gatherers, harvesters or caretakers undertaken by them led feminist techno-scientists⁷⁶ to conclude that these women would have created tools such as the sickle and the pestle, therefore making them the first technologists.⁷⁷ Autumn Stanley's book reaffirming women's creativity suggests that we should be skeptical of the male historians of technology and look for hidden women.⁷⁸ She asserts that women have frequently had ideas for the improvement of tools and machinery with which they worked.⁷⁹ Therefore, what is at issue is not women's inventiveness; rather, it is the ignorance of the IP system toward capturing and recognizing their contributions.

Informed by the above-mentioned feminist critiques of IP, my research is focused on the issue of legal protection of traditional knowledge through using a feminist method of gender

⁷⁵ Judy Wajcman, *Technofeminism* (Cambridge, United Kingdom: Polity, 2004) at 15-16 writes: "During the Eighteenth century, industrial engineering began to constitute the modern definition of technology. This transformed the meaning from including useful arts technology (such as needlework, metalwork, weaving, and mining) to strictly applied science. As a result, 'male machines' replaced the 'female fabrics' as identifiers of modern technology when engineering was considered as masculine profession." See also, Courtney Doagoo, "Feminist Anthropology and Copyright Gauging the Application and Limitations of Oppositional Models" in Courtney Doagoo et al, *Intellectual Property for the 21st Century: Interdisciplinary Approaches* (Toronto: Irwin Law Inc, 2014) 187–205.

⁷⁶ Feminist technoscience theories examine the unseen and unrecognized role of women in science and technology formation. Cynthia Cockburn in *The Machinery of Dominance: Women, Men, and Technical Know-how*, (London: Pluto, 1985) at 25 writes: "the question of what part women did or did not play in technological invention is a knotty one. Women have almost always been 'hidden from history' when historians were men."

⁷⁷ Wajcman, *Technofeminism*, *supra* note 75.

⁷⁸ Autumn Stanley, "Women Hold up Two-third of the Sky: Notes for a Revised History of Technology" in Joan Rothschild (ed), *Machina Ex Dea: Feminist Perspectives on Technology* (Pergamon Press, USA, 1983) 3–22. See also Autumn Stanley, *Mothers and Daughters of Invention: Notes for a Revised History of Technology* (New Brunswick, N.J.: Rutgers University Press, 1995). See also Cockburn, *The Machinery of Dominance*: *supra* note 76 at 25 where she writes: "Women have almost always been 'hidden from history' when historians were men."

⁷⁹ For instance, my research on the role of women in invention of core memory revealed that the first core memory plane was hand woven by Hilda G. Carpenter whose name is not even mentioned in the publications regarding core memory. For more details, see Jerban, "Unseen and Unrecognized," *supra* note 64.

impact assessment.⁸⁰ I argue that expansion of IP protection over TK is a feminist policy solution provided that modalities of such legal recognition and protection take into account Indigenous and local women's contributions, needs, and interests. This is not to say that the IP system in its current form does not require fundamental reform or that IP law should be expanded to include additional protection for various industries. Rather, my goal here is to describe how TK would be best treated within the IP system as it exists now but with sensitivity to the role of women. I am aware that not all feminists may support such a solution, as not all feminist critics of IP have the same vision of the ultimate IP system, nor envision a similar path to reimagining the IP system. As Deborah Halbert says, "I am not convinced all feminist theory, and by extension all feminists, would be equally critical of intellectual property."⁸¹ Some feminists argue that women are oppressed through systems of capitalism and private property, and gender equality can only be achieved through a radical restructuring of the current capitalist economy in which the IP system plays an important role.⁸² It is, however, of critical importance to bear in mind that engagement of feminists in discussions around TK protection under the banner of IP rights is in fact a resistance strategy. In other words, it is based on pragmatism and a pre-emptive drive to avoid further marginalization, rather than an endorsement of the essential principles underlying the current IP system. TK misappropriation due to lack of legal protection means that economic and social benefits of TK and its potential for empowerment of Indigenous and local women through promotion of TK-based productions are being wasted. A gender-responsive TK protection mechanism can benefit Indigenous and local women through, for example, promotion of TK-based production in sectors

⁸⁰ Gender impact assessment (GIA) is the estimation of the different effects (positive, negative or neutral) of any policy or activity in terms of gender equality. GIA is used as a methodological tool in this research. For more details, see Chapter 2.

⁸¹ Halbert, "Feminist Interpretations," *supra* note 43 at p 433.

⁸² See generally, Marxist feminism. For a critical analysis of this school of thought see Heidi I. Hartmann, "The Unhappy Marriage of Marxism and Feminism: Towards a More Progressive Union." (1979) 3:2 Capital & Class 1. This is not to say that all branches of feminism are anti-intellectual property or anti-commercial.

with high engagement by women, where women have a comparative advantage in production. In other words, a rise of TK-based production under proper legal protection can not only increase women's income and improve their quality of life, but also can safeguard their cultural integrity.

Some feminists argue that the public domain should be protected by avoiding expansion of IPRs to new industries.⁸³ However, choosing not to expand IP protection over TK and to leave it unprotected while there has been a trend of progressive expansion of IPRs – led by countries such as the US – only undermines the organic growth of TK and further marginalizes TK-holders including Indigenous and local women. More importantly, from a feminist perspective, it becomes a strategic choice to call for protection of TK, as the US and its like-minded countries lead the push to constrain or challenge the protection of TK using the public domain argument despite their records of actions weakening the public domain. As Oguamanam aptly states:

The US, which champions the public domain blackmail of TK, has consistently led a global assault on the public domain since the early development of intellectual property law.... Oddly, when it comes to TK, those who worked tirelessly over the decades to ratchet up intellectual property protection at the expense of the public domain have now re-constituted themselves into champions of the public domain.⁸⁴

TK law and policy have been largely gender unaware⁸⁵ to date and thus need to be transformed. For instance, although at WIPO's IGC the issue of TK has been addressed as a

⁸³ See e.g. Malla Pollack, "Towards a Feminist Theory of the Public Domain, or Rejecting the Gendered Scope of United States Copyrightable and Patentable Subject Matter" (2009) 12 William and Mary Journal of Women and the Law 603. In this article Pollack distinguishes four types of feminism and argues that feminism's most utopian form that she calls "humanist feminism" (which includes strains of socialist, radical, and Marxist feminism), supports protection and expansion of the public domain.

⁸⁴ Chidi Oguamanam, "Wandering Footloose: Traditional Knowledge and the 'Public Domain' Revisited" (2018) 21:5-6 *Journal of World Intellectual Property* 306 at 311. Oguamanam argues that the US is the most influential country that has championed the 'enclosure' movement of the public domain and the global commons through expansionist strategies such as the willingness to expand the scope of patentability; the practice of "patent ever-greening;" including the extension of patent terms through supplementary protection certificates; accommodation of data exclusivity rights, and delayed entry of generic drugs in the market.

⁸⁵ Gender-unaware is a term to replace "gender-blind," which has an ableist connotation. Gender-unawareness is a form of gender bias exemplified in the view that men represent both men and women. For the difference between gender neutrality and gender unawareness, see Fiona Leach, *Practising Gender Analysis in*

thematic issue, to date gender has been largely missing in the discussions. However, there is no doubt that structural gender inequalities are still embedded in societies across the world. It should not be assumed that just because the language of TK legal and policy instruments is gender neutral that therefore they would also automatically be gender neutral in application. Despite the fact that, generally speaking, the language of most laws remains gender neutral, women still do not have equal access to and control over material and non-material resources and assets.⁸⁶ Therefore, treating women that are affected by inequalities in an equal way in practice perpetuates these inequalities. It may even strengthen social, cultural, or economic gender inequalities. To avoid this, it is necessary to bring a gender lens to the discussions to meet the different needs and interests of women, to identify gender inequalities in terms of access to and control of resources, to consider the impact of roles and gender-based stereotypes, to anticipate the possible differential effects on women and men and to ensure that the outcomes of policies will support substantive gender equality. When a policy or legal instrument is directed at target groups, it will always imply the (re)distribution of resources and/or the application of rules or regulations.⁸⁷ As most of the economic resources are known to be unequally distributed between women and men,⁸⁸ and as rules are often connected to rules about gender, all policies directed at target groups are relevant to gender, as is the case with regard to TK. According to the fieldwork results, there are differences

Education (UK: OxfamGB, 2003); Suneetha M. Subramanian and Balakrishna Pisupati, eds, *Traditional Knowledge in Policy and Practice: Approaches to Development and Human Well-being* (Tokyo, New York, Paris: United Nations University Press, 2010) at 78.

⁸⁶ Esteban Ortiz-Ospina and Max Roser, “Economic Inequality by Gender” (2019) OurWorldInData.org, <<https://ourworldindata.org/economic-inequality-by-gender>>. See also, Monique Villa, “Women Own Less than 20% of the World's Land” (11 Jan 2017) World Economic Forum, <<https://www.weforum.org/agenda/2017/01/women-own-less-than-20-of-the-worlds-land-its-time-to-give-them-equal-property-rights/>>.

⁸⁷ Council of Europe, “Gender Mainstreaming; Conceptual Framework, Methodology and Presentation of Good Practices” (1988) Final Report of Activities of the Group of Specialists on Mainstreaming at 62.

⁸⁸ See e.g. World Bank, *World Development Report 2012: Gender Equality and Development*, <<https://openknowledge.worldbank.org/handle/10986/4391>>. For infographics see Ortiz-Ospina and Roser, “Economic Inequality,” *supra* note 86.

between women and men in terms of access to resources, participation in decision making, norms and values that influence gender roles and gender division of labour. Consequently, the fieldwork results indicate that TK policies affect women and men differently. Therefore, employing gender assessment is a necessity to uncover the gender impact of IP laws.

Viewed from the vantage point of Indigenous and local women who are often poor and are struggling with various forms of marginalization, the fundamental issues in the intellectual property rights debate over TK are twofold. One set of challenges women face focuses on access to, control, and use of TK and genetic resources. Privatization of genetic resources, which happens through patenting of seeds and microorganisms, restrains the access to such resources and raises the cost of activities that require such resources. It can bring about the monopolization of knowledge and resources in areas such as agriculture, medicine, and pharmaceuticals.⁸⁹ Depending on the role and contribution of women, as well as the structural and social limitations, women and men are not equally affected by privatization of their collective knowledge. For example, the IP system, which gives enforceable rights to patent holders, will have significant impacts on women farmers, who are generally small farmers, and who are dependent on the re-use and exchange of seed.

The second set of challenges is the recognition of, and compensation for, traditional knowledge among women as compared to men. It is normally the case that women have a triple burden in undertaking the traditionally prescribed role of caring for children and the elderly, engaging in food production as well as household duties, and carrying out the tasks of enhancing,

⁸⁹ For more details, see e.g. Markku Oksanen, "Privatizing Genetic Resources: Biodiversity, Communities and Intellectual Property Rights" in John Barry and Marcel L.J. Wissenburg, eds, *Sustaining Liberal Democracy* (London: Palgrave Macmillan, 2001) 135–148.

developing, and transmitting TK in the community.⁹⁰ Yet this is often not recognized, acknowledged or compensated for in models for protecting traditional knowledge or in benefit-sharing agreements. There are no considerations given to designing, planning, and implementing TK protection mechanisms in a manner that ensures Indigenous and local women will achieve the same outcomes as their male counterparts. While Indigenous and local women continue to spend back-breaking hours in TK labour and play an important role in TK system, they remain unseen and unrepresented in the TK governance and protection discussions.⁹¹ The misappropriation of TK and the gaining of IPRs over their resources affect Indigenous and local women differently than men due to the harsh realities of social and economic factors. This, in turn, prevents them from pursuing a quality life for themselves and their families mainly because maintaining control over their knowledge and resources is important for feeding their families and safeguarding their intellectual histories and heritage.

The way that a phenomenon is perceived will determine the response to it. Generally speaking, in international and national fora, TK misappropriation has not been perceived as a gender problem requiring a gender-responsive solution. Where international organizations have tried to conceptualize the lack of TK protection as a problem, their efforts have been fundamentally flawed by the limitations of their professional outlook and the absence of an overall policy framework.⁹² The problem is perceived narrowly by the various fora, preventing the emergence of

⁹⁰ For more details about the triple role of women (reproductive, productive, and community), see e.g. Tonnie Zibani, “The Triple Burden and Triple Role of Women”, (22 November 2016), *Empower Women*, <<https://www.empowerwomen.org/en/community/discussions/2016/11/the-triple-burden-and-triple-role-of-women>>.

⁹¹ See e.g. Paola Deda and Renata Rubian, “Women and Biodiversity: The Long Journey from Users to Policy-Makers” (2004) 28 *Natural Resources Forum* 201.

⁹² See e.g. Charles Lawson, “Relationships Between the Work of the WIPO IGC and Other Forums” in Daniel F. Robinson, Ahmed Abdel-Latif and Pedro Roffe, eds, *Protecting Traditional Knowledge: The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore* (New York: Routledge, 2017) 56–82.

a holistic definition of the problem and policy, and resulting in misconceptions and inadequate responses. This research reconceptualizes the TK issue as a gender problem to which international fora and national governments should respond with appropriate legal instruments, policy, programs, implementation plans, and adequate resources. As TK misappropriation begins to be defined as an issue with gender aspects, it will become clear that our understanding of it is still limited. There should be a better understanding of its consequences and impacts on TK-holders who are women. Indigenous and local women rely on their TK for household tasks such as providing healthcare and food for family, as well as productive/commercial activities, and yet, in spite of these burdens on their shoulders, TK policies and strategies are perceived to be gender-neutral with no reference to these women's interests, needs, and concerns.

Therefore, this research aims to answer the questions of whether and how protection of traditional knowledge (TK) should be regulated in a gender-responsive manner. Guided by a feminist legal methodology, an approach founded on women's experience of exclusion, and using two feminist methods of gender impact assessment and qualitative interviews, the thesis makes a case for mainstreaming gender in the TK law and policy so that Indigenous and local women's interests and needs are included in the TK decision-making process. Mainstreaming gender involves the integration of a gender-equality perspective into the thematic approach used to date. The research will then envision a gender-responsive legal instrument that protects TK within a development-oriented IP paradigm. Such an instrument allows women to contribute to governance of what is rightfully their cultural heritage, leading to Indigenous and local women's empowerment. In order to conduct a gender impact assessment, the current position of women TK-holders is determined through qualitative empirical research by collecting data from Indigenous and local women TK-holders who are among the target beneficiaries of TK law and policy.

Drawing an accurate image of the current situation of women allows for the precise description of important issues and for estimating the impact of future developments in TK law and policy if they continue to ignore gender aspects of TK. Without a gender impact assessment entailing an examination of the situation of women in the field, the risk of adoption of inappropriate or partial solutions will be high.

The two cases of carpet and saffron serve as examples to contextualize the discussions. Saffron and carpet production are examples of sectors in which women's contribution in the form of TK is a defining element of the activities. The crucial contribution of women, and the role of the TK held and practised by them in these sectors, serve as two sites for evaluating gender relevance of TK law and policy. The lack of TK protection and consequent misappropriations have a major impact on the economics of saffron and carpet production, which, in turn, have significant gender impacts for women whose cultural identity, social experiences, and economic life are entangled with saffron and carpet production. In other words, the impact of TK misappropriation is directly felt by rural and local women whose financial survival depends on TK-based production, such as saffron and handwoven carpets. Given this impact, taking into account these women's needs and interests while designing legal mechanisms, policies, and programs can lead to their economic empowerment and their improved social life. Moreover, due to male outmigration, the majority of the rural households in Iran are headed by women, and they play a significant role in the rural economy of a developing nation like Iran. Integrating their interests, needs, and priorities in the TK decision-making process is essential to empowering and facilitating their contribution to sustainable rural development and reduction of rural poverty.

1.2 Literature Review

Despite the availability of numerous studies examining gender roles in various sectors such as agriculture and cultural production, it is not an easy task to make the case for women's inclusion in TK protection discussions, mainly due to the fact that the literature dealing with women and TK is highly dispersed and fragmented across disciplines where an IP law focus is usually missing.⁹³ Of the various anthropological studies on specific communities and specific women, none looks at the issue from an IP law perspective. Some examine the issue from an economic perspective; for example, there is an article on traditional herbal medicine in Indonesia.⁹⁴ This article analyzes the impact of women's enterprises active in the traditional herbal sector (Jammu) in Indonesia in terms of household revenues and social status. The study focuses on the challenges that local women face in their commercial activities. It does not, however, address the legal challenges that these women face due to lack of protection of TK. Conversely, when the issue of TK is examined from a legal lens, the gender component is often missing. There are numerous doctoral theses written on TK from a legal perspective; however, none addresses the gender aspects of TK.⁹⁵ In fact, gender analyses of TK are limited in the IP literature. This is partly due to the fact that until

⁹³ In the course of my literature review, I tried to familiarize myself with the interdisciplinary studies regarding women's role in rural agriculture, food and nutrition security, and biodiversity conservation. See e.g. Carolyn E. Sachs, *Gendered fields: Rural Women, Agriculture, and Environment* (Boulder: WestviewPress, 1996); and J. Price Gittinger, *Household Food Security and the Role of Women* (Washington, D.C.: World Bank, 1990). Despite their significance in examining gender aspects of sectors such as rural agriculture, food security and nutrition and biodiversity, none of them addresses the issue from a legal perspective.

⁹⁴ Maria Costanza Torri, "The JAMU System in Indonesia: Linking Small-Scale Enterprises, Traditional Knowledge and Social Empowerment Among Women in Indonesia" (2012) 13:1 *Journal of International Women's Studies* 32.

⁹⁵ For finding theses in law on TK, I used the ProQuest dissertation and theses database. See e.g. Charles Kamau Maina, *The Traditional Knowledge Protection Debate: Identifying and Listening to the Voices of Traditional Knowledge Holders* (PhD Thesis, University of Western Ontario, 2009) [unpublished]; G. Young-Ing, *Intellectual Property Rights, Legislated Protection, Sui Generis Models and Ethical Access in the Transformation of Indigenous Traditional Knowledge* (PhD Thesis, University of British Columbia, 2006) [unpublished]; Aman Gebru, *Intellectual Property, Traditional Knowledge, and Bioprospecting: Searching for Efficient Balance of Rights* (PhD Thesis, University of Toronto, 2017) [unpublished].

about two decades ago, feminist scholarship was rarely engaged with IP law. The next part provides an overview of the literature on IP and gender, followed by a close examination of the limited legal scholarship on “women and TK” demonstrating women’s invisibility in this area.

1.2.1 Gender and IP

Until about 15 years ago, the words “copyright,” “patent” or “intellectual property” hardly, if ever, appeared in feminist scholarship. Similarly, intellectual property scholars seldom used feminist interpretations to examine IP laws.⁹⁶ Critical intellectual property studies and feminist legal scholarship used to be seen as two parallel tracks at a considerable distance from one another mainly due to the long-standing tradition of using a “law and economics” method in the field of IP.⁹⁷ Moreover, the fact that, unlike other areas of the law – such as family law that addresses gender equality directly–, IP laws do not, at face value, mention gender, has also created the common perception that IP laws are gender neutral. The legal provisions themselves make no reference to women or men. The growing body of feminist IP scholarship, however, has pursued IP and feminism, as two once seemingly parallel tracks, to some point of convergence.⁹⁸ In the words of Swanson, “the simple truth [is] that intellectual property law is no different than any other area of law... and that its formal gender neutrality does not mean that there is nothing to be

⁹⁶ See Ann Bartow, “Likelihood of Confusion” (2004) 41 San Diego Law Review 72 at 77 encouraging legal scholars to take an interest in the way feminism may help interpret the law, providing examples from trademark decisions.

⁹⁷ See William M. Landes and Richard A. Posner, *The Economic Structure of Intellectual Property Law* (Cambridge: Harvard University, 2003) for economic justifications of IP protection. *Contra* Madhavi Sunder, “IP3” (2006) 59 Stanford Law Review 257 at 312 arguing for a cultural analysis of intellectual property law in order to fully capture struggles over intellectual property rights.

⁹⁸ One of the most recent publication in this area is the book *Diversity in Intellectual Property: Identities, Interests, and Intersections* that includes an entire section on gender and IP. Irene Calboli & Srtvidhya Ragavan, eds, *Diversity in Intellectual Property: Identities, Interests, and Intersections* (Cambridge: Cambridge University Press, 2015).

considered with respect to IP and gender.”⁹⁹ Adopting a feminist lens in analysis of IP laws sheds light on the underlying social structures embedded in theories of IP that would remain unseen if we were to continue to employ the traditional economic method of analysis in the discourse. In other words, such a lens forces us to critically examine the social history of the IP system and the rationale behind its current design and how the gender deficit should be addressed. As Deborah Halbert puts it:

Feminist theory can make visible the underlying masculine assumptions existing in our construction of intellectual property as well as highlight a political economy of intellectual property that has historically benefited men more than women. Furthermore, the value of a feminist analysis is that it can be used politically—to think actively about what the future may hold by avoiding choices that privilege men more than women.¹⁰⁰

Concerned with distributive implications of intellectual property law for women, the IP/Gender symposia,¹⁰¹ held annually since 2004, have aimed at addressing this failure and, as Swanson believes, have been successful in calling attention to the gender dimensions of IP laws.¹⁰² To provide an overview of the existing contributions to this area, she has classified them into three categories:¹⁰³ (1) Those analyzing gender disparity mainly arguing that women are receiving fewer IPRs than men,¹⁰⁴ (2) Those analyzing judicial decisions arguing that the application of IP

⁹⁹ Kara. W. Swanson, “Intellectual Property and Gender: Reflections on Accomplishments and Methodology” (2015) 24:1 American University Journal of Gender, Social Policy & the Law 175 at 182.

¹⁰⁰ Halbert, “Feminist Interpretations,” *supra* note 43 at p 434.

¹⁰¹ A series of symposia that have been jointly sponsored since 2004 by the American University’s Washington College of Law, Program on Information Justice & IP, the Women and the Law Program & the Journal of Gender, Social Policy & the Law. These symposia (the last of which was in 2015) were organized jointly by the Women and the Law Program, the Program on Information Justice and Intellectual Property, and the Journal of Gender, Law, and Social Policy, <<http://www.pijip.org/ip-gender/>> (last visited Feb. 2019).

¹⁰² See generally Swanson, “Intellectual Property,” *supra* note 99.

¹⁰³ In my search to gather feminist IP works, I found two bibliographies, namely, IP/Gender Bibliography prepared by American University Washington College of Law” last updated March 2016 and WIPO’s IP/Gender Bibliography, <https://www.wipo.int/women-and-ip/en/academic_resources/>.

¹⁰⁴ Data from WIPO show that less than 20% of all international patent applications includes women inventors. See Bruno Lefeuvre et al, “Women and the international patent system: encouraging trends”, (2018) WIPO Magazine, <https://www.wipo.int/wipo_magazine/en/2018/02/article_0008.html>. In the USA, women are receiving fewer than 11% of patents issued. See e.g. Annette I. Kahler, “Examining Exclusion in Woman-Inventor Patenting: A Comparison of Educational Trends and Patent Data in the Era of Computer Engineer

doctrines to gendered and sexualized subject matters is discriminatory,¹⁰⁵ and (3) Those analyzing the gendered nature of IP doctrines themselves, arguing that the expansive doctrine of IP in aspects such as IP subject matter suddenly narrows when it comes to those forms of creating and knowing that are labeled as feminine.¹⁰⁶

Falling under the third category, my research criticizes the lack of recognition of TK under the current IP regime. The critique is different than, but complementary to, the critiques arguing that TK as a non-Western system of knowledge has been disregarded mainly because the current IP regime is designed to privilege only Western ways of creating and knowing. As Burk aptly puts it, the IP system draws the line between creativity that is rewarded and creativity that is not, and “the places where lines have been drawn may tell us something about the reason for the lines, which in turn tells us something about the implicit values held by society and by ourselves.”¹⁰⁷ In the same vein, Halbert asserts that the feminist critique of IP “...is quite a radical critique of the

Barbie” 19:3 American University Journal of Gender, Social Policy & the Law. 773 at 775-76, 778,782. For works examining the gender disparity in receiving IP, see also B. Zorina Khan, “‘Not for Ornament’: Patenting Activity by Nineteenth-Century Women Inventors” (2000) 31 J. Interdisciplinary Hist. 159 at 165 noting that only 77 patents issued to women between 1790 and 1860; see also Deborah J. Merritt, “Hypatia in the Patent Office: Women Inventors and the Law 1865-1900” (1991) 35 American Journal Legal History 235.

¹⁰⁵ See e.g. Pollack, “Towards a Feminist Theory of the Public Domain,” *supra* note 83 at 607–9; Rebecca Tushnet, “My Fair Ladies: Sex, Gender, and Fair Use in Copyright” (2007) 15 American University Journal of Gender, Social Policy & the Law 273 at 275, 303-04; see also Madhavi Sunder, “Intellectual Property and Identity Politics: Playing With Fire” (2000) 4 Journal of Gender Race & Justice. 69 at 71. See e.g. Kara W. Swanson, “Getting a Grip on the Corset: Gender, Sexuality, and Patent Law” (2011) 23:1 Yale Journal of Law and Feminism Article 3.

¹⁰⁶ See e.g. Shlomit Yavinsky-Ravid, “Eligible Subject Matter - Gender Analysis of Patent Law: International and Comparative Perspectives” (2011) 19 American University Journal of Gender, Social Policy & the Law 851 at 866–70; Foster, “Situating Feminisms,” *supra* note 60; see also Shelley Wright, “A Feminist Exploration of the Legal Protection of Art” (1994) 7 Canadian Journal of Women & the Law 59 at 61; and Bitu Amani, “Disabused of Copyright’s Use?: Not Quite, but You Had Me at Non-Use” (2016) 29:1 Intellectual Property Journal 141, where she examines gendered and racialized impacts of copyright doctrines and argues dual copyright citizenship exists for some cultural producers as authors in law, while others are simply authors in fact and noting the limits of rights rationales in explaining authorship in terms of an equality of authors.

¹⁰⁷ Burk, “Feminism and Dualism,” *supra* note 60 at p 187.

boundaries determined by IP law which are typically boundaries that tend to divide and control instead of facilitate exchange.”¹⁰⁸

In other words, through exposing the power relations embedded in the construction of knowledge, feminist critiques of IP question the status quo as a universally applicable framework for knowledge production and protection by opening the door toward many other possible avenues.¹⁰⁹ Such a perspective calls for re-evaluation of the current IP system and consideration of alternatives that can be used by both women and men whose knowledge is not appreciated within what is considered to be the only possible path to protect creative work, i.e., the existing IP system. Similarly, Firestone criticizes the current knowledge system in which women’s engagement in it must conform to the knowledge production standards that men set, asserting “[women] have had to do so on male terms. In fact, they have had to compete as men, in a male game.”¹¹⁰ Consequently, if women want their innovation and creativity (knowledge production) to be rewarded they should conform and act within the borders of the current IP system. They can be patent and copyright holders in a way equal to their male counterparts as long as they conform to the masculine definitions of invention, creativity, and patentable subject matters,¹¹¹ and similar categories.

Although Swanson’s classification makes it easy to distinguish the different types of feminist scholarly contributions in the realm of IP/gender issues, it does not necessarily provide

¹⁰⁸ Halbert, “Feminist Interpretations,” *supra* note 43 at 446.

¹⁰⁹ See *The Science Question*, *supra* note 61 at 136 suggesting that feminist science or epistemology could exist as an “alternative mode of knowledge-seeking” that would eliminate the dichotomy that currently exists in society between males and females. Feminist epistemologies, according to Sandra Harding, “can be used to undercut the legitimacy of the modernist epistemologies, which explicitly ignore gender while implicitly exploiting distinctively masculine meanings of knowledge-seeking.”

¹¹⁰ Shulamith Firestone, *The Dialectic of Sex: The Case for Feminist Revolution* (New York: Bantam Books, 1971) at 176–78.

¹¹¹ For a feminist analysis of the current definition of eligible patentable subject matter see Yavinsky-Ravid, “Eligible Subject Matter,” *supra* note 106.

us with a clear image of what an IP system that is informed by such feminist analyses might look like. In fact, a feminist perspective offers alternative paths to reimagining the IP system. This is to some extent due to the fact that not all feminist critiques of IP have the same vision of the ultimate IP system.¹¹² While some feminists, such as women authors and inventors themselves, may receive benefits from IP laws and advocate for expansion of IPRs to cover what is called feminine forms of creativity, including more women-centered subject matters like weaving, others have different visions in mind and criticize such expansion as they believe the underlying principles of the current IP system that are built upon commodification and market efficiency are contrary to their feminist goals.¹¹³ This is not to say that all branches of feminism are anti-intellectual property or anti-commercial.¹¹⁴ In fact, as Tatum Lindsay envisions, there are four possible scenarios that feminist/IP critiques might pursue:¹¹⁵

- (1) A complete abolition of IP laws: This option aims at complete and direct rejection of the notion that intellectual production should be regulated, protected, bought, disputed and commodified. The rationale behind such an approach is that by privileging no one's IP, in fact, all IP is privileged.
- (2) Elimination of royalties and specific protections to individuals, but not the IP law itself. The reason for eliminating royalties gained from registered works is to redefine the participation in a system that traditionally privileges men.
- (3) A fundamental ideological shift through which the IP system recognizes communal and other forms of creativity by assigning them equal protections. This can be achieved through

¹¹² Halbert, "Feminist Interpretations," *supra* note 43 at 433.

¹¹³ See generally Marxist feminism. For a critical analysis of this school of thought, see Hartmann, "The Unhappy Marriage," *supra* note 82.

¹¹⁴ Craig, Turcotte, and Coombe, "What is Feminist," *supra* note 59 at 21–22.

¹¹⁵ Tatum Lindsay, "Imagining Feminist Intellectual Property" (2014) 4th Print Issue of *Bluestockings Magazine*.

working within the existing framework of the law and rewriting these laws to include provisions for collective work.

- (4) And finally, a quota system that would ensure that women are equally represented both as owners of IPRs in the world and leaders in IP governance. This solution aims to address gender disparity and the fact that women constitute only a minority of IPRs holders.

Feminists holding a relational view of innovation and creativity would envision the first scenario and support movements such as Open Access and Creative Commons.¹¹⁶ In fact, Carys J. Craig et al have extensively examined the synergies between a feminist relational view of creativity and the vision that inspired the Open Access movement.¹¹⁷ According to the Open Access movement, the constant expansion of IPRs has hindered access to knowledge and information through excessive control mechanisms that are justified under the slogan of incentivizing innovation and creativity. Such control mechanisms defeat the purpose, particularly in the fields where creativity and innovation are triggered by other cultural and economic incentives.¹¹⁸ In a similar vein, Ann Bartow argues that existing IPRs hinder the development and application of

¹¹⁶ Craig, Turcotte, and Coombe, “What is Feminist,” *supra* note 59 at 16.

¹¹⁷ Relational conceptions of innovation and creativity are in harmony with both open access initiatives and feminist theories that challenge the existing IP system. Among other commonalities is their emphasis on the significance of a ground up, grass roots and participatory approach to social change. As Carys J. Craig et al [in Craig, Turcotte, and Coombe, “What is Feminist,” *supra* note 59 at 29] put it: “Both movements value information, communication, and dialogic participation as sources of empowerment.”

¹¹⁸ See Elizabeth L. Rosenblatt, “A Theory of IP’s Negative Space” (2011) 34:3 *Columbia Journal of Law & the Arts* 317. Rosenblatt describes some areas as IP’s “negative space”: areas in which creation and innovation thrive without significant protection from IP law. Much research has been undertaken on the subject and industries such as fashion designing, magic shows, standup comedy, haute cuisine, jam bands, street art (graffiti), etc. are now recognized as a few of the negative spaces of IP law. See e.g. Kal Raustiala & Christopher Sprigman, “The Piracy Paradox: Innovation and Intellectual Property in Fashion Design” (2006) 92 *Virginia Law Review* 1687; Jacob Loshin, “Secrets Revealed: How Magicians Protect Intellectual Property Without Law” in Christine A. Corcos, ed, *Law and Magic: A Collection of Essays* (Durham, N.C.: Carolina Academic Press, 2010) 123–142; Dotan Oliar & Christopher Sprigman, “There’s No Free Laugh (Anymore): The Emergence of Intellectual Property Norms and the Transformation of Stand-Up Comedy” (2008) 94 *Virginia Law Review* 1787.

knowledge.¹¹⁹ Moreover, it is argued that, in this highly connected world, accessibility and communicative exchange are necessary elements of knowledge production. This requires a revision of the neo-liberal conception of IPRs, which operates based on marketplace exchange instead of relations of communication.¹²⁰

Some feminist critics, on the other hand, may call for a total re-evaluation of innovative, creative, technical, and skilled work. In other words, instead of focusing attempts on women's inclusion in work currently defined as skilled, innovative, creative, and technical, they believe efforts should be directed toward recognizing many of women's traditional tasks as skilled and technical so that they can be given appropriate recognition under the IP system. Their view originates from the fact that current IP system is formed based on dualistic assumptions (such as mind/body and culture/nature, discussed in the previous section), elevates mental over physical effort (mind/body), and ties recognition and reward to participation in a specific step of the creative process. As a result, any other forms or steps of the creative process are excluded, invisible, and unrecognized.¹²¹ Not surprisingly, those that are excluded from the "creative process" (as defined by the current IP system) are those in positions of lower status and pay, and, in many cases, may be predominantly women. In other words, mapping legal recognition of innovation and creativity onto false dichotomies leads to turning a blind eye to the contribution of a large portion of the population whose work either is located on the feminized side of the pairs ("body" and "nature") or whose contribution does not match the IP system's individualistic, idealized, and romantic vision of creative production.¹²² TK is one such area where communal and collective innovative

¹¹⁹ Ann Bartow, "Open Access, Law, Knowledge, Copyrights, Dominance and Subordination" (2006) 10 *Lewis & Clark Law Review* 869 at 873-4.

¹²⁰ See Shalini Venturelli, "Cultural Rights and World Trade Agreements in the Information Society" (1998) 60:1 *Gazette: International Journal for Communication Studies* 47.

¹²¹ See Jerban, "Unseen and Unrecognized," *supra* note 64.

¹²² Bartow, "Fair Use," *supra* note 65 at 552.

and creative activities of Indigenous and local people in which women play an important role have been excluded from protection and the reward system of IPRs. The following part examines the limited literature on TK and gender.

1.2.2 Gender and TK

The question of how to protect TK has been examined within the circle of IP scholars for a long time. However, the topic of ‘women and TK’ has not yet constituted a subset of IP scholarship and the issue has remained mostly overlooked. For example, in one of the important collections on TK, *Valuing Local Knowledge: Indigenous People and Intellectual Property Rights*,¹²³ 12 out of 15 chapters are allocated to TK and genetic resources, yet none of them addresses gender. This lack of IP scholarship on gender and TK is worrying. It means that the issue of ‘women and TK’ is in a dark corner of IP literature, which, in turn, has led to an increasing risk of designing TK law and policy that are not informed by the ongoing realities of Indigenous and local women’s lives. There are a few exceptions though, where the issue of TK is examined through a gender lens; for example, Boatema Boateng, in her article “Walking the Tradition-Modernity Tightrope: Gender Contradictions in Textile Production and Intellectual Property Law”¹²⁴ and her later book,¹²⁵ asserts that, regardless of the gender identities of those who actually produce and hold TK, traditional knowledge is feminized in the encounter with the paternalistic

¹²³ Stephen B. Brush and Doreen Stabinsky, eds, *Indigenous Peoples and Intellectual Property Rights* (Washington, D.C.: Island Press, 1996).

¹²⁴ Boatema Boateng, “Walking the Tradition-Modernity Tightrope: Gender Contradictions in Textile Production and Intellectual Property Law” (2007) 15 *American University Journal of Gender, Social Policy & the Law* 341.

¹²⁵ Boatema Boateng, *The Copyright Thing Doesn't Work Here: Adinkra and Kente Cloth and Intellectual Property in Ghana* (London, Minneapolis: University of Minnesota Press, 2011). In five chapters, along with an introduction and conclusion, Boateng focuses on why the one-size-fits-all approach of IP law is ill-suited for protecting TK in this case: the knowledge of producers of the renowned cloths, adinkra and kente (see Chapter 2, Boatema Boateng, “The Women Don’t Know Anything!: Gender, Cloth production, and Appropriation” in *The Copyright Thing Doesn't Work Here: Adinkra and Kente Cloth and Intellectual Property in Ghana* (London, Minneapolis: University of Minnesota Press, 2011) 67–90).

state and with masculinized modern knowledge.¹²⁶ In her article and chapter 2 of her book, Boateng describes Ghanaian men's production of traditional kente and adrinka cloth and the ways in which these textiles have gained IP protections.¹²⁷ She examines the peculiar features of this Ghanaian case where, in the case of adinkra and kente, even though these fabrics are produced by men, the traditional production is feminized and has led to an unusual situation. She argues that, contrary to the trend in many instances of appropriation of Indigenous cultural production, gendering has occurred in ways that empower women rather than men, as in this case women are operating in a masculinized sphere of modern production.

Building on my fieldwork results, I take Boateng's argument regarding TK being feminized in contrast to modern knowledge a level further by arguing that, when TK is held and practised by women, an extra layer of TK marginalization occurs. To date, the significance of women's contribution in the form of TK has not been recognized, which has led to women's TK being a doubly-marginalized category of knowledge. This double marginalization, in turn, challenges the assumption that any gender-neutral TK protection mechanism will benefit Indigenous and local women directly and automatically.¹²⁸ My research undertakes a gender impact assessment,¹²⁹ which is an estimation of the different effects (positive, negative or neutral) of the current approach to TK law and policy in terms of gender equality. The research calls for mainstreaming gender in TK law and policy to ensure that Indigenous and local women's interests as the holders of this doubly-marginalized category of knowledge is taken into account.

¹²⁶ Boatema Boateng, "The Women Don't Know Anything!: Gender, Cloth Production, and Appropriation" in Boateng *The Copyright Thing Thing Doesn't Work Here*, *supra* note 125 at 69.

¹²⁷ See also Boateng's later book: Boateng, *The Copyright Thing Doesn't Work Here*, *supra* note 125.

¹²⁸ The record of tangible property appropriation can easily prove this point that women are likely to be the last to benefit from related compensation under any regulatory schemes. For discussions about patriarchal property rights, see e.g. Hilary Lim & Ann Bottomley, eds, *Feminist Perspectives on Land Law* (Routledge-Cavendish, 2007).

¹²⁹ See footnote 80 above on Gender Impact Assessment (GIA).

Shubhra Gururani, on the other hand, in her 2002 article, claims that traditional knowledge is becoming gendered since some development agencies are beginning to connect their agendas on gender to their agendas on traditional knowledge.¹³⁰ Gururani's article is more focused on development aspects of TK rather than IP protection. Krishna Pidatala and Aisha Rahman Khan also have a short article on women's traditional medicinal knowledge.¹³¹ Like Gururani's, this piece also lacks an IP perspective and is more focused on development aspects of the topic, criticizing the male perspective of existing development initiatives. Gururani's article is not focused on the recognition of women's traditional knowledge; rather, she problematizes equating TK with women. She believes that, instead of what she calls "fetishising local women as embodiment of special knowledge,"¹³² the well-guided project of women's empowerment must attend to the cultural context in which women have held this knowledge.¹³³ It is noteworthy that my research acknowledges that women do not have a monopoly over TK and that TK may be held primarily by men or by both men and women. Neither does my research argue that women's traditional knowledge is "special" and therefore deserves higher protection than other forms of knowledge; rather, it aims to introduce Indigenous and local women as a group of TK holders to the discussions of TK protection in order to ensure that their interests are taken into account in evaluating potential approaches to recognition and protection of TK in IP law and policy. In doing so, my research builds upon qualitative cross-cultural data to examine women's role in TK and

¹³⁰ Shubhra Gururani, "Construction of Third World Women's Knowledge in the Development Discourse" (2002) 54 *International Social Science Journal* 313 at 314.

¹³¹ Krishna Pidatala & Aisha Rahman Khan "Women and Indigenous Knowledge: A South-South Perspective" (2003) 63 *IK Notes World Bank*.

¹³² Gururani, "Construction of Third World," *supra* note 130 at 321.

¹³³ See generally, Gururani, "Construction of Third World," *supra* note 130.

how it should shape the design of the TK protection mechanism in a way that leads to women's empowerment. As Margaret Chon states:

...there are very very few that are on the ground, that ethnographic sort of narratives that allow us to extrapolate of what we might want an IP system to do for us [to protect TK]? Or what kind of IP tools we might want to deploy [for protection of TK]...¹³⁴

Laura Foster is among the first to have addressed TK and gender from an IP law perspective. She brought gender into the discussion about TK in the context of breast cancer gene patents.¹³⁵ She examines the Khomani San women's contribution to traditional practices in the case of the Hoodia plant as an example to argue that recognition of their knowledge and practices is a valuable counterhegemonic strategy. She believes such acknowledgment can work to disrupt neoliberal mechanisms that construct what counts as valuable knowledge regarding the plant.¹³⁶ Terra L. Gearhart-Sema, in "Women's Work, Women's Knowing: Intellectual Property and the Recognition of Women's Traditional Knowledge," also examines the issue of women's traditional knowledge. Her main argument is that "women should not have to inhabit the largely Western and male-dominated paradigm of the scientific inventor in order to gain recognition for and avoid exploitation of their knowledge by commercial actors in the international marketplace."¹³⁷ Although both Gearhart-Sema's and Foster's articles establish the necessary foundational block for my research by identifying TK that women have possessed for generations as a "gendered cultural possession" deserving of a place in the international IP regime, neither of them tackles the

¹³⁴ "10th Annual IP/Gender: Gender and the Regulation of Traditional Knowledge" (March 20, 2014), <<http://www.pijip.org/events/ipg2014/>> at 00h:37m:41s.

¹³⁵ The story of Hoodia involves a plant known for generations by the San peoples in Southern Africa to suppress appetite. For more detail about how Hoodia's properties became patented, see Laura A. Foster, "Patents, Biopolitics, and Feminisms: Locating Patent Law Struggles Over Breast Cancer Genes and the Hoodia Plant" (2012) 19 International Journal of Cultural Property 371.

¹³⁶ Foster, "Patents, Biopolitics," *supra* note 135 at 389.

¹³⁷ Terra L. Gearhart-Sema, "Women's Work, Women's Knowing: Intellectual Property and the Recognition of Women's Traditional Knowledge" (2009) 21:2 Yale Journal of Law & Feminism 372 at 373-74.

issue from a international policy perspective where concrete recommendations supported by empirical research are provided. Written respectively in 2009 and 2012, Gearhart-Sema's and Foster's articles do not address the lack of gender-sensitivity of the international developments in the realm of TK protection in various fora. Consequently, no critical examination of such developments is available in their work to enable them to come up with recommendations on how the ongoing developments can lead to an international legal instrument that is gender-responsive. Building on Gearhart-Sema's and Foster's work, my research aims to bridge theory and the lived realities of TK holders through examining two case studies and by conducting a gender impact assessment resulting in recommendations for gender mainstreaming in TK law and policy.

A critical examination of the legal developments, in the realm of TK protection, especially in the current negotiations at WIPO, is a missing point in the limited scholarship on 'women and TK.' This is also true even in the works of Vandana Shiva, who is a prolific writer in the area of women's knowledge in biodiversity conservation, which constitutes a large portion of women's TK.¹³⁸ She believes "capitalist patriarchy"¹³⁹ is threatening biodiversity and is ignoring women's contribution and potential in conservation of biodiversity. In *Biopiracy: The Plunder of Nature and Knowledge*, she explains how Indigenous culture is being subordinated by Western corporations, which can be likened to the subordination that women face in patriarchal knowledge systems.¹⁴⁰ Despite the significance of her scholarship in calling attention to women's contribution to biodiversity, Shiva's work does not focus on the issue from a legal/IP perspective. Backed by evidence from fieldwork, my research takes Shiva's critiques regarding the lack of recognition of

¹³⁸ Bhagwati Uniyal and Vandana Shiva, "Traditional Knowledge on Medicinal Plants among Rural Women of the Garhwal Himalaya" (2005) 43:3 Indian Journal of Traditional Knowledge 259.

¹³⁹ Vandana Shiva, "Women's Indigenous Knowledge and Biodiversity Conservation" (1992) 19 India International Centre Quarterly 205 at 205.

¹⁴⁰ Vandana Shiva, *Protect or Plunder? Understanding Intellectual Property Rights* (London: Zed Books, 2001).

women's contribution in the form of TK one step further by examining how this lack of recognition impacts women in terms of access to resources and participation in decision making and how a gender perspective can be integrated into TK law and policy.

Deborah Luce's thesis, titled "Gender and Global Biodiversity from 'Women and Plant' to International Law," investigates the source of women's ecological knowledge in Latin American rural villages and identifies characteristics of this knowledge by exploring ethnographic case studies.¹⁴¹ Looking from a development studies lens, the thesis mainly addresses biodiversity conservation as a development objective for which giving rural women in Latin America and the world a voice in the international arena is essential. The dissertation addresses the issue from a legal perspective, exploring how international law should respond to the issue of women and biodiversity. However, the thesis is silent when it comes to the IP aspect of the issue. Moreover, written in 2010, the thesis lacks any analysis regarding the current negotiations such as those happening at WIPO-IGC, a gap that my thesis aims to fill.

To date, there are only a very few reports and notes produced by international fora where gender and TK can be seen together. For example, in a very brief note (only four pages),¹⁴² linked to the World Bank, it is briefly mentioned that policies and initiatives that ignore gender dimensions of TK can have serious implications. The United Nation's Development Program (UNDP)'s document entitled "Gender Dimensions of Intellectual Property and Traditional Medicinal Knowledge,"¹⁴³ which is mainly focused on the issue of traditional medicine, concludes that inequalities between women and men and their different gender roles with respect to TK have generated different levels of access to medical plants and genetic resources in many countries.

¹⁴¹ Deborah Luce, *Gender and Global Biodiversity from 'Women and Plant' to International Law* (MA Thesis, University of Ottawa School of Globalization and International Development, 2010) [unpublished].

¹⁴² Pidatala and Rahman Khan, "Women and Indigenous Knowledge," *supra* note 131.

¹⁴³ Gibb, "Gender Dimensions of," *supra* note 18.

Written in 2007, the UNDP document stops at being a descriptive piece, without providing any recommendations on how to integrate a gender perspective into the design of legal instruments and into the implementation of programs and projects in the field of TK. It is fair to say that the gender equality dimension of TK has received no focused attention in international fora, despite the serious equality issues underlying the apparently technical, gender neutral, legalistic and administrative decision-making processes in the realm of TK. Since my thesis examines traditional knowledge practices in two cases of saffron and handwoven carpet production in Iran, the following parts examine the literature relating to women, TK, agriculture and textile.

1.2.3 TK and Agriculture

A considerable body of work examining the intersection of intellectual property, traditional knowledge, and agriculture already exists. However, this body of scholarship often misses the gender angle. Graham Dutfield's book, *Intellectual Property, Biogenetic Resources, and Traditional Knowledge*, is a comprehensive examination of the key issues, institutions and ideologies in the area of biogenetic resources, focusing on biogenetic resources and TK from an IP perspective. Despite the breadth of its coverage, the gender aspects of TK are not raised in the book. The recent book, *The Role of Intellectual Property Rights in Agriculture and Allied Sciences*,¹⁴⁴ has a chapter on TK and IP, but similarly makes no reference to women and gender. Teshager Dagne's book, *Intellectual Property and Traditional Knowledge in the Global Economy: Translating Geographical Indications for Development*, has a chapter on protecting traditional knowledge-based agricultural products.¹⁴⁵ However, the role of women in agriculture and its

¹⁴⁴ Chandan Roy, *The Role of Intellectual Property Rights in Agriculture and Allied Sciences* (Apple Academic Press, 2018) 130-156, Chapter 4.

¹⁴⁵ Teshager W. Dagne, "Traditional Knowledge-based Agricultural Products and Geographical Indications Law" in Teshager W. Dagne, *Intellectual Property and Traditional Knowledge in the Global Economy: Translating Geographical Indications for Development* (London: Routledge, 2015). For more general discussions on women, agriculture, and food see Bitu Amani, "Eat This! Gender Inequality, Culture, and the Politics of

implications from a legal perspective are not mentioned in any of the discussions throughout the book.

1.2.4 Gender and Agriculture

Studies on women's role in agriculture and their knowledge in this area can be found in other disciplines, but these do not address the legal perspective. Much of the best-known research is often carried out within the fields of ethnobotany, ethnobiology, and ethnoecology but is also present in many other disciplines. Not surprisingly, such studies do not integrate the information from the IP law field.

Patricia Howard's book, *Women and Plants*, for example, provides a range of case studies from across the globe that is based on field research and examines the vital role played by local women around the world, their agricultural wisdom of the past, and the diversity of plants that have been used for both food and medicine. The book shows that, in most parts of the world, it is mainly women who are wild plant gatherers and managers, home gardeners, and plant domesticators, herbalists and healers, as well as seed custodians. Although the book lacks the legal perspective that is adopted by this research, it provides detailed information regarding the gender difference in the realm of agriculture and serves as a solid departure point for one of my research assumptions, namely that, "gendered traditional knowledge exists." In addition to Howard's book, there is a body of scholarship examining women's TK in a specific community and regarding a specific crop. For example, Zimmerer's study of potato cultivars in Andean Peru finds that women almost exclusively manage potato and maize seed in the community and also that male outmigration in search for paid labour elsewhere widens the plant knowledge gap between men

Food" in Heather McLeod-Kilmurray et al (eds) *Food Law and Policy in Canada* (Toronto: Thomson Reuters, 2019), 409–430.

and women farmers.¹⁴⁶ The Special Issue of the *Singapore Journal of Tropical Geography*¹⁴⁷ includes six articles on gender and agrobiodiversity where gendered knowledge among farm families and communities on three different continents is examined. The aforementioned works on gender and agriculture show the extent of gendered knowledge involving seed selection, seed saving, and traditional plant use for food and medicinal purposes at the global level. Despite such a global reach, however, women and their interests are yet to be taken into account when TK law and policy are being formulated.¹⁴⁸

1.2.5 TK and Textile

Generally, most of the literature on TK concerns its genetic, medical, agricultural, and scientific aspects. Considerably fewer books¹⁴⁹ are devoted to traditional cultural expressions (TCE) and IP, and even fewer focus on one specific category or subset of TCEs, such as textile production. One of the most recent books, *Traditional Knowledge in Modern India* has a section where the history of Banarasi Saree as an Indian cultural textile is examined.¹⁵⁰ The section examines the evolution of IP protection for this cultural product; however, throughout the section there is no mention of gender and women, despite the fact that a Saree is women's apparel. In her doctoral thesis, "Stepping Outside the Box: Traditional Knowledge, Folklore, Indigenous Textiles

¹⁴⁶ Karl Zimmerer, *Seeds of Peasant Subsistence: Agrarian Structure, Crop Ecology and Quechua Agriculture in Reference to the Loss of Biological Biodiversity in the Southern Peruvian Andes* (PhD Thesis, 1988) [unpublished].

¹⁴⁷ Introduction to the Special Issue, Gender and Agrobiodiversity, *Singapore Journal of Tropical Geography* (March 2007).

¹⁴⁸ See e.g. Deda and Rubian, "Women and Biodiversity," *supra* note 91 at 201–204.

¹⁴⁹ Notable books that consider traditional cultural expressions are Barbara T. Hoffman, ed, *Art and Cultural Heritage: Law, Policy, and Practice* (New York: Cambridge University Press, 2006); Silke von Lewinski, ed, *Indigenous Heritage and Intellectual Property: Genetic Resources, Traditional Knowledge, and Folklore* (The Hague: Kluwer Law International, 2004); J. Michael Finger & Philip Schuler, eds., *Poor People's Knowledge: Promoting Intellectual Property in Developing Countries* (Washington, D.C.: World Bank, 2004).

¹⁵⁰ Nirmal Sengupta, "Traditional Cultural Expressions, Expressions of Folklore" in Nirmal Sengupta, *Traditional Knowledge in Modern India* (Springer, 2019) 127–152.

and Cultural Appropriation: Is There Room for Folklore Protection under Intellectual Property Law?”, Josephine Asmah focuses on traditional textiles as a branch of TK.¹⁵¹ The gender aspects of traditional textile production are not raised in her thesis even though textile production is one of the areas that is traditionally classified as “women’s work.” There are also a few works examining African traditional textiles such as Adinkra cloths,¹⁵² but none looks at the issue from a gender perspective, apart from Boatema Boateng’s work, which is examined in the following part.

1.2.6 Gender and Textile

Originating from the sexual division of labor and appointed gender roles, textiles have been viewed as “women’s work” for a long time. Historical studies show that women were responsible for the entire process of textile production, beginning with the cultivation of plants, their “harvesting, cleaning, spinning, dying, starching,”¹⁵³ and ending with the weaving of the yarns. Despite various studies across disciplines examining gender and textile, unfortunately the existing IP law literature on traditional textile does not look at the issue from a gender perspective. However, as mentioned earlier, Boatema Boateng, as one of the few authors studying “TK and gender” from a legal perspective, examines the unusual case of production of traditional kente and adrinka, which, unlike many instances of gendering cultural production, has occurred in ways that

¹⁵¹ Josephine Asmah, *Stepping Outside the Box: Traditional Knowledge, Folklore, Indigenous Textiles and Cultural Appropriation; Is There Room for Folklore Protection under Intellectual Property Law?* (LLD Thesis, University of Ottawa Faculty of Law, 2010) [unpublished]. See also Courtney Doagoo, *The Use of Intellectual Property Laws and Social Norms by Independent Fashion Designers in Montreal and Toronto: An Empirical Study* (PhD Thesis, University of Ottawa Faculty of Law, 2017) [unpublished].

¹⁵² See e.g. Julie Halls & Allison Martino “Cloth, Copyright, and Cultural Exchange: Textile Designs for Export to Africa at The National Archives of the UK” (2018) 31 *Journal of Design History* 236.

¹⁵³ Elizabeth Barber, *Women’s Work: The First 20,000 Years: Women, Cloth, and Society in Early Times* (New York: W.W. Norton & Company, 1994) at 161.

empower women rather than men, mainly because in this case women are operating in the realm of modern production and men use traditional methods of production.¹⁵⁴

Victoria F. Phillips's article "Commodification, Intellectual Property and the Quilters of Gee's Bend" also addresses the role that TK can play in the empowerment of Indigenous and local women. In her article, Phillips focuses on the distinctive quilts produced by African-American women in Gee's Bend, Alabama, and their introduction into the mass market.¹⁵⁵ Her article examines, among other things, whether commodification and introduction of the Gee's Bend quilts into the mass market have been beneficial to quiltmakers or has alienated part of their identity. In light of Phillips's article, I argue that, when it comes to the current TK protection debates, not all feminists argue for expansion of IPRs over TK. In fact, some feminists may argue against TK protection through IP because it entails commodification of such knowledge based on the classic tensions and contradictions between feminist goals and capitalism.¹⁵⁶ I believe the real question, however, is whether women TK holders will be forced into the marketplace and will be unknowingly alienating part of their identity, or whether they willingly deploy the power of the marketplace to ultimately improve their lives and community. The story of the quilters of Gee's Bend and the similar study of Nadia De Leon, "Molas: A Women's Global Folk Art," where she explores molas, a textile art of the Kuna Indians from Panama and how it has become an important

¹⁵⁴ Boateng, "Walking the Tradition-Modernity," *supra* note 124. See also Elisha Renne, "Traditional Modernity and the Economics of Handwoven Cloth Production in Southwestern Nigeria" (1997) 45:4 *Economic Development and Cultural Change* 773 at 775 (1997) describing how, in the Yoruba areas, excluding the Ekiti towns, weaving is viewed as a male's job.

¹⁵⁵ Victoria Phillips, "Commodification, Intellectual Property and the Quilters of Gee's Bend" (2007) 15 *American University Journal of Gender, Social Policy & the Law* 359.

¹⁵⁶ For discussions about how the social institutions of private property and capitalism lead to gender inequality and oppression, see Zillah R. Eisenstein, "Capitalist Patriarchy and the Case for Socialist Feminism" (1977) 7:3 *The Insurgent Sociologist* 2. See also Katharine Silbaugh, "Commodification and Women's Household Labor" in Martha Fineman, and Terence Dougherty, eds, *Feminism Confronts Homo Economicus: Gender, Law, and Society* (Ithaca, N.Y.: Cornell University Press, 2005) 338–372.

source of income for Kuna households, is instructive to inform the current debate over commodification of TK and also the ongoing search for a protection model.¹⁵⁷

The advantages and disadvantages of the propertization and commodification of TK (bound up with identity or personhood) should be considered carefully. In particular, the risks associated with the increasing propertization of traditional knowledge and cultural production is that the commodification of cultural identity has the potential to homogenize everything it touches and, in the process, remove all local meaning and context. On the other hand, the commodification of cultural identity also has the unique ability to empower ILCs and women within ILCs as can be seen in the case of the quilters of Gee's Bend and Kuna's molas producers where change from production-for-use to production-for-sale has transformed the communities' economy and the lives of the women who produce them. As Philips puts it, "in such respects, the traditional debate over whether or not to commodify is increasingly viewed in the new scholarship as an unhelpful distraction."¹⁵⁸

Professor Madhavi Sunder has observed that property law, at its core, is based on the recognition of a set of complex negotiations between equity and liberty, the desire for freedom and community, the right to exclude and the right of access, and tradition and modernity.¹⁵⁹ She argues that, given this foundation, we should not fear the rise in new intellectual property rights but instead should pay more heed to the social relationships at stake and the substantive and changing needs and desires of the individuals and communities involved.¹⁶⁰ Thus the type of relationship that any future TK protection mechanism creates and promotes is of critical importance from a gender

¹⁵⁷ Discussions around commodification of TK and also the ongoing search for a TK-protection model are extensively examined in Chapter 6 of the thesis.

¹⁵⁸ Phillips, "Commodification," *supra* note 155 at 373.

¹⁵⁹ See Madhavi Sunder, "Property in Personhood" in Martha Ertman and Joan Williams, eds, *Rethinking Commodification: Cases and Readings in Law and Culture* (New York: New York University Press, 2005) 301–326 at 172–73.

¹⁶⁰ See Sunder, "Property in Personhood" *supra* note 159 at 172–73.

perspective and requires a detailed assessment of women TK-holders' current situation and integration of their interests and concern in the TK law and policy.

1.3 Chapters Roadmap

The dissertation is divided into 7 chapters including this one. In chapter two I present the methodology and theoretical framework used in this thesis. Chapter three provides an overview of the existing legal framework on the protection of TK and explores whether and to what extent gender features in them. With Chapter Three revealing the extent of gender unawareness of the existing instruments, Chapters Four and Five build upon the two case studies of Persian handwoven carpets and saffron production to establish the gender relevance of TK law and policy. Using the results of the qualitative interviews, Chapter Four is focused on examining the local women's TK in handwoven carpets production and the role their TK plays in their life and also in the handwoven carpets' value chain. Chapter Five presents a similar examination of local women's role and their TK in saffron production, where the economic and cultural significance of local women's TK is highlighted through concrete real-life examples that came out of the in-person interviews. Chapter Six then relies on the case studies results to conduct a gender impact assessment of the current trend of gender unawareness in TK law and policy that is revealed earlier in Chapter Three. The gender impact assessment is an attempt to shed light on the impact of future developments in TK law and policy if they continue to ignore the gender aspects of TK. The inclusion of a gender perspective in TK law and policy makes visible the different ways in which women and men use, preserve, know, and participate in TK systems. The chapter then calls for gender mainstreaming in TK law and policy by providing recommendations on how to make both the process and content of TK law and policy gender responsive so that the potential of women's TK for empowerment of its holders comes closer to realization. It is through gender mainstreaming that a greater articulation of the rights of Indigenous and local women in TK instruments can occur

to empower them to protect their TK both defensively and positively. Chapter Seven then entails the conclusion of the thesis, talking about the journey that Indigenous and local women face, from invisible contributors to the TK system, to users of TK law and policy, and ideally to contributors to TK law and policy making.

CHAPTER 2: THEORETICAL FRAMEWORK AND RESEARCH METHODOLOGY

2.1 Theoretical Framework

Third World feminism, as a point where feminism and Third World Approaches to International Law (TWAIL) intersect, offers an interesting theoretical framework to examine the issue of TK from a gender perspective. The issue of TK misappropriation can be and is examined through a TWAIL perspective,¹⁶¹ which is “an attempt to understand the history, structure and process of international law from the perspective of Third World peoples and states.”¹⁶² But having it examined under Third World feminism brings Indigenous and local women’s TK into the picture. This is a piece that has been missing to date and can strengthen the TWAIL critique of the hegemonic nature of the current IP system. The reality that the majority of Third World women still live in poverty, in need and deprivation,¹⁶³ must drive TWAIL scholars’ interest in Third World feminists’ investigations. Such an approach can contribute to the overall TWAIL agenda as international law has yet to deliver on its promise to Indigenous and local women in the Third World. TWAIL’s minimal engagement with or negligence toward certain marginalized groups within the broader category of marginalized peoples of the Third World, such as Indigenous Peoples, has been criticized.¹⁶⁴ Further, women constitute a large percentage of the marginalized

¹⁶¹ See e.g. Ikechi Mgbefji, “Lost in Translation? The Rhetoric of Protecting Indigenous Peoples’ Knowledge in International Law and the Omnipresent Reality of Biopiracy” in Timothy Beatley et al, eds, *Accessing and Sharing the Benefits of the Genomics Revolution* (Dordrecht: Springer Netherlands, 2007) 111–143.

¹⁶² See Bhupinder S. Chimni, “The Past, Present and Future of International Law: A Critical Third World Approach” (2007) 8 *Melbourne Journal of International Law* 499.

¹⁶³ See e.g. UN Women, “UN Women and the World Bank Unveil New Data Analysis on Women and Poverty” (9 November 2017) UN Women <<https://www.unwomen.org/en/news/stories/2017/11/news-un-women-and-the-world-bank-unveil-new-data-analysis-on-women-and-poverty>>.

¹⁶⁴ See e.g. Srinivas Burra, “TWAIL’S Others: A Caste Critique of TWAILers and Their Field of Analysis” (2016) 33:3 *Windsor Yearbook of Access to Justice*; Mosope Fagbongbe, “The Future of Women’s Rights from a TWAIL Perspective” (2008) 10 *International Community Law Review* 401.

population in most parts of the world, including the Third World. Such criticisms may suggest the need for TWAIL to attend to these and other marginalized voices within its general oppositional discourse.

A critical examination of the existing Third World feminist literature, on the other hand, reveals what Vasuki Nesiah calls the “fetishistic absorption” with issues like veiling, at the expense of excluding or marginalizing other political priorities such as questions of economic redistribution. Focusing on issues such as domestic violence, female genital cutting, or veiling is not of itself unreasonable; however, the neglect of other areas is problematic. One such area that requires immediate attention due to its adverse impacts on Indigenous and local women is the issue of TK protection.

This research adopts Third World feminism as its theoretical lens to examine the issue of TK protection through two case studies from Iran. One might wonder if Iran is a Third World country. The term “Third World countries” was first used during the Cold War to describe countries that were not aligned with the two power blocs at the time, namely the Communist and Capitalist blocs.¹⁶⁵ Ever since several alternatives are used for the term “Third World” such as *least developed countries*, *developing countries* and *the Global South*.¹⁶⁶ However, the term “Third World” has been reclaimed by TWAIL and other scholars to describe the group of states and

¹⁶⁵ The term “Third World” was coined by Alfred Sauvy, a French demographer, anthropologist, and historian to describe a group of countries, many former colonies, that did not share the ideological views of Western capitalism or Soviet Communism. Sauvy in 1952 wrote the article “Three Worlds, One Planet,” published in *L'Observateur* (now called *Le Nouvel Observateur*). At the time Iran was among non-aligned countries and later the country became a founding member of the Non-Aligned Movement (NAM), which is a forum of 120 developing world states that are not formally aligned with or against any major power bloc. Iran was the President of NAM from 2012 to 2016. For more details about the Non-Aligned Movement (NAM), see its website <<https://mnoal.org/nam-about/>>.

¹⁶⁶ TWAIL scholars have expressed their discomfort about the employment of alternatives such as “underdeveloped”, “developing” or “south” for various reasons. See Balakrishnan Rajagopal, “Locating the Third World in Cultural Geography” (1999) 15:1 *Third World Legal Studies* 2 at 3.

peoples who see that international law has been and continues to be employed by First World states in a manner that oppresses states of the Global South.¹⁶⁷ In other words, the term “Third World” now encompasses countries at various stages of development including economically poor and non-industrialized countries, as well as newly industrialized countries.¹⁶⁸ Karin Mickelson provides an excellent definition of the term “Third World,” where in her view the Third World should not be seen “as a bloc, but as a distinctive voice, or, more accurately, as a chorus of voices that blend, though not always harmoniously, in attempting to make heard a common set of concerns.”¹⁶⁹

2.1.1 Third World Feminism

Third World feminism, “transnational feminism” and “postcolonial feminism” are umbrella terms under which are situated diverging feminist perspectives¹⁷⁰ that share an opposition to feminism that focuses solely on the experiences of white, middle-class women in Western cultures. No single, over-arching definition of Third World feminism exists; but, in general, it refers to approaches developed by women in the South and women of colour in the North based on their own historical contexts.¹⁷¹ Third World feminism emerged as a reaction refusing the false

¹⁶⁷ Rajagopal, “Locating the Third,” *supra* note 166.

¹⁶⁸ It is argued that after the Cold War era and with the collapse of the communist bloc and disappearance of the Second World, the Third World has lost its relevance. The counter arguments are examined in section 1.3.1.1 on Critiques of Third World Feminism.

¹⁶⁹ Karin Mickelson, “Rhetoric and Rage: Third World Voices in International Legal Discourse” (1998) 16:2 Wisconsin International Law Journal 353 at 360.

¹⁷⁰ The basic foundation common among these schools is the refusal of false universalism that is taken for granted by white feminism and an emphasis on multiple forms of resistance. Although there are considerable overlaps between these branches, each of them have their own distinct theoretical features. For example, see Ranjoo S. Herr “Reclaiming Third World Feminism: or Why Transnational Feminism Needs Third World Feminism” (2014) 12:1 Meridians: Feminism, Race, Transnationalism 1, where she examines the differences between Third World feminism and transnational feminism.

¹⁷¹ Hilary Charlesworth & Christine Chinkin, *The Boundaries of International Law: A Feminist Analysis* (Manchester, U.K.: Manchester University Press, 2000) at 46. See also Chandra Talpade Mohanty, “Under Western Eyes: Feminist Scholarship and Colonial Discourses” in Chandra Talpade Mohanty, Ann Russo & Lourdes Torres, eds., *Third World Women and the Politics of Feminism* (Bloomington: Indiana University Press, 1991) 51–80.

universalism that is taken for granted by white feminism and clarifying that not all women around the world struggle under exactly the same oppression; rather, they face various forms of oppressions due to a combination of multiple factors, which become aggravated by imperialism and colonialism. In this capacity, Third World feminism is a branch of intersectional feminist thought,¹⁷² which is now the leading feminist paradigm.¹⁷³ Intersectionality, in fact, targets white feminism's tendency to essentialism, revealing the inconsistency between white feminism's claims to speak for all women and its ignorance with respect to racial, ethnic, class and other differences.¹⁷⁴

Third World feminism received further recognition through Chandra Mohanty's powerful critique of white feminism in *Under Western Eyes* arguing that homogenization and historical reductionism has led white feminists to believe that women around the world are a culturally singular, homogeneous group, the members of which share similar interests, perspectives, goals and experiences.¹⁷⁵ The unidimensional focus of white feminism on gender as the root cause of women's oppression around the world resulted in assuming a notion of "universal patriarchy",¹⁷⁶ meaning Third World women were victims of the same kind of oppression as white women. In the eyes of Western feminism, women in the "East" are assumed to be in desperate need of the so-called civilizing forces of "equality", "rights", and "secularism" as promoted in Western cultures

¹⁷² See Kimberlé Crenshaw, "Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics" (1989) 1 University of Chicago Legal Forum 139. According to the theory of intersectionality, the experience of being a woman of color cannot be understood in terms of being *a person of color* and of being *a woman* considered independently, but must include the interactions which frequently reinforce each other.

¹⁷³ Leslie McCall, "The Complexity of Intersectionality" (2005) 30:3 Signs 1771 at 1771. In her widely cited article, sociologist Leslie McCall states that "intersectionality is the most important theoretical contribution that women's studies, in conjunction with related fields, has made so far."

¹⁷⁴ Crenshaw, "Demarginalizing," *supra* note 172.

¹⁷⁵ Mohanty, "Under Western Eyes," *supra* note 171.

¹⁷⁶ Charlotte Bunch, "Prospects for Global Feminism" in Charlotte Bunch, *Passionate Politics: Feminist Theory in Action* (New York: St. Martin's Press, 1987) 304–315 at 304..

as they are often seen as victims of “backwards” religious and patriarchal systems, helpless and unaware of the extent of their misery. Cognizant of such erroneous assumptions, Third World feminism goes beyond Western ideals of gender equality, taking into account the social, political, and historical context of the country around which the discussion is based.¹⁷⁷

In her definition of Third World feminism, Herr highlights the two pillars on which one can distinguish Third World feminism from the other branches of feminism:

Third World feminism encompasses feminist perspectives on Third World women that (1) generate more reliable analyses of and recommendations for addressing Third World women’s multidimensional and complex oppression through careful examinations of their local conditions in their historical specificity; and (2) respect the agency and voices of Third World women engaged in diverse forms of local activism.¹⁷⁸

The foundation of Third World feminism is therefore shaped by 1) rejecting the false universalism and 2) emphasizing multiple forms of resistance.¹⁷⁹ According to Third World feminist scholars, since Third World women are active agents of positive change in various forms of local activism, their viewpoints must receive recognition and respect, even if these may not conform to the preconceived notions about feminist activism. Moreover, as argued in feminist standpoint theory, marginalized groups are more aptly positioned to produce a “less partial and distorted” understanding of the human condition.¹⁸⁰ In other words, the marginalized position of Third World women gives them “epistemic advantage”¹⁸¹ or “epistemic privilege”¹⁸² regarding issues that have an impact on their lives.

¹⁷⁷ Gabriella Kamran, “Feminism 101: What is Postcolonial Feminism?” (18 April 2018) Femmagazine, <<https://femmagazine.com/feminism-101-what-is-postcolonial-feminism/>>.

¹⁷⁸ Herr “Reclaiming Third World Feminism,” *supra* note 170 at 6.

¹⁷⁹ Herr “Reclaiming Third World Feminism,” *supra* note 170 at 2.

¹⁸⁰ Sandra Harding, “Rethinking Standpoint Epistemology” in Linda Alcoff and Elizabeth Potter, eds, *Feminist Epistemologies* (New York: Routledge, 1993) 49–82 at 56, 62.

¹⁸¹ Harding, “Rethinking Standpoint Epistemology,” *supra* note 180 at 56.

¹⁸² Chandra T. Mohanty, “Under Western Eyes’ Revisited: Feminist Solidarity through Anti-Capitalist Struggles” (2003) 28:2 *Signs*, 499 at 511, 515.

The main objective of Third World feminism is producing accurate and reliable feminist analyses by Third World women themselves¹⁸³ of Third World women's diverse forms of oppression and different modes of resistance on the ground. In order to reach this objective, Third World feminists employ attentive examinations of Third World women's multiple forms of oppression and resistance that are fully informed by their historical, social and cultural context.¹⁸⁴ As Mohanty says, "it is on the basis of such context-specific differentiated analyses that effective political strategies can be generated."¹⁸⁵ Such contributions require close attention to intersections of gender, race, class, ethnicity, religion, etc., and interestingly, they often reveal that Third World women's resistance strategies are quite different in the sense that they do not necessarily raise an explicit demand for gender equality nor do they call for radical social restructuring in order to realize feminist goals.¹⁸⁶ Rather, Third World women's resistance often seeks gradual changes that require a strategic alliance with their male counterparts "to enhance their communal influence vis-à-vis other members and to improve living standards of their families and of the community itself."¹⁸⁷

History shows that Third World women have often collaborated with nationalists in their anticolonial and independence movements and later in the postcolonial order, in their anti-neoliberal, global capitalism movements.¹⁸⁸ For instance, Indigenous women activists choose to

¹⁸³ Or those Western feminists who have used the "world-traveling" method, in which feminists shift from being one person in one world to a different person in another world. For more detail, see Isabelle R. Gunning, "Arrogant Perception, World Traveling and Multicultural Feminism: The Case of Female Genital Surgeries" (1992) 23 Colum. Hum. Rts. L. Rev. 189 at 202.

¹⁸⁴ As Uma Narayan says non-western feminists have a double struggle in trying to find their own voice. They have to learn to articulate their differences, not only from their own traditional contexts but also from the context of Western feminism. Uma Narayan, "The Project of Feminist Epistemology: Perspectives from Non-Western Feminists" in Alison Jaggar & Susan Bordo, eds, *Gender/Body/Knowledge: Feminist Reconstructions of Being and Knowing* (Rutgers University Press) 256–272.

¹⁸⁵ Mohanty, "Under Western Eyes," *supra* note 171 at 75.

¹⁸⁶ Herr "Reclaiming Third World Feminism," *supra* note 170 at 5.

¹⁸⁷ Herr "Reclaiming Third World Feminism," *supra* note 170 at 5.

¹⁸⁸ Kumary Jayawardena, *Feminism and Nationalism in the Third World* (London: Zed Books, 1986).

form coalitions with their nationalist male counterparts because they prioritize achieving national self-determination as more urgent than prevailing internal gender discrimination.¹⁸⁹ In fact, Third World women advocate nationalism as a strategic tool to resist imperialism and colonialism. Moreover, Third World feminists capitalize on engaging with their national government as it is simultaneously both “the main arenas of democratic contestations” and also “important loci of women activists’ struggles.”¹⁹⁰ Here is the point where “transnational feminism” diverges from “Third World feminism.” What distinguishes these two is their respective positions regarding nation-states and nationalism, which have been antithetical, as leading transnational feminists have categorically rejected nation-states and nationalism as detrimental to feminism. Third World feminists, on the other hand, believe that concepts of nation-state and nationalism, when properly de-essentialized, can be both strategically useful and intrinsically valuable for feminist goals.¹⁹¹

Of course, engaging with national governments is not an easy path for Third World feminists. Without a doubt, Third World feminists have faced attempts made by their male nationalist counterparts to exclude them from national politics. This does not mean though that they must abandon the national political arena (due to past experiences) to the benefit of patriarchal nationalists, as doing so is equal to giving them the authority to continue with business as usual, which shows records of sidelining or completely silencing Third World women. In reality, local women’s activism and other local social movements, such as human rights advocacy groups or national, pro-democracy causes, usually merge.¹⁹² Local and national women’s movements have

¹⁸⁹ See Haunani-Kay Trask, *From a Native Daughter* (Monroe, ME: Common Courage Press, 1993).

¹⁹⁰ Herr “Reclaiming Third World Feminism,” *supra* note 170 at 8.

¹⁹¹ Herr “Reclaiming Third World Feminism,” *supra* note 170 at 20.

¹⁹² Herr “Reclaiming Third World Feminism,” *supra* note 170 at 6. Herr calls them “mixed activism.” However, even in this “mixed activism,” Basu believes that “women ultimately take up questions of gender inequality even if this was not their initial objective.” Amrita Basu, “Introduction” in Amrita Basu, ed, *The Challenges of Local Feminisms* (Boulder, CO: Westview Press, 1995) 19–23.

been “most successful when they have engaged the state, through contestation and collaboration, without abdicating their own identities and constituencies.”¹⁹³ Informed by the realities of social movements, Third World feminism calls for active participation in national discourse.¹⁹⁴

Although the Third World feminist movement was originally concerned with nationalist struggles, it has shifted its focus toward ending poverty and is, therefore, very concerned with the perpetuation of poverty imposed by the global economy and by the reliance of economically powerful states upon the economic exploitation of Third World countries.¹⁹⁵ In other words, Third World feminism’s engagement with national issues and local movements does not mean that it focuses on the national issues at the expense of the international; rather, quite the opposite, as a precise analysis of Third World women’s issues requires a careful examination of processes and events at the international level.¹⁹⁶ Under the existing neoliberal global capitalist system and in an increasingly integrated global economy, Third World women in their own local and national contexts are highly affected by larger, global, economic and political frameworks. Adoption of a Third World feminist analysis seems especially appropriate for evaluating international developments around TK protection and its enforcement mechanisms and whether it attends to the needs and interests of local and Indigenous women. Third World feminism captures the double marginalization of women’s TK as a category of knowledge that is both prevalent in Third World countries and is held by Third World women. In the context of TK discussions, multiple forms of

¹⁹³ Basu, “Introduction” *supra* note 192.

¹⁹⁴ Uma Narayan, *Dislocating Cultures* (New York: Routledge, 1997) at 30-31.

¹⁹⁵ Geraldine Heng, “‘A Great Way to Fly’: Nationalism, the State, and the Varieties of Third- World Feminism” in M. Jacqui Alexander & Chandra Talpade Mohanty, eds, *Feminist Genealogies, Colonial Legacies, Democratic Futures* (New York: Routledge, 1997) 30–45 at 47.

¹⁹⁶ For feminist critiques of international law, see Charlesworth and Chinkin, *The Boundaries of International Law*, *supra* note 171. Feminist critiques of international law aim to give a general overview of how the process of international lawmaking and the content of international norms exclude women and their interests. See also Karen Engle, “International Human Rights and Feminism: When Discourses Keep Meeting” in Doris Buss & Ambreena Manji, eds, *International Law: Modern Feminist Approaches* (Oxford; Portland, Or.: Hart, 2005) 518-599.

marginalization intersect simultaneously in the lived experiences of Indigenous and local women, including being *women*, from *Indigenous and local populations of Third World peoples*. This intensifies their invisibility.

2.1.1.1 Critiques of Third World Feminism

As with any other theoretical framework, Third World feminism has not been immune to critiques. For example, the use of the term “Third World” is seen as imprecise and anachronistic. Critics believe that the notion of a Third World today has lost any relevance or legitimacy it once had.¹⁹⁷ According to Third World scholars, however, the term “Third World” has created a common identity among the peoples covered by it—an identity that clearly promotes resistance against hegemonic oppression.¹⁹⁸ In the words of Mickelson:

“Third World” terminology itself may appear out-of-date, but its very contingency, involving an insistence on history and continuity, may in fact be one of its strengths. Such an approach does not deny the existence of differences between and within Third World countries, nor does it underestimate the importance of such differences.¹⁹⁹

Looking at the “Third World” from this perspective liberates it from its “geographical moorings.”²⁰⁰

¹⁹⁷ According to Walker, the “great dissolutions of 1989” shattered all cold war categories and “as a label to be affixed to a world in dramatic motion the Third World became increasingly absurd, a tattered remnant of another time.” See Rob B.J. Walker, “Space/Time/Sovereignty” in Mark Denham and Mark Lombardi, eds, *Perspectives on Third World Sovereignty: The Postmodern Paradox* (New York: Macmillan Press, 1996) 13–27 at 15; See also Karin Mickelson, “Taking Stock of TWAIL Histories” (2008) 10 *International Community Law Review* 355. For general discussions of the implications of the end of the Cold War for the Third World, see Guy Arnold, *The End of the Third World* (New York: St. Martin’s Press, 1993); Mark Berger, “After the Third World? History, Destiny and the Fate of Third Worldism” (2004) 25 *Third World Quarterly* 9, 31.

¹⁹⁸ Rajagopal, “Locating the Third World,” *supra* note 166 at 20.

¹⁹⁹ Mickelson, “Rhetoric and Rage,” *supra* note 169 at 360.

²⁰⁰ In an effort to move the Third World from its “geographical mooring,” Rajagopal elaborates on four different models/concepts for the Third World: *ideological*, *geopolitical*, *historic-determinist* and *popular-representational* concepts. Rajagopal, “Locating the Third World,” *supra* note 166 at 15–19.

According to Herr, “Third World” “is still the term that most clearly approximates the features of the world as we understand it.”²⁰¹ In other words, the term retains its uses as a basis for analyzing the condition of Third World peoples, given the common history of subjection to colonialism and neo-colonialism.²⁰² Of course, there is certainly the need to take into account the diversity²⁰³ that characterizes the “Third World” but there should be no denying the unity due to a common past and present. Moreover, as Chimni, states the “Third World” is not to be viewed as an all-or-nothing category, which requires inflexible coalitions that yield few gains in diplomatic practice, as in the past. Rather, it can play an effective role in shaping ongoing policy debates and effectively intervening in international negotiations through new forms of collective action. This flexibility has been successfully deployed, for example, in the Doha Round of trade negotiations.²⁰⁴

Third World feminism has also received criticism from within the feminist circle as a project that divides women into smaller groups and therefore leads to the loss of purpose and power of the entire movement. It is argued that, by including race, class, sexuality and other identity markers in feminist analysis, Third World feminism is spreading the movement thin and undermining it.²⁰⁵ The trouble with this line of reasoning is that a one-size-fits-all feminist movement that focuses only on the common ground between women is exclusive rather than

²⁰¹ Herr “Reclaiming Third World Feminism,” *supra* note 170.

²⁰² Although the historical experience of colonialism and imperialism is important, Rajagopal argues that the Third World cannot be understood solely in terms of a singular determinant of “the political geography of ex-colonial nationalism.” Therefore, although Iran has never been under direct colonial rule, it still is a Third World country. Rajagopal, “Locating the Third World,” *supra* note 166 at 25.

²⁰³ As R.P. Anand, a distinguished TWAIL scholar, writes, “It is all too well known that the so-called Third World is not a homogeneous group. It covers a whole range of economic, political and cultural diversities....” R.P. Anand, *Confrontation or Cooperation? International Law and the Developing Countries* (Dordrecht; Boston: Kluwer Academic Publishers, 1987) at 120–21.

²⁰⁴ See Andrew Hurrell and Amrita Narlikar, “A New Politics of Confrontation? Brazil and India in Multilateral Trade Negotiations” (2006) 20 *Global Society* 415, 421, 424.

²⁰⁵ See e.g. Bunch, “Prospects for Global Feminism,” *supra* note 176.

inclusive. As Audre Lorde, in her inspiring essay writes, the failure to “recognize difference as a crucial strength is a failure to reach beyond the first patriarchal lesson. In our world, divide and conquer must become define and empower.”²⁰⁶ As discussed, Third World feminists believe that the manner in which patriarchy and capitalism manifest themselves in concrete terms results from complex interaction between economic, ideological, and cultural systems.²⁰⁷ This results in concluding that women in different social circumstances require different means to resist.²⁰⁸ Therefore, “feminism cannot be monolithic in its issues, goals and strategies since it is the political expression of the concerns and interests of women from different regions, classes, nationalities and ethnic backgrounds.”²⁰⁹ Moreover, this diversity “gives feminism its dynamism and makes it the most potentially powerful challenge to the status quo.”²¹⁰ It provides the opportunity to challenge gender oppression in any form and in any arena from relations in the home to relations between nations by revealing the concealed gendered assumptions and calling for substantial change in cultural, economic, and political systems, as in most cases gender equality cannot be achieved without changes on these other fronts.

The Third World feminist approach, the particular type of feminist theory adopted by this thesis, is a suitable fit to analyze the issue of TK as it captures the angles of the subject that are not necessarily within the agenda of the other strands of feminism. When it comes to the IP system, the existing feminist critiques tend to focus on the removal of gender-based discrimination and

²⁰⁶ Audre Lorde, “The Master’s Tools Will Never Dismantle the Master’s House” (1984) in *Sister Outsider: Essays and Speeches* (Berkeley, CA: Crossing Press, 2007) 110–113.

²⁰⁷ See e.g. N. Redclift, “Gender, Accumulation and the Labour Process” in R.E. Pahl, ed, *On Work: Historical, Comparative and Theoretical Perspectives* (Oxford: Blackwell, 1988) 428–448.

²⁰⁸ Ethel Crowley, “Third World Women and the Inadequacies of Western Feminism” Global Research 8 March 2014 at 3, < <https://www.globalresearch.ca/third-world-women-and-the-inadequacies-of-western-feminism/5372515>>. at 2.

²⁰⁹ Gita Sen & Caren Grown, “Development, Crises, and Alternative Visions: Third World Women’s Perspectives” 7:1-2 Canadian Woman Studies 31; Gita Sen with Caren Grown, *Development, Crises, and Alternative Visions: Third World Women’s Perspectives* (New York: Monthly Review Press, 1988).

²¹⁰ Sen and Grown, “Development, Crises,” *supra* note 209.

gender gaps in patenting and other types of IPRs. They are often focused on how to enable women to participate in the current IPRs system by investing in strategies to maximize women's use of the available IP tools such as patent and copyright. While attempts to increase the number of women IPRs registrants (as compared to their men counterparts) can be considered as a strategy for equalizing power and decreasing gender disparity within the current IP system, the Third World feminist view calls for a more fundamental shift in the view to make the IP system more inclusive. To date, the IP regime has contributed to marginalization of women's work and creativity by failing to cover areas of practice in which women engagement is high. TK is one such area where communal, collective, and group endeavours engaged in by Indigenous and local women have been excluded from protection and the reward system of IPRs.²¹¹ In other words, in addition to increasing the number of women inventors and authors who participate in and benefit from the current IPRs system as equals with men, the IP system should include the significant contributions made in the form of TK, an area in which Indigenous and local women actively participate.

Despite the existence of international instruments and women's rights documents, the status of women in today's world indicates that gender equality has not been achieved. As articulated above, this is especially true for the world's poorest women, i.e., Indigenous and local women who are important actors in the TK system. Unless the current TK protection negotiations take their needs and interests into account, there is no assurance that TK protection mechanisms are going to be structured in a way that truly help Indigenous and local women and improve their status. The Third World feminist approach of this research focuses on the needs of Indigenous and local women within the context of TK protection and calls for a TK protection mechanism that values their work and brings them out of the dark corners of the IP system. The analysis is informed

²¹¹ See feminist critiques of IP discussed at section 1.1.3.

by the cross-cultural data gained through interviews with women saffron farmers and carpet weavers in the rural village of Bidvey and city of Kashan in Iran. This micro-level analysis corresponds well with the Third World feminist emphasis on specific, local accounts of women, in creating change.²¹² Essentialism and over-generalization will be avoided, but some conclusions as to pressing issues for Indigenous and local women to create a baseline of commonality for the analysis will nevertheless be drawn. Using this approach, the workability and effectiveness of the existing gender-unaware approach to TK law and policy instruments are analyzed. The research does not take the position that Indigenous and local women around the world are a homogenous group and deal with the same problems or would be served by the same solutions.²¹³ However, in order to accomplish change, at some level, a baseline set of commonalities must be established. As noted by Jodi Dean, it is important to come

to an agreement about those aspects of our lives affecting us all, of working within our differences to find norms and practices worthy of the consent of each individual. The recognition of difference remains meaningless so long as it is not included as an element of our common life context and incorporated into the struggle to end exclusion and oppression.²¹⁴

2.2 Research Methodology

2.2.1 Feminist Methodology

This research is located under the broad umbrella of feminist legal research methodology, which itself is located within a critical approach to research. It has been argued that feminist methodology is a related set of practices starting from a position on research, which says that

²¹² Charlesworth and Chinkin, *The Boundaries of International Law*, *supra* note 171 at 47.

²¹³ For a discussion of the differing priorities and needs of women in the Third World, and the development of Third World Feminism, see generally Mohanty, “Under Western Eyes,” *supra* note 171; Elizabeth Grosz, “A Note on Essentialism and Difference” in Sneja Gunew, ed., *Feminist Knowledge: Critique and Construct* (New York: Routledge, 1990) 332–344 at 342.

²¹⁴ Jodi Dean, *Solidarity of Strangers: Feminism After Identity Politics* (Berkeley: University of California Press, 1966) at 174.

gender must be taken into account as an enormously influential factor in research.²¹⁵ In response to critiques questioning the distinctiveness of feminist methodology, several feminist scholars have addressed the question of what characteristics of feminist methodology make it a distinctive methodology.²¹⁶ Marjorie L. DeVault in her book, *Liberating Method: Feminism and Social Research*, defines feminist methodology in opposition to traditional, more masculine models that associate research with objectivity, detachment, rationality, control of the research process, and a hierarchical stance toward subjects. In her view, feminist methodology is distinctive in various ways:

1) In content, feminist research focuses on women and women's concerns, which means that issues of difference and power are the main axes. This is referred to as "asking the women question."²¹⁷ In law, "asking the woman question" means examining how the content of law or the process of lawmaking ignores or suppresses the experiences and interests of women or other excluded groups. This research examines how the process of TK lawmaking ignores the experience of local and Indigenous women.²¹⁸ Clougherty notes that feminists use this method to

²¹⁵ See generally SAGE, "Sharlene Nagy Hesse-Biber on Feminist Research: PART 1" (July 21, 2009), YouTube <http://www.youtube.com/watch?v=xGtF_C_r1HE>. She argues that what makes feminist research really unique is its perspective. In fact, it's undeniable that the core that all feminists agree upon is that the circumstances of women are unjust in significant respects and ought to be improved. This is what they call commitment to social change and social justice. Denise G. Reaume in "What is Distinctive About Feminist Analysis of Law: A Conceptual Analysis of Women's Exclusion from Law" argues that a wide variety of feminist critiques of law can be expressed as instances of women's exclusion from the design or application of law. This variety encompasses critiques with respect to different groups of women, different levels of legal analysis, different levels of ambition, as well as different substantive foundations of critique, both political and epistemological.

²¹⁶ See e.g. Reaume, "What is Distinctive," *supra* note 215 at 271. According to Reaume, feminist jurisprudence is an analysis of the exclusion of (some) women's needs, interests, aspirations, or attributes from the design or application of the law.

²¹⁷ Katherine Bartlett, "Feminist Legal Methods" (1990)103:4 Harvard Law Review 829.

²¹⁸ Bartlett, "Feminist Legal Methods," *supra* note 217 at 836. Reaume argues that feminist jurisprudence is mainly the critique of exclusion. According to her any reading of modern feminist legal literature across many different areas of law reveals one particular recurring theme: that of exclusion. Reaume, "What is Distinctive," *supra* note 215.

unveil any form of bias against women in laws and lawmaking processes to see if they will have an impact on women's lives in the real world by asking questions such as "What would the law be like if women had been considered by drafters and interpreters of the law?"²¹⁹ and "How can future policymaking be informed by the excluded voices and perspectives of those at the bottom of the political, economic, or patriarchal social hierarchy?"²²⁰ Therefore, feminist legal methodology investigates the law from the standpoint of women and aims to integrate women's practical life experience into legal analysis and policymaking processes.

In asking the "women question," feminists situate themselves in the perspectives of women affected or going to be affected in various ways and to various extents by legal rules and ideologies that claim to be neutral and objective. As prescribed by the methodology, in order to situate myself in the perspectives of women TK holders, I undertook two fieldwork projects where I examined women's TK in the sectors of saffron and handwoven carpet production in Iran. Using a feminist legal methodology means digging beneath the surface of apparently gender-neutral TK law and policy to identify the gender implications of legal rules and assumptions underlying them in an attempt to revise them so that women's subordination stops being perpetuated and reproduced.²²¹ In other words, feminist methodology leads to advocacy research and is meant to raise awareness and to bring change. This means feminist legal methodology reflects the status of women as "outsiders," who need ways of challenging and emasculating dominant legal conventions in an attempt to offer alternatives that are sensitive of women's experiences and needs.²²² Feminist legal

²¹⁹ Lydia A. Clougherty, "Feminist Legal Methods and the First Amendment Defense to Sexual Harassment Liability" (1996) 75:1 Nebraska Law Review 2 at 8.

²²⁰ Sharon K. Hom, "Female Infanticide in China: The Human Rights Specter and Thoughts Toward (An) Other Vision" (1992) 23 Columbia Human Right Law Review 249 at 274.

²²¹ Bartlett, "Feminist Legal Methods," *supra* note 217 at 843.

²²² Bartlett, "Feminist Legal Methods," *supra* note 217 at 831.

methodology is, therefore, aimed at enhancing the position of women in society and before the law.²²³ In fact, having an activist orientation, feminist research operates as a form of resistance as well as a tool for understanding.²²⁴

2) In form, feminist research is non-hierarchical. Researchers take steps to minimize their control over the research process. For example, the claim of research objectivity is contested by feminist methodology, arguing that women have been either overlooked or considered within a more general category as “society” or “mankind,” with their experiences differing from men’s.²²⁵ Furthermore, some feminists have argued that women have more sensitivity to situation and context and that they avoid universal generalizations.²²⁶ Many feminists prefer individualized fact finding instead of the application of fixed standards,²²⁷ and they believe that reasoning from context permits paying attention to difference²²⁸ and to the perspectives of the powerless. Most feminist scholars have come to the conclusion that what makes feminist methodology distinctive is not a unique set of tools or methods and instructions for their use but a distinct way of thinking about method.²²⁹ Marjorie L. DeVault characterizes feminist methodology as a form of excavation, a way to unveil and express the overlooked experiences and needs of women.²³⁰ In other words, it has been asserted that “although not every component of feminist methodology is unique, these

²²³ Iain McDonald, “Methodology: Feminist Legal Research and Feminist Methodology” (14 February 2017), <https://uweascilmsupport.wordpress.com/2017/02/14/methodology-feminist-legal-research-and-feminist-methodology/#_ftn2>.

²²⁴ Sarah Rosenfield, Book Review of *Liberating Method: Feminism and Social Research* by Marjorie DeVault, (Philadelphia: Temple University Press, 1999).

²²⁵ McDonald, “Methodology,” *supra* note 223.

²²⁶ Bartlett, “Feminist Legal Methods,” *supra* note 217 at 849.

²²⁷ Bartlett, “Feminist Legal Methods,” *supra* note 217 at 836.

²²⁸ See Minow & Spelman, “Passion for Justice” (1988) 10 Cardozo L. Rev. 37, 53 cited in Bartlett, “Feminist Legal Methods,” *supra* note 217 at 849.

²²⁹ Hesse-Biber, “On Feminist Research,” *supra* note 215.

²³⁰ Mary Margaret Fonow, Book review of *Liberating Method: Feminism and Social Research* by Marjorie DeVault, (Philadelphia: Temple University Press, 1999).

components together address a set of concerns not reached by existing traditions.”²³¹ In fact, feminists cannot use the traditional methodologies in their efforts to criticize law and to propose legal reforms because if they seek to challenge the status quo with the same methodologies used for defining current structure power, they may reproduce the existing power structures that they are trying to reform.²³²

According to Bartlett, the difference between feminist legal methodology and other legal methodologies relates less to differences in principles of logic than to differences in emphasis and in underlying ideals about rules.²³³ Traditional legal methodologies focus on the predictability, certainty, and fixity of rules, while feminist legal methodology value rule flexibility and ability to identify missing points.²³⁴ In her seminal work “Feminist Legal Methods,” Bartlett introduces three specific characteristics of feminist legal methodology as

(1) identifying and challenging those elements of existing legal doctrine that leave out or disadvantage women and members of other excluded groups (asking the “women question”) (2) Reasoning from an ideal in which legal resolutions are pragmatic responses to concrete dilemmas rather than static choices between opposing, often mismatched perspectives (feminist practical reasoning). (3) seeking insights and enhances perspectives through collaborative or interactive engagement with others based upon personal experience and narrative (consciousness raising).²³⁵

Fineman points out that these three characteristics represent the integration of theory and practice.²³⁶ This suggests that where these three tools are successfully realized and utilized, it can

²³¹ Bartlett, “Feminist Legal Methods,” *supra* note 217 at 834.

²³² Bartlett, “Feminist Legal Methods,” *supra* note 217 at 830–31.

²³³ Bartlett, “Feminist Legal Methods,” *supra* note 217 at 854–58. According to Deborah Rhode, “Feminist Critical Theories” (1990) 42:3 Stanford Law Review 617, three core assumptions of feminist methodology are that gender is a central category for analysis; that equality between women and men is a crucial social objective; and that such equality for all women cannot be achieved without fundamental social transformation.

²³⁴ Bartlett, “Feminist Legal Methods,” *supra* note 217 at 832.

²³⁵ Bartlett, “Feminist Legal Methods,” *supra* note 217 at 831.

²³⁶ Martha Albertson Fineman, “Feminist Legal Theory” (2005) 13 Journal of Gender, Social Policy & The Law 1 at 14.

serve as a framework for the formulation of decision-making processes that may be considered in practice as gender-neutral.

Use of the label “feminist” for describing the methodology, though, has substantial problems. Katherine Bartlett believes that it creates an expectation of feminist originality or invention that feminists do not intend or cannot fulfill. She argues that this expectation itself reveals the obsession of individual achievement and ownership, which is at odds with feminist emphasis on collective, relational discovery and is in line with the nature of TK, the topic for this research project.²³⁷ Moreover, it has been argued both within and outside the circle of feminist scholars that any analysis employing the general category of women is itself exclusionary, because it treats women as a homogenous category with universal interests and experiences while having a specific group of women (namely white middle class women) in mind. Andrea Rich calls this problem “white solipsism.”²³⁸

Third World feminism, which is used as the theoretical framework of this research, addresses this problem. Third World feminism was a response to white second wave feminists’ neglect of women’s multiple and complex oppressions in their various social locations. According to Third World feminism, not all women struggle under exactly the same oppression merely because of their gender; rather, they face multiple and complex oppressions in their various national settings, which are a composite of multiple factors such as race and class exacerbated by imperialism and colonialism. According to Crenshaw’s intersectionality theory women experience

²³⁷ Bartlett, “Feminist Legal Methods,” *supra* note 217 at 833. Bartlett discusses the feminist emphasis on collective discovery at 863-65. Martha Minow in “Beyond Universality” (1989) *The University of Chicago Legal Forum* 115 at 131 addresses this issue in a very interesting way; “why is it so important for feminism to be distinctive, as that notion has been understood? The preoccupation with distinctiveness shows a preoccupation with pinning things down, with knowing by categorizing and dividing, claiming, naming, and blaming, and with tracking ownership of things and ideas.”

²³⁸ Bartlett, “Feminist Legal Methods,” *supra* note 217 at 847.

oppression in varying configurations and in varying degrees of intensity depending on their social and cultural context.²³⁹ The basic foundation of Third World feminism is the refusal of false universalism that is taken for granted by white feminism and an emphasis on multiple forms of resistance.²⁴⁰ Third World feminism calls for an analysis that takes into account the social, political, and historical context of women who are under study. Therefore, informed by the Third World feminist approach, I have tried to follow the path initiated by feminist anthropologists where they seek cross-cultural data to evaluate the application of mainstream feminist theories to the issue of TK protection.²⁴¹ In other words, conducting contextual interviews²⁴² with women TK holders is in line with my theoretical framework, that is, Third World feminism, one critical element of which is to bring cross-cultural data from countries of the Global South to assess the relevance of existing social models offered by feminist theories. As Ethel Crowley asserts, it is only through the use of such data that we can learn about other places and only by such studies that we can begin to understand and establish solidarity with women in other parts of the world, thus gaining strength from diversity.²⁴³

Although some may find my approach similar to ethnographic methods, this research does not fit neatly within the scope of ethnography, defined as a written account detailing the lives of a society in-depth through observation of their customs. My research was based on using contextual interviews rather than ethnography. It is important to make a distinction between these different

²³⁹ Crenshaw, “Demarginalizing,” *supra* note 172. According to the theory of intersectionality, the experience of being a woman of color cannot be understood in terms of being *a person of color* and of being *a woman* considered independently, but must include the interactions which frequently reinforce each other.

²⁴⁰ Herr “Reclaiming Third World Feminism,” *supra* note 170 at 2.

²⁴¹ Henrietta Moore, *Feminism and Anthropology* (London: Polity Press, 1988) at 11. It has been argued that ethnography and qualitative research should be an essential element in feminist studies in order to strengthen their arguments. See e.g. Crowley, “Third World Women,” *supra* note 208.

²⁴² See Demetrius Madrigal, “Contextual Interviews and Ethnography: Two Different Types of Home Visits” September 2009, <<http://usabilitypost.com/2009/09/09/contextual-interviews-and-ethnography/>>.

²⁴³ Crowley, “Third World Women,” *supra* note 208 at 3.

research methodologies and the kind of data obtainable from each. The principle of in-person observation of behavior remains at the core of ethnography as a research method. In true ethnography, a researcher will spend one or more entire days with a research participant, profiling the person's life and activities.²⁴⁴ Rather than relying on self-reported data, the goal of ethnography is to directly observe and document the actual behavior of the participant and search for patterns and the needs underlying those patterns. By contrast, a contextual interview involves a visit to a home or place of business where the participants explain certain processes of interest in practice and the researcher asks questions about the process to get a clear understanding. The following part describes the two feminist methods I used for this research, namely (1) gender impact assessment of the current prevailing trend in the realm of TK law and policy (2) an empirical method of qualitative contextual interviews.

2.2.2 Gender Impact Assessment

Gender impact assessment has its roots in the environmental sector and is an ex ante evaluation, which assesses the different impacts of a given law or policy on women and men.²⁴⁵ In other words, gender impact assessment is the estimation of the different effects (positive, negative or neutral) of any policy or activity in terms of gender equality.²⁴⁶ Gender impact assessment allows for evaluation of a given law or policy in order to examine its differential impact on women and men, so that these imbalances can be redressed. An analysis from a gender

²⁴⁴ For more details about Gavin Johnston, "Ethnography vs. Contextual Interviews: Methods Matter" (13 July 2019), *Anthrostrategist* (blog), <<https://anthrostrategy.net/2019/07/03/ethnography-vs-contextual-interviewsmethodsmatter/#:~:text=Contextual%20interviews%2C%20which%20rely%20on,data%20and%20have%20different%20strengths.>>>.

²⁴⁵ The European Institute for Gender Equality (EIGE), *Gender Impact Assessment: Gender Mainstreaming Toolkit* (Luxembourg: Publications Office of the European Union, 2016) at 6.

²⁴⁶ In Chapter 6, the following three criteria are used to weigh the positive, negative, or neutral gender impact; (1) participation of women and men in TK governance (2) access to and control of resources, and (3) gender-based social norms and values that hinder women's participation or they access to resources.

perspective helps to see whether the needs of women and men are equally taken into account and served. It enables lawmakers and policymakers to develop laws and policies with an understanding of the socioeconomic reality of women and men. It may result in developing measures to counter potential negative gender impacts.²⁴⁷

Gender impact assessment can be conducted on either proposed or existing legislation, policy plans, policy programs, budgets, concrete actions, bills and reports or calls for research.²⁴⁸ It should also be borne in mind that there is no single way of carrying out a gender impact assessment.²⁴⁹ In the case of this research, gender impact assessment is used to examine the existing TK instruments including the IGC Draft Articles for protection of TK.²⁵⁰ Chapter Three of the thesis presents a feminist analysis of the various TK instruments and the extent to which they reflect women's interests and experiences and protect women's TK. Gender impact assessment allows for the scrutinizing of TK law and policy to see whether the needs and interests of Indigenous and local women are taken into account and served for instance by the IGC Draft Articles or whether they will reproduce and maintain the existing inequalities. Any TK protection and benefit-sharing mechanism that do not take into consideration the existing gender inequities are bound to leave women at a severe disadvantage. Like most political decisions, TK policy has a concrete impact on the lives of women and men. That is why gender impact assessment is

²⁴⁷ See e.g. Council of Europe, "Gender Mainstreaming," *supra* note 87.

²⁴⁸ Council of Europe, "Gender Mainstreaming," *supra* note 87 at 31.

²⁴⁹ See generally, Nicole Peletz and Kevin Hanna, "Gender Analysis and Impact Assessment: Canadian and International Experiences" (2019) Canadian International Resources and Development Institute (CIRDI), <https://cirdi.ca/wp-content/uploads/2019/07/WEB_Gender_Analysis_Impact_Assessment.pdf>. See also The European Institute for Gender Equality (EIGE), *Gender Impact Assessment*, *supra* note 245 at 10. Applying gender impact assessment in this legal analytical context where there are lots of deduction and extrapolation in terms of result is different from other impact assessment methods such as environmental impact assessment where the assessment necessarily has an "ante" orientation. For more details regarding environmental impact assessment, see e.g. <<https://www.canada.ca/en/impact-assessment-agency/services/environmental-assessments/basics-environmental-assessment.html>>.

²⁵⁰ Gender Impact assessment in the context of TK law and policy is conducted at Chapter 6.

relevant and needed in order to measure the effects of the decisions and to evaluate the foreseen impact from a gender perspective and to ensure that the proposed draft articles will enhance gender equality.

Gender impact assessment involves a two-fold analysis: the current position of women in relation to the law or policy under consideration, and the projected impacts on women once the law or policy has been implemented.²⁵¹ Examining the current position of women requires quality empirical research.²⁵² The final aim of gender impact assessment is to improve the design and the planning of the law or policy under consideration, in order to prevent a negative impact on gender equality and to strengthen gender equality through better designed, transformative legislation and policies. Beyond avoiding negative effects, gender impact assessment can also be used in a more transformative way as a tool for defining gender equality objectives and formulating the policy and law so as to proactively promote gender equality.²⁵³ Gender impact assessment sets two criteria to decide whether impacts will be positive or negative: equality, in the sense of equal rights and equal treatment of equal cases, and autonomy, in the sense of the possibility for women to decide about their own lives.²⁵⁴ As mentioned earlier there are different ways to carry out a gender impact assessment,²⁵⁵ and there is no common model for gender impact assessments. The one that is used in this research is based on the toolkit published by the European Institute for Gender Equality (EIGE). My search for a Third World gender impact assessment tool did not yield any result. Although the toolkit is a European document, its adoption for the purpose of this research is informed by the fact that 1) gender is experienced in context, and 2) the situations of women in

²⁵¹ The European Institute for Gender Equality (EIGE), *Gender Impact Assessment*, *supra* note 245 at 8.

²⁵² Christine Chinkin, "Gender Mainstreaming in Legal and Constitutional Affairs A Reference Manual for Governments and Other Stakeholders" (2001) Commonwealth Secretariat at 39.

²⁵³ The European Institute for Gender Equality (EIGE), *Gender Impact Assessment*, *supra* note 245 at 8.

²⁵⁴ Chinkin, "Gender Mainstreaming," *supra* note 252 at 45.

²⁵⁵ The European Institute for Gender Equality (EIGE), *Gender Impact Assessment*, *supra* note 245 at 10.

different parts of the world are not the same. Therefore, I have avoided a blanket application of the EIGE's gender impact assessments. Drawing on my case studies from local communities in Iran, I use a context-specific and particularized gender impact assessment of TK policy through intersectional analysis where other social identities, such as class, marital status, and age are considered in order to analyze the interdependent system of disadvantages. In other words, being a woman, of course, is not the only source of vulnerability in local communities in Iran or elsewhere. Therefore, in employing an EIGE toolkit for assessing the impact of TK law and policy on women, other social characteristics, such as class, age and marital status are given proper attention.

According to the EIGE toolkit, a gender impact assessment process should include three assessment phases: (1) Gender relevance assessment, (2) Gender impact assessment and, and (3) Gender equality assessment.²⁵⁶ The phases of the gender impact assessment process in the context of this research can be organized around the following four steps:

Step 1. Checking gender relevance: A gender impact assessment starts with assessing the gender relevance of law and policy, and continues with describing the current and future situation. Determining the gender relevance implies taking into account two criteria or what some resources call, SMART, that is, a Simple Method to Assess the Relevance of policies To gender.²⁵⁷ It is a very simple instrument that can be used without expertise on gender issues, but not without qualitative/quantitative data on women. It consists of two questions: 1) Is the policy proposal directed at one or more target groups? 2) Are there differences between women and men in the field of the policy proposal (with regard to rights, resources, positions, representation, values and norms)? The impact of any law, policy or program on the target group may be direct or indirect.

²⁵⁶ The European Institute for Gender Equality (EIGE), *Gender Impact Assessment*, *supra* note 245.

²⁵⁷ Council of Europe, "Gender Mainstreaming," *supra* note 87 at 62.

Direct impact occurs when regulating or affecting people's access to resources that has a direct and immediate effect on the status and position of women and men. Indirect impact, on the other hand, happens when regulating or planning measures affect the means of provision of certain resources or services behind which there are people as ultimate beneficiaries.²⁵⁸ In such instances, even though the policy is not directly targeted at them, they can be affected by it.

Step 2. Gender-sensitive analysis: An assessment of the gender impact of any initiative involves a process of analysis to determine the impact (tangible results) that the intervention could have on the effective equality of women and men. On one hand, such analysis should try to comprehend the present situation for the groups concerned. On the other hand, the analysis should examine, as much as possible, how the planned intervention is expected to change the existing situation. In doing this step, according to the European Institute for Gender Equality, first, the situation of women in the field should be analyzed with collecting information and data. Gender-disaggregated statistics, where available, are a good starting point. Quantitative information, however, should be complemented with qualitative insights to gain a deeper understanding as inadequate knowledge and analysis of the current situation and of the problems and needs of the target groups and beneficiaries could lead to the adoption of inappropriate or partial solutions to these problems and needs. Unfortunately, gender-disaggregated quantitative data showing women's contribution and specific roles in TK is not available either at the national or international level. The following section provides details of the empirical method used to acquire qualitative data when I undertook fieldwork to examine the situation of local women TK holders who are involved in saffron and handwoven carpet production in Iran.

²⁵⁸ The European Institute for Gender Equality (EIGE), *Gender Impact Assessment*, *supra* note 245 at 14.

Once the current situation is examined, the existing gender inequalities in terms of access to resources (work, money, power, health, well-being, security, knowledge, education, mobility, time, and so on) and in their exercise of fundamental rights (civil, social and political rights) on the basis of their gender or because of roles attributed to women and men (gender roles) should be identified. In addition, the norms and values that regulate the process of access to and control of resources should be considered. This is about the opportunities to participate on equal terms in all aspects of society.

Step 3. Weighing the gender impact: In this phase, it is important to assess the foreseen impact on women as well as to establish how the policy or legislative measure will contribute to gender equality. The following criteria are suggested by the European Institute for Gender Equality²⁵⁹ to weigh the positive, neutral or negative gender impact of any initiative: 1) Participation of women and men, 2) Access to and control of resources, 3) Gender-based social norms and values.

Step 4. Findings and proposals for improving the project in terms of gender equality: Conclusions must be formulated in terms of the impacts on women and men within the target group. Furthermore, proposals should be put forward that will promote gender equality in response to the existing situation. To do this, it should be identified how gender equality could be strengthened in TK laws and policy, taking into account the conclusions reached.

2.2.3 Empirical Method: Qualitative Data Collection and Analysis

In an attempt to overcome the existing gap on data and statistics regarding women TK holders, this research has used an empirical method to collect information through qualitative research. According to feminist scholars, it is possible to conduct feminist qualitative research

²⁵⁹ The European Institute for Gender Equality (EIGE), *Gender Impact Assessment*, *supra* note 245 at 8.

using a range of research methods. Various data collection techniques such direct observation, in-depth interviews and analysis of documents are used in qualitative research and are also commonly employed by feminist researchers.²⁶⁰ After receiving permission from the University of Ottawa's Research Ethics Board,²⁶¹ and after the participants signed consent forms, face-to-face, contextual, in-depth interviews were used for this research to examine women's role and TK in the sectors of Persian handwoven carpet and saffron production. My Iranian background and native proficiency in Farsi language, allowed for efficient communications where I documented the extent of women's participation and the TK held and practised by them.²⁶²

2.2.3.1 Sampling: Selecting Interview Subjects

Identifying possible interview subjects from whom data might be gathered was the first step toward collecting qualitative data. The overarching goal was to select female subjects who are involved in traditional practices in saffron and carpet production. Therefore, senior and elderly local people who work in these sectors and are engaged in production and processing were the main subjects. However, I did not limit my inclusion criteria to a certain age since one of the aspects that I was trying to examine was the intergenerational transfer of TK. For example, in one occasion, I had a chance to interview three generations of women in one family (i.e., the

²⁶⁰ Jane Wambui, "An Introduction to Feminist Research" (2013) University of Nairobi at 5.

²⁶¹ The research was undertaken after ethics review and approval from the Research Ethics Board (REB), University of Ottawa. The procedure started after I successfully defended my research thesis proposal and involved meetings with ethics Officer Gabriel Petitti (for whose clear instructions and guidance during the process I am so grateful), completing the application package including consent form, interview guide, letter of information and the application Form. The research was then approved by the Research Ethics Board, and the ethics certificate was issued (File Number: 03-17-05) on 04/13/2017. The field work took place from 5/09/2017 to 20/10/2017.

²⁶² Regarding the local ethical clearance, at the time of conducting this research, the only field that required research ethics approval in Iran was medical and health-related research. For other areas of research, unlike Canadian universities and research institutions, there is no central ethics board/authority at Iranian universities and research institutes to issue ethical clearance. Students and researchers are allowed to start their fieldwork after their proposal defense, and their supervisory committees guide them regarding ethical aspects of their research.

grandmother, mother and granddaughter) where all three were working at one of the workshops. In order to reach my potential interview subjects, I traveled to one of the main centres for saffron and carpet production in Iran. For saffron, I went to one of the rural areas of Mashhad (in Khorasan Province) ²⁶³ called “Bidvey,” and for carpet, I traveled to Kashan, a city that has a worldwide fame for its hand-woven carpets. (The locations of the fieldwork can be seen in Figure 3).



Figure 3
Showing the sites of fieldwork

Travelling to and being on these sites where local people are practising their traditional knowledge on a daily basis, provided rich sources of data and can be considered as “purposeful

²⁶³ Saffron has traditionally been grown in Khorasan province, an area (about the size of England) in the North-East of Iran, with ideal soil and climate conditions for the crop. “More than 70 percent of Iran’s saffron production are produced in the Khorasan province.” Secretary of Iran’s National Saffron Council, “Iran exports saffron to 45 states”, Islamic Republic News Agency (IRNA) (9 November 2014), <<https://en.irna.ir/news/2783875/Iran-exports-saffron-to-45-states>>.

sampling.”²⁶⁴ Purposeful sampling is a technique widely used in qualitative research for the identification and selection of information-rich cases for the most effective use of limited resources.²⁶⁵ This involves identifying and selecting individuals or groups of individuals who are especially knowledgeable about or experienced with a phenomenon of interest.²⁶⁶ As for the method of recruitment, for the carpet case, I had some contacts in Kashan and prior to residing in the city for the purpose of interviews, I travelled to the city once and my contact introduced me to the manager of a series of carpet weaving workshops in the city. The manager and I had a meeting, where I explained the purpose of my research and he then issued permission for me to visit the workshops. On the same day, I visited one of the workshops and met the head of the workshop and explained in a friendly way and in lay language about my research. She was an experienced senior weaver. We exchanged our contact information, and I returned to Tehran (because a holiday was coming during which the workshops were closed). I travelled to Kashan after the holiday and resided in the city for 10 days. I went to workshops every day during morning and afternoon shifts and interviewed the women who were interested in taking part in my research. I interviewed a total of 16 women.

My first interview was with the head of the workshop; then I continued through the “snowball sampling”²⁶⁷ technique by asking each participant to provide details of someone else (among their colleagues) whom they considered to be a good research subject for the purposes of

²⁶⁴ Lisa Webley, “Qualitative Approaches to Empirical Legal Research” in Peter Cane and Herbert M. Kritzer, eds, *The Oxford Handbook of Empirical Legal Research* (Oxford Handbooks Online, 2010) 926–950 at 934; see also Michael Q. Patton, *Qualitative Research and Evaluation Methods*, 3rd ed, (London: Sage, 2002) at 45.

²⁶⁵ Patton, *Qualitative Research*, *supra* note 264 at 45.

²⁶⁶ John W. Cresswell & Vicki Plano Clark, *Designing and Conducting Mixed Method Research*, 2nd ed. (Sage; Thousand Oaks, CA: 2011).

²⁶⁷ This form of sampling is often used for qualitative research where the participants are identified through referrals. Sven Berg, “Snowball Sampling I” in *Encyclopedia of Statistical Science* (John Wiley and Sons, 2006) no page number at 1.

the study. This technique enabled me to gradually build up a larger sample of participants until “saturation” happened. Saturation is defined as the point at which the data collection process no longer offers any new or relevant data. Another way to state this is that conceptual categories in a research project can be considered saturated “when gathering fresh data no longer sparks new theoretical insights, nor reveals new properties of your core theoretical categories.”²⁶⁸

Throughout my interviews, I was able to photograph and record my participants’ activities and also had a chance to try and learn the basics of carpet weaving.²⁶⁹ With the help of my local contacts, I also had a chance to visit one of the oldest dyeing workshops where natural colors and materials are used to dye wool and silk. I also visited Kashan’s traditional Bazaar where handwoven carpets are sold.

Once I collected the necessary data, I left the city and returned to Tehran in order to prepare for my next trip to Khorasan province for the second half of my fieldwork. Due to some specific characteristics of saffron, the second trip (entailing saffron farm visits) required precise scheduling and planning. Saffron flowers (unlike most other flowers) only start to bloom when the weather becomes cold. In other words, they require the gentle autumn breeze to bloom, which means depending on weather conditions, the very short harvesting period (only about ten days), is different for each area. In order to manage my time efficiently and to avoid missing the season, I traveled to one of the rural areas of Khorasan province, where due to the climatic conditions, the

²⁶⁸ Most scholars argue that the concept of saturation is the most important factor to think about when deciding about sample size in qualitative research. See Shari L. Dworkin, “Sample Size Policy for Qualitative Studies Using In-Depth Interviews” (2012) 41:6 Archives of Sexual Behavior 1319 at 1319.

²⁶⁹ Having a hands-on experience and the chance to sit behind the carpet loom and trying to follow the instructions of my participants in order to make a single knot (which took me about a minute compared to 3 seconds for a highly skilled weaver), opened my eyes to the level of delicacy and skill required for the job. It was a humbling experience where the self-confidence of my participants was boosted, who until then might still have had an intimidating image of me as a highly educated woman who lives abroad. Throughout the process of interviews, I tried to remain reflexive by being aware of my position. Reflexivity and positionality are discussed in section 2.2.3.6 of the thesis.

saffron flowers start to bloom first in the region. I knew a woman living in Tehran who was originally from the village.²⁷⁰ Once I started my trip to Khorasan, we drove about 1200 km from Tehran to reach the village of Bidvey. I resided in the village for ten days and accompanied the local people to the farms every day before sunrise. I interviewed 15 rural women in order to identify their role and the special techniques that they use in saffron processing.

Overall, I conducted 31 interviews in total (for both carpet and saffron production). The answer to the question “how many interviews is enough?” is not clear and it has been argued that the number of participants proposed in different sources is merely a guideline and may change because the research itself dictates whether the sampling has finished; that is, the interviews are complete when saturation happens, and no new information is being uncovered by doing interviews. It is recommended, however, that twenty to thirty participants can be used as a sample size for graduate research. There is an upper limit to the number of interviews that it is feasible or practical to conduct and analyze. For the single researcher, this is somewhere between 15 and 25 individual interviews and some six to eight focus group discussions.²⁷¹

The interviews lasted about one hour depending on the respondents’ answers, but a time frame of two hours was allotted. The interviews took place in the respective villages where the participants resided. The range of participants who were interviewed provided a variety of

²⁷⁰ I knew her through my mother and my mother was accompanying me during the trip. My mother’s prior acquaintance with the local people in the village was very helpful. She has a very sweet and friendly character, which played a big role in eliminating the distance between me and my participants. I cannot even imagine how the fieldwork would have carried out without the presence of my mother; her presence facilitated the trust building process. Without her, village people would see me as a young female researcher coming from the capital city and studying a Ph.D. in Canada. For them it would be very intimidating. Instead, with my mother I was just Mrs. Saba’s daughter whom they kindly helped in her research.

²⁷¹ Dworkin “Sample Size,” *supra* note 268 at 1319. For a detail discussion, see E. Sarah Baker & Rosalind Edward, “How Many Interviews?: Expert Voices and Early Career Reflections on Sampling and Cases in Qualitative Research” (2012) National Center for Research Paper at 9, <<http://eprints.ncrm.ac.uk/2273/>>. See also Alan Bryman, *Social Research Methods* (OUP Oxford, 2012) at 425; John W. Creswell, *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (London: Sage, 2006) at 127–8; Carol A Bailey, *A Guide to Field Research* (Thousand Oaks, CA: Pine Forge Press, 1996) at 37.

experiences that were representative of different types of weavers and farmers (in terms of their age, background, marital status, etc.) even if not representative in quantitative terms. Among my participants were women who were the heads of households, who depended on their wage to provide for their family, as well as women whose incomes were a supplement to the insufficient income of their husbands. The family size of my participants varied from those having two children to a more populous family where some of them lived with and were responsible for taking care of the elderly members of their family.

2.2.3.2 Contextual Interviews

Contextual interviews are interviews that take place in the context in which the behavior of interest happens. A typical contextual interview entails a visit to a home or place of business which, in my case, were carpet weaving workshops and saffron farms. In this type of interview, the participants demonstrate certain processes of interest for the researcher who asks questions about the process to get a clear understanding. In this way, the researcher can obtain a record of activities in which the participant engages when going through a process which, in my case, were carpet weaving and saffron production. Some argue that contextual interviewing is a superior form of interviewing as it allows the researcher to understand the person's environment and get actual demonstrations of behaviours of interest.²⁷² It also has another advantage as it helps the interviewee remember specific details about performing actions.²⁷³

Face-to-face interviews, as opposed to remote interviews (via telephone or video link), were conducted in order to avoid technical difficulties and, more importantly, in order to contextualize the data and to allow the respondents to provide responses in an open manner, which

²⁷² Madrigal, "Contextual Interviews," *supra* note 242.

²⁷³ Madrigal, "Contextual Interviews," *supra* note 242.

permitted for richer data than simply answering “yes” or “no”.²⁷⁴ This method also allowed me to ask for clarification and to provide different scenarios to which the participant usually responded with an explanation. It also allowed for observation of the participants in their chosen interview space, i.e., carpet weaving workshops and saffron farms. It provided opportunities to collect contextualized, rich description of the setting from those being observed and interviewed. In this way, some participants were able to show the methods and techniques in practice that I would otherwise not have been able to see or access had the interviews been conducted over the phone. Moreover, the interviews were conducted at the participants’ place of convenience, and I made sure that interviews neither took time from their workday nor interrupted their activities. In fact, one of the main reasons that I resided in Kashan and Bidvey (the two sites of my fieldwork) was to have flexibility regarding the time and place of interviews.

Individual interviews were conducted as opposed to group interviews (focus groups) for three reasons. First, in individual interviews, participants have more space to elaborate their points, and this type of interview is recommended when the topic concerns detailed individual experiences, choices, and personal biographies.²⁷⁵ Second, gathering participants in one time slot was not practical because one of the key criteria was time flexibility that allowed each individual to participate at a time and place that would be convenient to the respondent. Third, it is not feasible to focus attention on a particular individual in a group discussion in the same way that can be achieved in a one-on-one interview. With the ability to follow up with probing questions based on

²⁷⁴ Harvey R. Bernard, *Research Methods in Anthropology: Qualitative and Quantitative Approaches*, 5th ed (Lanham: Rowman & Littlefield Publishing Group, 2011) at 187, 190. For advantages of face-to-face interviews, see also Webley, “Qualitative Approaches,” *supra* note 264. As Bernard rightly notes, a problem with fixed-choice questions is that people focus on the choices they have. If they’d like to offer a response other than those in front of them, they won’t do it. He argues that the open-ended questions break the monotony for the respondent. Bernard, *Research Methods*, *supra* note 274 at 199–202.

²⁷⁵ See George Gaskell, “Individual and Group Interviewing” in Martin W. Bauer & George Gaskell, eds, *Qualitative Researching with Text, Image and Sound* (London: SAGE, 2000).

the particular circumstances, far richer detail about personal experiences and action sequences can be discovered, with a single respondent.²⁷⁶ Fourth, the objective of a focus group is to stimulate the participants to talk and to respond to each other, to compare experiences and impressions, and to react to what others people in the group say, which, in my case, was neither intended nor desired in the research design.²⁷⁷

In-depth interviews, using semi-structured, open-ended questions,²⁷⁸ were conducted with the local and rural women in two sectors of carpet and saffron production in Kashan and Bidvey. In-depth interviews are guided conversations utilizing open-ended questions and various forms of (informal) probing to facilitate a discussion of issues in a semi-structured manner. The open-ended format allowed me to probe diligently for more detail than the interviewee offered as a first reply to a question. My interviews started with some introductory remarks about myself and the research, a word of thanks to the interviewee for agreeing to talk, and a request for permission to tape record the session. The interviews were recorded to facilitate the analysis of the full transcripts and allowed me to concentrate on what was being said and to be totally engaged in the conversation. I also had a pad and pencil in order to take notes while the interview was taking place. However, I tried to minimize my note taking to avoid any negative impact that it might have had on my participants.

I was well aware that my interviewees might see the interviews as conversation of unequals²⁷⁹ and feel self-conscious, and perhaps a little hesitant and defensive. Their primary

²⁷⁶ For more details, see Gaskell, "Individual and Group," *supra* note 275. Electronic version pages are not numbered sequentially.

²⁷⁷ Gaskell, "Individual and Group," *supra* note 275.

²⁷⁸ Bernard, *Research Methods*, *supra* note 274 at 199–202.

²⁷⁹ Considering my labels such as Ph.D. student, Canadian resident, etc it was completely normal for my interviewees, who were mostly local and rural women, to feel intimidated. In order to overcome the trust barriers and create a climate of trust, I was careful with my appearance by wearing simple cloths, wearing no makeup, no jewelleries, etc. I even clipped my nails to make my hands similar to their working hands.

tendency was to follow the cultural norms of formal conversation and to limit answers to what is presumed to be relevant and informative. Therefore, I tried to adopt a conversational style²⁸⁰ to counter these understandable tendencies and to encourage the interviewees to talk at length, to expand on aspects of their life and to be frank. I tried to put the interviewees at ease and establish a relationship of trust and confidence, developing a rapport with each participant.²⁸¹ In doing so, I tried to pose my questions in a conversational manner by verbal and non-verbal reinforcement, and by being relaxed and un-self-conscious.²⁸² As a ‘fellow-feeling’ developed, participants felt more relaxed and expansive, to think and talk about things beyond the level of surface opinions. The interviews thus resembled more a conversation between women friends than unidirectional sets of questions and answers.²⁸³ By making the subjects feel more comfortable, the informal tone of the interview encouraged them to say things they otherwise might not have shared.

I had prepared the interview guide and my list of questions in advance. However, as recommended by many scholars, I used the interview guide, as the title suggests, only as a “guide” and when issues beyond prior planning and expectation were brought up, I took the liberty to address them.²⁸⁴ Equally, as a series of interviews progressed, some topics turned out to be uninteresting, either for conceptual reasons or because respondents had little if anything to say about them.²⁸⁵

2.2.3.3 Method of Data Analysis

²⁸⁰ Bernard, *Research Methods*, *supra* note 274 at 109. Although conventionally a question-and-answer style interview (where the interviewees all hear the same question) was held to be reliable, Bernard suggests that conversational style interviews “produces more accurate data, especially when respondents really need to get clarifications on unclear concepts.”

²⁸¹ Gaskell, “Individual and Group,” *supra* note 275 at 18 of 22.

²⁸² Reflexivity and positionality are discussed in section 2.2.3.6.

²⁸³ Gaskell, “Individual and Group,” *supra* note 275 at 18 of 22.

²⁸⁴ See Gaskell, “Individual and Group,” *supra* note 275 where he explains that “the interview guide does not need to be an extensive series of specific questions, but rather a set of paragraph headings.”

²⁸⁵ Gaskell, “Individual and Group,” *supra* note 275.

Once the interviews were conducted and recorded, the next step was to transcribe, analyze, and then translate the data. Although I was directly involved in collecting the data, in order to gain an overview of the body of material gathered and avoid additional costs, I personally transcribed the recordings in order to familiarize myself with the data.²⁸⁶ It helped me to recall aspects of the interview beyond the words, and I almost re-lived the interviews, which was beneficial later during the process of abstraction and conceptualization.²⁸⁷

There are three relatively widely used modes of qualitative data analysis: classical content analysis, discourse analysis, and the grounded-theory method. Among different modes, classical content analysis was more suitable for the context of this research. It has a wide application; it is usually used to examine or research generated texts such as interview transcripts.²⁸⁸ All various modes of qualitative data analysis rely on coding, which, as Gibbs states, involves identifying and recording one or more passages of text that, in some sense, exemplify the same theoretical or descriptive idea.²⁸⁹ Classical content analysis also involves thematic categorization or coding; it reduces text to codes by categorizing items in the text and then counting occurrences of those items to allow inferences to be drawn from the document.²⁹⁰ Usually several passages are identified, and they are then linked with a name for that idea, which is the code.²⁹¹ According to Charmaz, the method of coding “depends on the type of data collected, their level of abstraction, the stage of the

²⁸⁶ Alan Bryman, Bob Burgess & Robert G. Burgess, eds, *Analyzing Qualitative Data* (London: Routledge, 1994) at 178. They believe that before beginning the process of sifting and sorting data the researcher must become familiar with the range and diversity of the data to gain an overview of the body of material gathered.

²⁸⁷ It has been argued that it is essential to almost live and dream the interviews – to be able to recall each setting and respondent, and the key themes of each interview. Gaskell, “Individual and Group,” *supra* note 275.

²⁸⁸ Webley, “Qualitative Approaches,” *supra* note 264 at 17.

²⁸⁹ Webley, “Qualitative Approaches,” *supra* note 264 at 940–941.

²⁹⁰ See Martin W. Bauer, “Classical Content Analysis: a Review” in Martin W. Bauer & George Gaskell, eds, *Qualitative Researching with Text, Image and Sound* (London: SAGE, 2000) no sequential page numbers at 3 of 15.

²⁹¹ Webley, “Qualitative Approaches,” *supra* note 264 at 940–941.

research process, and your purpose for collecting these data.”²⁹² Although coding line-by-line is very useful, in the case of my transcripts not every line contained a complete sentence and not every sentence was important. Due to the nature of the data sought, I engaged in question-by-question coding rather than using word-by-word or line-by-line coding.²⁹³

Coding refers to the process whereby the thematic framework is systematically applied to the data in its textual form. To code the transcripts, I identified the key issues, concepts, and themes according to which the data can be examined and referenced.²⁹⁴ To name just a few, the following are a few themes that emerged during coding and analyzing the data: intergenerational transmission of knowledge, women’s financial independence, low wage, and lack of interest in younger generation. I employed the traditional techniques of coding where a pencil and other low technology aids²⁹⁵ such as colour highlighters were used to mark and highlight the text of the transcripts. Notes and comments were added to the text to facilitate thematic analysis. I did not use Computer Assisted Qualitative Data Analysis (CAQDAS) mainly because I worked with cross-cultural data in Farsi and the data remained in the native language for the most part of coding and analysis as prescribed by the literature. The details regarding language and translation are addressed under “Limitations” section.²⁹⁶

The process of reading and re-reading helped me to go beyond the superficial meanings and brought to my mind the accounts or comments, which, at first hearing, appeared to be

²⁹² Kathy Charmaz, *Constructing Grounded Theory: A Practical Guide through Qualitative Analysis* (London: Sage Publication, 2006) at 53.

²⁹³ For various methods of coding and their application, see Charmaz, *Constructing Grounded Theory*, *supra* note 292 at 50–53.

²⁹⁴ Bryman, Burgess and Burgess, *Analyzing*, *supra* note 286 at 180.

²⁹⁵ As opposed to Computer Assisted Qualitative Data Analysis (CAQDAS), which refers to the wide range of software now available that supports a variety of analytic styles in qualitative work such as NVivo, MAXQDA, ATLAS.ti. Working with both Farsi and English language simultaneously made it troublesome to use any CAQDAS software.

²⁹⁶ See e.g. Fenna Van Nes et al “Language Differences in Qualitative Research: Is Meaning Lost in Translation?” (2010) 7:4 Eur J Ageing 313.

inconsequential, and suddenly came into focus as the contributions of different interviewees were compared and contrasted. Having applied the thematic framework to individual transcripts, the next step was to build up a picture of the data as a whole. This final step was interpretation, where I began to interpret the data as a whole according to the research theoretical framework.

2.2.3.4 Confidentiality and Anonymity

Prior to the beginning of the interviews and to the participants signing the consent forms, I took the time to read the consent forms to them to outline that they had the right to withdraw at any time, even after the interview was concluded. The participants were offered complete anonymity and confidentiality of their responses.²⁹⁷ Most of my participants, though, were not worried about their identity being released. For instance, while I was trying not to reveal their faces in the videos and photos, they were fully willing for the images to appear. For most of them, not only was it not an issue to appear in photos and videos with their faces revealed, but in some instances, I had a feeling that they found it offensive when I was trying not to capture their faces.²⁹⁸

2.2.3.5 Methods of Data Collection: Primary & Secondary Sources

In addition to the interviews, the data that I used for the purpose of this research was in a number of forms. It included my notes that provided a description of what, where, and how local people did what they did, their interactions, processes of the work, etc. This dual approach to the data collection (observation and interviews) provided a more rounded data set and in-depth findings than would have been possible using a single method alone. The observation allowed me

²⁹⁷ See Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada, Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans, December 2014, chapter 5 at 57.

²⁹⁸ Therefore, I used my personal smartphone and took some friendly photos with them (as opposed to the research photos that were taken by a professional camera). The friendly photos are not used in the research, and they are in my personal photo collection.

to watch the participants' behaviour in their work environment, as well as to experience their working day. During my stay, I had a chance to participate in their activities by accompanying them to farms and workshops rather than observing as a bystander.²⁹⁹

In addition to the empirical research conducted using the qualitative method, I have used primary data sources that include legislative instruments such as Iranian national laws, bills and regulations. The material on domestic laws is important because it provided insight into the current status of legal protection of TK in the country. I also examined the international instruments that are relevant to the TK discussions. One important part of the thesis was to closely examine the progress of WIPO-IGC's work and the documents under its revision; therefore, WIPO's official documents were among secondary data sources used for the research. Moreover, I benefited from books, essays, and journal articles. For additional information on traditional practices of carpet weaving and saffron production, I used materials on blogs and websites and documents that were already in existence such as audio or visual recordings or pictures.

2.2.3.6 Reflexivity and Positionality

One of the most distinctive characteristics of feminist qualitative research is its attention to reflexivity, in which researchers engage in reflection about the research process. Feminist scholars recognize the importance of being reflexive about interpreting the research data, their role in the analytic process, and the preconceived ideas and assumptions they bring to the analysis.³⁰⁰ This is specifically important since, as Strauss and Corbin have noted, "... researchers often fail to see much of what is there because they come to analytic sessions wearing blinders, composed of assumptions, experience, and immersion in the literature."³⁰¹ Emphasising the notion of

²⁹⁹ Webley, "Qualitative Approaches," *supra* note 264 at 937.

³⁰⁰ Wambui, "An Introduction," *supra* note 260 at 3.

³⁰¹ Wambui, "An Introduction," *supra* note 260 at 3.

reflexivity, Lofland argues that the role of a qualitative researcher is not to impose the researcher's own view; rather, the researcher's duty is to discover the research participant's understanding instead of judging what that person must think or feel.³⁰² In order to do so and really learn from participants, the researcher needs to interact with the participants rather than remaining entirely distanced. Moreover, as Kim R. L. England rightly describes, fieldwork is intensely personal, in that the positionality and biography of the researcher plays a central role in the research process, in the field as well as in the final text.³⁰³ Informed by this notion of reflexivity, I tried to situate myself and my interpretations of the interviews by reflexively examining my positionality.³⁰⁴ I have used my perspective as a non-western, Iranian woman to critically examine the issue of legal protection of TK and what such an issue might signify for women in non-western structures. As a middle class, educated woman who is originally from the South but is currently living and studying abroad, I attempted to understand the lives of rural and local women while being aware of the suspicion with which they may view feminist researchers who try to sympathize with women of the Third World. I avoided the false attitude of "us helping them"³⁰⁵ and simply attempted to see the world through the eyes of my participants.³⁰⁶ I realized that although having been born, raised, and lived most of my life in Iran, I, although still a Third World woman myself, am a world away from my participants. As a Third World woman who later moved to a developed country for

³⁰² Webley, "Qualitative Approaches," *supra* note 264.

³⁰³ Kim R. L. England, "Getting Personal: Reflexivity, Positionality, and Feminist Research" (1994) 46:1 *Professional Geographer* 80 at 87. England argues we need to locate ourselves in our work and to reflect on how our location influences the questions we ask, how we conduct our research, and how we write our research.

³⁰⁴ Gillian Rose, "Situating Knowledges: Positionality, Reflexivities and Other Tactics" (1997) 21:3 *Progress in Human Geography* 305 at 305.

³⁰⁵ See Vasuki Nesiah, "The Ground Beneath Her Feet: TWAIL Feminisms" in Antony Anghie et al., eds., *The Third World and International Order: Law, Politics and Globalization* (Boston: Martinus Nijhoff, 2003) 133–144 at 134, explaining the connection between colonialism and the move to "liberate" women within the Western idea of liberation, specifically the case of French colonial powers unveiling women.

³⁰⁶ See generally Gunning, "Arrogant Perception," *supra* note 183 at 194.

advancing her education, I tried to the best of my ability to understand the issues facing the local and rural women.

In particular, as Audrey Kobayashi argues, I recognize that all academic women are privileged to some degree since they have “access to the middle-class luxuries, such as education and professional status, that are still relatively inaccessible for most women of all backgrounds.”³⁰⁷ In my case, it was an element separating me from the women I interviewed, who were mainly local, rural women having no academic or even secondary education. So, what did it mean in practice to be reflexive? Not surprisingly, it was a hard and delicate task to do, as feminist scholars have warned.³⁰⁸ Trying to overcome the distance between myself and my participants, on one hand, and remaining conscious of the differences between us on the other hand, was not an easy task. I tried to be aware of the differences between my participants and me in terms of our age, gender, social and economic status and minimize the impact that those differences may have on the interview process and other aspects of my research. Moreover, I kept a diary as a place for recording my reflections during the fieldwork, which included my observations, my feelings about how the interview went, and my primary ideas and attempts to make meaning about the data. I also participated in the activities such as picking the flowers, pistol removal, and weaving. It has been argued that this type of research yields far better data as long as the researcher remains reflexive.³⁰⁹ Informed by the literature on positionality and reflexivity in research, I tried to situate myself and

³⁰⁷ Audrey Kobayashi, “Coloring the Field: Gender, Race, and the Politics of Fieldwork” (1994) 46 *Professional Geographer* 73 at 76.

³⁰⁸ At the same time as they defend reflexivity, many feminists acknowledge the difficulty of actually being reflexive. Rose, “Situating Knowledges,” *supra* note 304 at 306.

³⁰⁹ For more about the technique of “going native” see e.g. Howard S. Becker and Blanche Gee, “Participant Observation and Interviewing: A Comparison,” in William J. Filstead, ed, *Qualitative Methodology First-Hand Involvement with the Social World* (Chicago: Markham, 1970) 133–143 at 133.

my interpretations of the interviews by reflexively examining my position.³¹⁰ To provide a concrete example, years of modern-style education has shaped my mentality that to learn things, I need to theorize them first. This was in sharp contrast to the prevalent teaching and learning method in the sectors that I examined. In order to participate in the activities while I was at the workshops and farms, I was asking for step-by-step verbal explanations on how the task was performed (in other words, I was demanding a lecture on the subjects), while all that I was receiving was my participants doing the job in front of me and asking me to repeat it. Learning by seeing and then doing! The method was so strange to my mind (due to years of academic education) that I caught myself resisting it several times when I was desperately in search of some instructions in a textbook style.³¹¹ When I was invited to repeat weaving or saffron processing practices, my mind was experiencing an extreme need to learn in a way that it was used to for years, and was constantly trying to formulate textbook style instructions and verifying them with the participant before performing the task while all they wanted was to get my hands on and start repeating.³¹² The process of reflexivity is also an attempt to identify and acknowledge the limitations of the research,³¹³ which the next part aims to examine.

³¹⁰ For more detail about reflexivity and how to practice it in course of research, see e.g. Natasha S. Mauthner & Andrea Doucet, "Reflexive Accounts and Accounts of Reflexivity in Qualitative Data Analysis" (2003) 37:3 *Sociology* 413; see also Rose, "Situating Knowledges," *supra* note 304 at 305; England, "Getting Personal," *supra* note 303.

³¹¹ England, "Getting Personal," *supra* note 303 at 82 describes reflexivity as a process of "self-discovery".

³¹² I remember that I felt so incompetent and it was one of the moments when I personally and thoroughly realized that there is no hierarchy between traditional and modern science. I was not afraid to share this feeling with my participant; quite the contrary, I deliberately put my feelings into words by expressing sentences such as "I feel so dumb" "would you please help me..." "I do not know how..." "oh... I'm awful in..." and I believe that this honesty changed the nature of the relationship between me and my participants completely; my weakness in following their steps and expressing it frankly shattered the intimidating image that they may have had of me (as an academic). In other words, it boosted their self-esteem, and they realized that they have skills and knowledge that I am lacking. In that way, the interviews turned out not to be a conversation of "unequals" anymore.

³¹³ Geoffrey Shacklock & John Smyth, eds, *Being Reflexive in Critical Educational and Social Research* (London: Falmer Press, 1998) at 7.

2.2.3.7 Limitations

First, it is noteworthy to recognize that the term “gender” refers to socially constructed roles of and power relations among men and women. However, considering that women have historically been discriminated against owing to patriarchal norms and power structures, this thesis focuses on women. The research has several genuine limitations as follows: 1) As feminists themselves have argued essentialism should be avoided and women should not be considered as a single analytical category since there are differences in race, class, sexual orientation, etc. that should be taken into consideration.³¹⁴ Some may argue that introducing gender analysis to the TK discussions and using gender as a category of analysis can reinforce stereotyped thinking and thus marginalize the status of women even further.³¹⁵ In fact, I am cognizant that putting emphasis on the existence of “women’s traditional knowledge” is followed by the risk of creating a knowledge category that is doubly gendered (as argued previously) and thus doubly devalued. However, as Gearhart-Sema rightly notes, “to pretend that women are not subject to gendered categories and value hierarchies due to their sex and, oftentimes, due to the nature of their labor is to avoid the obvious.”³¹⁶ The case study approach taken by this research, where the cultural context for saffron and carpet production is examined through obtaining cross-cultural data, is in line with the emphasis of my theoretical framework, i.e., Third World feminism, on the cultural, historical and political context in examining women’s issues. Therefore, this research retains “women” as an analytical category in analysing TK while it is guided by theoretical and methodological

³¹⁴ For more detail, see feminist anti-essentialism critiques, such as Elizabeth V. Spelman, *Inessential Woman: Problems of Exclusion in Feminist Thought* (Boston, MA: Beacon Press, 1988).

³¹⁵ Bartlett, “Feminist Legal Methods,” *supra* note 217 at 835. As Bartlett argues, this is the most difficult problem of all with use of the term “feminist” and “woman”; it has a tendency to reinstate what most feminists seek to abolish: the isolation and stigmatization of women.

³¹⁶ Gearhart-Sema, “Women’s Work,” *supra* note 137 at 386.

approaches that are sensitive to the misleading or dangerous tendencies of homogenizing and overgeneralization.³¹⁷ After all, it should be kept in mind that “no feminist should produce knowledge that claims to have universal applicability to all women (or men).”³¹⁸ Moreover, as is consistent with feminist theory, and more specifically Third World feminism, the sample size used for the two sectors in one country does not allow for claiming essentialist or universalizing characteristics for the women that I interviewed. Indigenous and local women are not a homogenous category with universal interests and experiences; therefore, it will be important to study other sectors and/or other countries to see to what extent the results of this thesis are transferable to other sectors and countries.

2) It has been argued that often problems within the legal system and the effect of policy shifts can only be examined using qualitative methods, as is also adopted by this research.³¹⁹ The findings of this research, however, are representative only in the sense of capturing women’s TK and its specifications in the two sectors of saffron and handwoven carpet. The findings do not allow for the estimation of the statistical distribution of TK in the population as a whole. Although the study has been designed and executed genuinely and the findings are valid and dependable, the findings should not be considered as statistically representative, as is true of other qualitative research.³²⁰ Qualitative research does not depend on statistical quantification, but attempts to

³¹⁷ Third wave feminists’ anti-essentialist critique has too often been used to dismiss second wave feminist projects. As a third wave feminist herself, Cressida J. Heyes argues in her article that feminist theorists have often failed to move on from a dismissive “anti-essentialist” critique to a more nuanced, practical engagement with political projects. Her paper highlights the political vacuity of anti-essentialist gestures that constitute simply an automatic reflex to bring difference to the fore. For more detail, see Cressida J. Heyes, “Anti-Essentialism in Practice: Carol Gilligan and Feminist Philosophy” (1997) 12:3 *Hypatia* 142; See also Charlotte Witt, “Anti-Essentialism in Feminist Theory” (1995) 23:2 *Philosophical Topics*.

³¹⁸ Rose, “Situating Knowledges,” *supra* note 304 at 307.

³¹⁹ Webley, “Qualitative Approaches,” *supra* note 264 at 949.

³²⁰ For more details regarding generalizability of qualitative research, see Brett Smith, “Generalizability in Qualitative Research: Misunderstandings, Opportunities and Recommendations for the Sport and Exercise Sciences” (2018) 10:1 *Qualitative Research in Sport, Exercise and Health* 137 where he distinguishes various forms of

capture and categorize social phenomena and their meanings. Qualitative research is about examining people's lives in rich detail, and, to achieve that goal, small numbers of people are often chosen through purposeful sampling.³²¹ Therefore, as Smith puts it, "rich knowledge and small samples purposefully chosen are thus unique strengths of qualitative research, not weaknesses."³²² In the context of this research, the interviews seek to capture the interaction between local women and TK as a dynamic, evolving concept.³²³ As Barsh observes, the traditional aspect of traditional knowledge is not its antiquity, but the way the knowledge is acquired and used. According to Barsh, it is the social process of learning and sharing knowledge that defines the knowledge's "traditionality." Moreover, I have borrowed the term "Indigenous and Local" from the TK scholarship and also from the terminology that is used at international forums. More specifically, the term is used at WIPO-IGC following its use at CBD. The term has been the subject of considerable discussion and study and there is no universal, standard definition for it. For instance, the Convention on Biological Diversity (1992) uses the term "indigenous and local communities" in recognition of communities that have a long association with the ecosystem that they have traditionally live on or used. The term is defined as "the human population in a distinct ecological area who depend directly on its biodiversity and ecosystem goods and services for all or part of their livelihood and who have developed or acquired traditional knowledge as a result of this

generalizability namely statistical-probabilistic generalizability naturalistic generalisation, transferability, analytical generalizability and intersectional generalizability.

³²¹ See Virginia Braun and Victoria Clarke, "Successful Qualitative Research: A Practical Guide for Beginners (London: Sage, 2013).

³²² Brett Smith, "Generalizability," *supra* note 320.

³²³ Webley, "Qualitative Approaches," *supra* note 264 at 934. Qualitative researchers are not usually concerned that research subjects should be statistically representative because they do not seek to reach findings that are generalizable to an entire population.

dependence.”³²⁴ With this definition, the term indigenous and local communities is applicable to the target population of the case studies.

3) Although I tried to give the participants time to come out of the interview mode before turning the recorder off, on several occasions, they added some comments after the tape recorder was switched off. In those instances, I wished that the tape was still recording as points of some significance were raised. In such circumstances, I took notes as soon as I found free time. Sometimes, I had to make a mark on my hand to make sure that I did not forget it until I reached my notebook.

4) Although I used my personal observation as a method of data collection, I was well aware of the fact that, considering the nature of traditional practices, the details of these practices may not be recognizable through observation. Therefore, I relied mainly on my participants’ description and assessment of their activities through in-depth interviews and only used my observation as a supplementary method. Moreover, in order to minimize problems associated with observation,³²⁵ I tried to immerse myself in the environments by participating in the environment actively rather than remaining a mere witness.³²⁶

5) Since local people had no working knowledge of English, the interviews were conducted in the official language of the country, which is Persian (Farsi). It has been argued that when participants and the main researcher have the same non-English native language and the non-

³²⁴ See Russel Lawrence Barsh, “Indigenous Knowledge and Biodiversity” in Darrell Addison Posey, ed, *Cultural and Spiritual Values of Biodiversity* (London: Intermediate Technology, 1999) 73–75 at 74. For the definition of the term “indigenous and local communities” see WIPO Glossary, <<https://www.wipo.int/tk/en/resources/glossary.html#26>>.

³²⁵ It has been argued that observation may have some difficulties; for example, if people know that they are being observed then they may consciously or subconsciously alter their behavior (known as the Hawthorne effect). Webley, “Qualitative Approaches,” *supra* note 264 at p 937.

³²⁶ Robert Dingwall, “Accounts, Interviews and Observations,” in Gale Miller & Robert Dingwall, eds, *Context and Method in Qualitative Research* (London: Sage Publications, 1997) 52–66. Dingwall argues that observation provides data that cannot be collected via interviews.

English data is for an English publication, the research validity is secured only when the distance between the meanings as experienced by the participants and the meanings as interpreted in the findings are as close as possible.³²⁷ It is a very delicate job to ensure that the findings are communicated in such a way that the readers understand the meaning as it was expressed in the source language. Since the translation between languages involves interpretation as well, the message communicated in the source language (in this case, Farsi) has to be interpreted by the researcher and transferred into the target language (in this case, English) in such a way that the reader of the thesis understands what was meant.³²⁸ One of the difficulties in translation was when I needed to translate the terms of art that are very specific to the saffron and carpet processes where no English equivalent was available for them. In such instances, I have used the Farsi word itself (transliterated in English alphabet) with an English description of what it means. To provide an example, “*čhellehkašhi*” is an early step in carpet weaving. The closest English phrase for it would be “wrap winding” which does not necessarily convey the meaning. Therefore, I have used the original Farsi word for this step followed by the description: “*čhellehkašhi*” (preparing the yarns according to the size of the carpet and twisting them in equal distances on the loom). The description reveals the highly technical nature of the practice that requires very accurate and complicated calculations.

Although placing emphasis on the use of cross-cultural data (that often comes in the form of cross-language data), Third World feminist literature itself is silent when it comes to the translation procedure in qualitative research. Translation issues are not discussed in the method sections of Third World feminist works for English articles reporting research with non-English

³²⁷ See generally, Donald E. Polkinghorne, “Validity Issues in Narrative Research” (2007) 13:4 *Qualitative Inquiry* 471. See also Donald E. Polkinghorne, “Language and Meaning: Data Collection in Qualitative Research” (2005) 52 *J Counsel Psychol.* 137.

³²⁸ Van Nes et al, “Language Differences,” *supra* note 296 at 314.

data. The existing literature on the timing of translation in cross-language studies usually comes from healthcare studies. Generally, there is no standardised procedures for translation of data in qualitative research and the timing of translation depends on various factors such as whether the research is done by a single researcher or a team of researchers, if it is team research whether all researchers work in a common language or not, whether participants and main researchers have the same non-English native language or not, etc. As a study with a single researcher who shared the same non-English native language with my participants, during the interview phase there was no translation issue. The purpose of the interview and the type of questions asked (inquiring details of their TK, how they learn and transfer it, etc.) required no legal/technical English term. Moreover, such terms have clear translation in Farsi. Regarding the analysis phase, this research followed the recommendations of Van Nes *et al* and stayed in the original language as long and as much as possible.³²⁹ Consequently, some major parts of the coding and analysis phases were conducted in the original language and only after reaching the point where abstractions were made were the findings translated into English.³³⁰ The data was analyzed in the source language and translation was carried out only on the analyzed data. According to Van Nes *et al*, this method reduces the loss of meaning and thereby enhances the validity of cross-language qualitative research.³³¹

6) During the interview stage, since my questions regarding description of the different phases of carpet weaving and saffron production were similar, after the first couple of interviews,

³²⁹ Van Nes *et al*, “Language Differences,” *supra* note 296 at 315.

³³⁰ See Hsiao-Yu Chen & Jennifer Boore, “Translation and Backtranslation in Qualitative Nursing Research: Methodological Review” (2010) 19:1-2 *Journal of Clinical Nursing* 234 at 237.

³³¹ Generally, there is some influence when analyzing in another language than your own. In other words, the language in which thinking and reflection happens affects analysis. The relationship between thinking and language has been studied from different scientific perspectives, e.g. in psychology and in the philosophy of language. See e.g. Ray Jackendoff, *Language, Consciousness, Culture: Essays on Mental Structure* (Cambridge: MIT Press, 2009).

I already knew the different steps of carpet weaving and saffron production. Therefore, I used a technique called “Taking a naive position”³³² by taking the positions such as “*I am not very familiar with that*”, “*Could you tell me a little more about it?*”, “*How would you describe that to someone who was new to the situation?*” Moreover, I reached the saturation point (defined as the point at which the data collection process no longer offers any new or relevant data)³³³ before the final interviews. It happened much earlier with regard to the saffron case. However, in order not to miss any potential new theoretical insights, I conducted the number of interviews that was decided initially.

³³² Gaskell, “Individual and Group Interviewing,” *supra* note 275 at 18 of 22.

³³³ Dworkin, “Sample Size,” *supra* note 268.

CHAPTER 3: LEGAL FRAMEWORK

3.1 Introduction

This chapter provides a close Third World feminist analysis of the existing instruments relevant to TK protection at both the international and domestic level (e.g., Iranian laws) regarding their sensitivity to Indigenous and local women's needs and interests. Emphasizing the diversity in forms of oppression and modes of resistance, Third World feminism captures the double marginalization of women's TK as a category of knowledge that is both prevalent in Third World countries and is held by Third World women. As discussed in the previous chapter, under the existing neoliberal global capitalist system and in an increasingly integrated global economy, Third World women in their own local and national contexts are highly affected by larger, global, economic, and political frameworks. Third World feminist analysis seems especially appropriate for evaluating international instruments around TK protection to examine whether they attend to the needs and interests of Indigenous and local women. The analysis highlights the omissions in the current legal framework for TK protection with respect to Indigenous and local women's needs and interests through examples from the case studies. This reveals that the text, structure, and nature of the existing gender provisions (if any) in the current TK-related instruments fail to acknowledge women's experiences or to protect women's rights in the realm of TK and as a result perpetuate the existing gender inequalities where Indigenous and local women are not recognized and fairly compensated for their contribution to the TK system. With this chapter considering how women and their interest are reflected in TK instruments, the next chapter discusses why it is important for gender to be considered in TK instruments.

With respect to the assessment of whether and to what extent the existing instruments are gender-responsive, there are different degrees of taking note of or attending to gender varying from

gender sensitivity on one side and gender transformativeness on the other side.³³⁴ The examination in this chapter is based on the extent to which the text of these instruments has recognized gender differences and dealt with women's specific needs. In doing so, first the instruments are examined regarding their references to women, gender, or to a similar female noun, for example, girl, mothers, wives, or widows.³³⁵ While it is not suggested that finding such references amounts to evidence of gender sensitivity in the instruments, I argue that such texts (provisions) dealing explicitly with women and gender can nonetheless provide a useful starting point from which wider questions as to whether and what type of gender perspective is adopted can be examined. In other words, the data on references to women and gender in the instruments provide a form of baseline assessment of whether it is likely that a gender perspective was adopted at the time the instrument was being crafted. It is difficult to imagine a gender perspective having been adopted by policymakers and lawmakers in instruments having no reference to women or gender in their text. As Dorothy Smith argues, texts are crucial to understanding institutional priorities.³³⁶ In fact, feminist textuality allows us to focus on the analysis of the so-called "institutional truth" reflected in the text and to consider how this ideology is both created and perpetuated by text-based

³³⁴ See "Report of the Working Group on the Issue of Human Rights and Transnational Corporations and Other Business Enterprises" UN Human Rights Council, 41st session (2019) <<https://documents-dds-ny.un.org/doc/UNDOC/GEN/G19/146/08/PDF/G1914608.pdf?OpenElement>>. Gender sensitive is being aware of how gender plays a role in life. Gender-responsiveness means understanding and taking account of the differences in characteristics and life experiences that women and men have to better respond to women's priorities as well as men's. Gender transformative means transforming unequal gender relations to promote shared power, control of resources, and decision-making. The terminology is adapted from UN Women Glossary, <<https://trainingcentre.unwomen.org/mod/glossary/view.php?id=36&mode=letter&hook=G&sortkey&sortorder&fullsearch=0&page=2>>.

³³⁵ The same method is used by Christine Bell in a different context. Christine Bell, "Text and context: Evaluating Peace Agreements for Their Gender Perspective" (2015) UN Women, <<https://www.unwomen.org/en/digital-library/publications/2017/8/evaluating-peace-agreements-for-their-gender-perspective#view>>.

³³⁶ See Penelope Simons and Melisa Handl, (2019) "Relations of Ruling: A Feminist Critique of the United Nations Guiding Principles on Business and Human Rights and Violence against Women in the Context of Resource Extraction" 31:1 Canadian Journal of Women and the Law 113.

institutional practices.³³⁷ “On this understanding, therefore, texts operate to discipline how the various actors using them think about a particular issue [...] and to shape institutional practices.”³³⁸ After examining the instruments regarding their references to women, then, if any such references exist, the analysis continues by answering the following questions: to what extent do the instruments reflect women’s interests and experiences and their human rights? Have women and their experiences and interests simply been added as an afterthought (add and stir approach v. add and alter approach)?³³⁹ Are women essentialized when references to them are included in the instruments or is there a recognition of the intersecting forms of oppression in terms of how they protect women and their TK?

Although gender-related provisions are really just one part of the solution in empowering Indigenous and local women, explicit references to gender equality in TK instruments help to increase countries’ commitment and can have an impact on the availability of funding for gender-related policies, programs, and initiatives.³⁴⁰ The chapter goes beyond searching for the aforementioned references by examining the variation in the scope and depth of those references. The scope, language, structure, and location of gender-related provisions in the instruments vary. Therefore, I have assessed the quality of the gender-related provisions through their structure, location in the agreement, language, and enforceability.³⁴¹ The combination of these criteria makes

³³⁷ For more details about feminist textuality, see Dorothy E Smith, *Texts, Facts and Femininity: Exploring the Relations of Ruling* (London: Routledge, 1990). Penelope Simons and Melisa Handl have used the framework to examine the United Nations Guiding Principles on Business and Human Rights. See Simons and Handl, “Relations of Ruling,” *supra* note 336.

³³⁸ Simons and Handl, “Relations of Ruling,” *supra* note 336 at 117.

³³⁹ The term “add and stir” is borrowed from Dorothy Q Thomas, “Conclusion” in JS Peters & Andrea Wolper, eds, *Women’s Rights, Human Rights: International Feminist Perspectives* (New York: Routledge, 1995) 356–359.

³⁴⁰ For example, for the impact of gender provisions in trade agreements, see Women Watch, “Gender Equality & Trade Policy” (2011) Resource Paper at 15, <https://www.un.org/womenwatch/feature/trade/gender_equality_and_trade_policy.pdf>.

³⁴¹ The same method is used by José-Antonio Monteiro in the context of trade agreements. José-Antonio Monteiro, “Gender Related Provisions in Regional Trade Agreements” (2018) Working Paper ERSD-2018-15

it possible to gain a sense of gender-related provisions' depth and quality. Gender-related provisions can take different structures, namely, non-specific provision, specific provision, or specific chapter. Non-specific articles are provisions that refer to an issue or a broad range of issues and mention gender as a particular case. For instance, non-specific provisions on gender often list women, among other groups such as disabled or Indigenous People, as vulnerable populations requiring special attention. Language of gender-related provisions can also be formulated differently (e.g., exhortatory or as a binding obligation). Differences in wording often reflect the provisions' level of detail. Depending on their language, gender-related provisions can be aspirational or can recognize or reaffirm specific statements. Such provisions usually exhort or recommend the parties to take specific steps. Alternatively, gender-related provisions can establish stronger substantive commitments and form specific obligations or rights. While formulating a provision in clear language indicating a binding legal obligation can give an indication of the stronger nature of the commitment, the location of the provision in the agreement is also relevant.³⁴² Gender-related provisions can appear in different parts of the instruments (preamble, main text, or side documents such as protocols), which gives them different weight in terms of their enforceability. For instance, the gender-related provisions in the main text have more enforceability compared to those in the preamble.

In addition to assessing the quality of gender-related provisions based on the aforementioned criteria, where there are gender-related provisions, I have examined the instruments further to explore the type of gender perspective that they adopt. In defining what a gender perspective for TK instruments might comprise, four different components (which can be

Economic Research and Statistics Division, World Trade Organization,
https://www.wto.org/english/res_e/reser_e/ersd201815_e.pdf.

³⁴² Monteiro, "Gender Related," *supra* note 341 at 3.

understood as involving different levels of gender inclusion) are recognized. First, a gender perspective clearly requires Indigenous and local women's participation and input in TK law and policy formulation. Second, a gender perspective involves providing for material gains for Indigenous and local women based on an assessment of their particular needs and interests. A gender perspective would involve thinking through areas where differentiated provisions for women need to be included in the instrument if women's particular needs are to be adequately addressed. Third, a gender perspective requires a more holistic assessment of the different ways in which TK instrument provisions impact Indigenous and local women, even when phrased in neutral terms. Fourth, and perhaps most profoundly, adopting a gender perspective involves analysis of how the TK law and policy relate to the power relationships between men and women.

3.2 TK and Gender in International Legal Instruments: Hard and Soft Law

Various international entities have discussed TK protection in one form or another: some with a human rights and cultural focus, others from a trade and development perspective, and some mainly concerned with environmental protection. As a result, a "regime complex"³⁴³ has emerged where various international instruments overlap yet none of them fully covers the issue of IP protection for TK. In other words, the current regime complexity arises from two facts; (1) the cross cutting nature of TK has resulted in the issue being discussed in many international fora where each has a particular area of focus; and (2) the interests and expectations of the various stakeholders involved in TK protection are highly diverse leading to "forum shopping."³⁴⁴

³⁴³ Kal Raustiala & David G. Victor, "The Regime Complex for Plant Genetic Resources" (2004) 58:2 International Organization 277 at 279 defines a "regime complex" as an array of partially overlapping institutions governing a particular issue-area among which there is no agreed upon hierarchy.

³⁴⁴ Helfer, "Regime Shifting," (2004) *supra* note 21 at 14 defines forum shopping as "an attempt to alter the status quo ante by moving treaty negotiations, lawmaking initiatives, or standard setting activities from one international venue to another."

Interestingly, these various fora have remained distinctly separate, i.e., working in silos with limited acknowledgement that similar agendas and proposals are being perused by and presented in other fora. Not surprisingly, the outcomes in these various fora have different implications and impacts given the great variety in the degrees and forms of legitimacy associated with each forum. In other words, the existing international instruments dealing with TK are located in various spots on the hard-soft law spectrum, with “hard law” referring to “legally binding obligations that are precise (or can be made precise through adjudication or the issuance of detailed regulations) and that delegate authority for interpreting and implementing the law.”³⁴⁵ According to Abbott and Snidal, the realm of “soft law” begins once legal arrangements are weakened along one or more of the dimensions of obligation, precision, and delegation.³⁴⁶

The current debates on international TK regime encompass an array of many issues, such as biodiversity conservation, socio-cultural and economic development, health, food and agriculture, trade and development, and human rights. The aim of the following parts is to engage in a close Third World feminist reading of the existing international TK-related instruments in terms of their gender-sensitivity considering how Indigenous and local women, their interests, and human rights are dealt with in the text of the existing TK-related international instruments. Generally, these instruments fail to do much more than mention women or make reference to the need for formal equality, if they do this at all. In other words, the examination of the existing international instruments as undertaken by this chapter reveals that recognition of the differentiated impacts of TK protection/misappropriation on women and men is noticeably overlooked in

³⁴⁵ Kenneth W. Abbott and Duncan Snidal, “Hard and Soft Law in International Governance” (2000) 54:3 International Organization 421 at 421.

³⁴⁶ Abbott and Snidal, “Hard and Soft Law,” *supra* note 345 at 422.

international TK regime partially due to the gendered nature of the international legal system.³⁴⁷ The international legal system continues to ignore women and to fail to protect their interests.³⁴⁸ Any attempt to attend to this issue must go beyond simply adding references to women in TK-related instruments. A gender-responsive approach requires taking into account the depth and breadth of the exclusion of women, women's interests, and knowledge.

The following parts provide a brief overview of the existing hard and soft legal instruments based on their host forum with the purpose of examining their gender sensitivity based on the criteria that I discussed in the introduction. In doing so, I examine whether or not consideration is given to (1) recognition of women's role in TK, (2) the need for women's participation in TK governance including in free and prior informed consent (FPIC)³⁴⁹ and access and benefit sharing (ABS)³⁵⁰ processes, (3) gender-based social, economic, and cultural constraints of women and the need for proper accommodations to facilitate their participation, (4) the need for TK preservation in a gender-responsive manner, (5) Indigenous and local women's potential as active agents of change, and (6) the need for gender-responsive capacity building and training. The rationale behind highlighting these aspects is that general gender provisions do not do enough to ensure that TK

³⁴⁷ See generally feminist critiques of international law in Charlesworth and Chinkin, *The Boundaries of International Law*, *supra* note 171. Rather than just examining discrete areas where international law has a specific impact on women, feminist critiques of international law aim to give a general overview of how the process of international law-making and the content of international norms exclude women and their interests.

³⁴⁸ Charlesworth and Chinkin, *The Boundaries of International Law*, *supra* note 171.

³⁴⁹ World Intellectual Property Organization, "Glossary of Key Terms," *supra* note 1 at 35. The Glossary provides the following explanation for the term "prior informed consent" (PIC), which is at times referred to as free and prior informed consent (FPIC). The purpose of the use of the adjective "free" is to ensure that no coercion or manipulation is used in the course of negotiations, while inclusion of "prior" acknowledges the importance of allowing time to ILCs to fully review proposals respecting the time required for achieving consensus. The notion of "informed" reflects the growing acceptance that environment and social impact assessments are a prerequisite for any negotiation process and allow all Parties to make balanced decisions. "Consent" is a process whereby permission is given, based on a relationship of trust. The process should be transparent, and the language fully understood by Indigenous Peoples.

³⁵⁰ Access and Benefit Sharing (ABS) refers to the ways in which GRs, TK and TCEs may be accessed, and how the benefits that result from their utilization are shared among the peoples or countries using the resources and the ILCs that provide them. Benefits may include monetary and non-monetary benefits, including but not limited to those listed in the Annex to the Nagoya Protocol. For more details, see World Intellectual Property Organization, "Glossary of Key Terms," *supra* note 1 at 5.

instruments are benefiting women as much as they benefit men. Of course, I am aware that having a comprehensive treatment of Indigenous and local women in a TK instrument does not guarantee their improved situation as instruments with the clearest and most comprehensive gender-related provisions can be very poorly implemented. Therefore, robust monitoring of the implementation of TK instruments is another factor in their success.

Although these instruments are typically framed in gender-neutral language, they are not equally applicable to, or framed in a way that adequately recognizes and addresses, the needs of both Indigenous and local women and men. In fact, with the existing gender inequalities in most societies around the world, it cannot be assumed that Indigenous and local women's interests and priorities are identical to those of their male counterparts. While references to women in TK instruments are not in-and-of-themselves sufficient to improve women's equality and quality of life, inclusion of gender-related provisions in TK instruments' agenda for change is crucial to broader, on-going struggles for inclusion and structural change. As mentioned earlier, the next parts provide an overview of the TK-related instruments at two levels of international and national law (Iranian domestic laws). The international instruments are a mixture of hard law instruments such as TRIPS and soft law instruments such as CBD voluntary guidelines. These instruments are categorized and presented based on the UN specialized bodies from which they have originated.³⁵¹ The major existing and proposed IP frameworks can be arranged along a spectrum ranging from the least to the most gender-responsive with the majority of them marking no gender sensitivity at all.

3.2.1 World Trade Organization

³⁵¹ The order in which the instruments are presented is not chronological. The rationale behind presenting the instruments based on their hosting fora is to give some form of order to this spaghetti bowl (regime complex).

3.2.1.1 Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs)³⁵²

A major part of the regime complexity over TK is due to the fact that TK is not recognized under the TRIPs Agreement. The TRIPs Agreement and its incorporated agreements (the Berne Convention³⁵³ and the Paris Convention³⁵⁴) do not protect TK. The following part discusses the approach of the WTO-governed TRIPs agreement to the protection of TK, followed by a description of the tension between TRIPs and other TK-related instruments such as the Convention on Biological Diversity (CBD). The TRIPs agreement, i.e., “the most important IP public international law”,³⁵⁵ as it stands today does not extend IP protection to TK. Among the existing international instruments, TRIPs is, in fact, a hard law instrument due to the effective implementation and enforcement mechanisms of the WTO. Backed by the WTO’s hard-edged dispute settlement system, in the words of Helfer, TRIPs has “teeth” which makes it different from other international instruments dealing with TK.³⁵⁶ Despite several calls and attempts for the reforming and inclusion of TK protection, the agreement has to date remained silent on the matter of TK protection.³⁵⁷ The first proposal to amend TRIPs was introduced during the review of TRIPs Article 27.3(b).³⁵⁸ That article contains a limited obligation to grant IPRs in life forms. It mandates

³⁵² *Agreement on Trade-Related Aspects of Intellectual Property Rights*, 15 April 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex IC, Legal Instruments Results of the Uruguay Round, 1869 UNTS 299, 33 I.L.M. 1197 (entered into force 1 January 1995).

³⁵³ *Berne Convention for the Protection of Literary and Artistic Works*, 9 September 1886 (with various revisions) 828 UNTS (entered into force 29 January 1970).

³⁵⁴ *Paris Convention for the protection of industrial property*, 20 March 20 1883 (with various revisions) 828 UNTS (entered into force 26 April 1970).

³⁵⁵ Sell, “The Quest for Global Governance,” *supra* note 31 at 371.

³⁵⁶ Helfer, “Regime Shifting,” (2004), *supra* note 21 at 2.

³⁵⁷ Miriam Latorre Quinn, “Protection for Indigenous Knowledge: An International Law Analysis” (2001) 14:2 St. Thomas Law Rev. 287 at 300.

³⁵⁸ For a detailed analysis of TRIPs’ evolution, see Daniel Gervais, *The TRIPS Agreement: Drafting History and Analysis*, 4th ed (London: Thomson Reuters/Sweet & Maxwell, 2012).

patent protection for microorganisms and for non-biological and microbiological processes for the production of plants or animals, and patent and/or sui generis protection for plant varieties.³⁵⁹ Given the controversial nature of these obligations, however, countries of the Global South signed numerous proposals to reform TRIPs as far as biodiversity and TK are concerned.³⁶⁰ The amendment proposals expressly relied on events occurring in the biodiversity and GR regimes to support TRIPs revisions that would allow WTO members to (1) harmonize intellectual property rules with those generated within the CBD and FAO, (2) deny patent protection to inventions involving genetic resources, and (3) protect TK.³⁶¹ An important TRIPS-related development with respect to the protection of TK was the 2001 Doha Ministerial Declaration of the WTO.³⁶² Paragraph 19 of the Declaration instructed the WTO's Council for TRIPs to examine the relationship between the TRIPS Agreement and the CBD, as well as the issue of protection of TK, taking into account the development dimension.³⁶³

After almost three decades, ILCs and some member states of the WTO – mostly countries of Global South – are still pushing for reform in the Agreement, but with little success. The most

³⁵⁹ *Agreement on Trade-Related Aspects of Intellectual Property Rights*, *supra* note 352 defining patentable subject matter and exclusions.

³⁶⁰ For a detailed discussion of Article 27.3(b) and its unique position in TRIPs, see Laurence R. Helfer, “Intellectual Property Rights in Plant Varieties: International Legal Regimes and Policy Options for National Governments” (2004) 85 FAO Legislative Study at 22-24.

³⁶¹ Helfer, “Regime Shifting,” (2004), *supra* note 21 at 64 referring to Preparations for the 1999 Ministerial Conference –Proposal on Protection of the Intellectual Property Rights Relating to the Traditional Knowledge of Local and Indigenous Communities– Communication from Bolivia, Colombia, Ecuador, Nicaragua, and Peru, paras. 9-10, WTO Doc. WT/GC/W/362 (Oct. 12, 1999).

³⁶² *Doha Ministerial Declaration on the TRIPS Agreement and Public Health*, 14 November 2001, WTO Doc. WT/MIN(01)/DEC/2.

³⁶³ Clause 19 of the *Doha Declaration* spells out:

... the Council for TRIPS, in pursuing its review program “to examine, inter alia, ... the protection of traditional knowledge” and to be guided by the objectives and principles set out in Articles 7 and 8 of the TRIPS Agreement and ... take fully into account the development dimensions.

For more details, see Tania Voon, “The World Trade Organization, the TRIPS Agreement and Traditional Knowledge” in Matthew Rimmer (ed), *Indigenous Intellectual Property: A Handbook of Contemporary Research* (Edward Elgar, UK, 2015) 64–82.

significant recent development has been the advanced proposal to introduce an obligation to disclose the origin of GRs and TK in patent applications. This proposal is to amend TRIPS with a new Article 29*bis* according to which, where the subject matter of a patent application is derived from or developed with biological resources and/or associated TK, members shall require disclosure of origin (DOO).³⁶⁴ According to the proposed Article 29*bis*, members shall also require that applicants provide information including evidence of compliance with the applicable legal requirements in the providing country for FPIC, and fair and equitable benefit sharing arising from the commercial or other utilization of such resources and/or associated TK.³⁶⁵ While these matters remain under ongoing discussions as a regular agenda item before the TRIPS Council, these discussions do not appear to be advancing rapidly.³⁶⁶ In fact, while the expressed wish of countries from the Global South is to include TK protection as an integral part of the obligation under the TRIPs Agreement or agreements of similar scope (mainly because of the strong WTO dispute settlement mechanism), not surprisingly, most developed countries have resisted the idea of amending the TRIPs agreement to include requirements such as DOO, FPIC, and fair and equitable benefit sharing in TRIPs.³⁶⁷

A common objection by developed countries to the adoption of the requirements is that it may hinder innovation because the process of disclosing all the origins of knowledge used in the

³⁶⁴ See generally Council for TRIPs documents circulated under the 2001 mandate on Article 27.3b, traditional knowledge, biodiversity, <https://www.wto.org/english/tratop_e/trips_e/art27_3b_e.htm>. More specifically, see Council for TRIPs, *Response to Questions Raised on the Draft Amendment to TRIPS – Article 29bis*, IP/C/W/475 (2006), <<http://docsonline.wto.org/imrd/directdoc.asp?DDFDdocuments/t/ip/c/w475.doc>>.

³⁶⁵ Council for TRIPs *supra* note 364.

³⁶⁶ For more details, see Lawson, “Relationships Between,” *supra* note 92.

³⁶⁷ According to Gebru, “Although the position of countries on the establishment of the ‘disclosure of origin’ requirement does not rigidly correlate to their level of economic development, the general division on positions does reflect a North-South divide.” However, he mentions that there are outliers, and countries such as Norway and Switzerland have called for the establishment of the DOO requirement within TRIPs. For more details, see Gebru, *Intellectual Property*, *supra* note 95 at 231.

inventive process may prove to be too cumbersome and may make such process more costly.³⁶⁸ For instance, the US, as the most influential member of the WTO, rather than making amendments to the TRIPs Agreement, prefers national legislative measures and allowing interested Parties to enter into contractual relations on a case-by-case basis without additional legal regulation.³⁶⁹ Even further, the US objects to the TRIPs Council's jurisdiction over TK protection, opposition that is supported by Japan and other like-minded countries, suggesting the deliberation of such issues should take place at WIPO instead of at the WTO.³⁷⁰ The consignment of TK-related concerns to WIPO is seen by developing countries as a regime-shifting strategy by developed countries to move policy discussions on TK to “a powerless and obscure forum”³⁷¹ with regard to the subject matter of TK. As Okediji has noted, “WIPO is neither formally charged nor structurally designed to accomplish the kind of linkage bargains now associated with the WTO.”³⁷²

From a gender perspective, while seemingly global and “gender neutral” in its formulation, TRIPs remains completely gender-insensitive with no gender perspective in any of the four senses outlined in the introduction. Moreover, the fact that TK, as an area with high contribution by women, is not addressed or protected under TRIPs and is only partially and inadequately protected under a confused mixture of the international instruments can be seen as a key example of the gendered nature of the international legal system.³⁷³ TRIPs can be criticized not only for its

³⁶⁸ Gebru, “The Global Protection,” *supra* note 23 at 61.

³⁶⁹ Council for TRIPs, *Article 27.3(b), Relationship between the TRIPS Agreement and the CBD, and the Protection of Traditional Knowledge and Folklore—Communication by the United States*, WTO Docs IP/C/W/434 at 3.

³⁷⁰ See generally Council for TRIPs, *The Patent System and Genetic Resources—Communication from Japan* (IP/C/W/472) (2006).

³⁷¹ Oguamanam, *Intellectual Property in Global Governance*, *supra* note 51 at 8. See also Helfer, “Regime Shifting,” (2009) *supra* note 37.

³⁷² Ruth L. Okediji, “WIPO-WTO Relations and the Future of Global Intellectual Property Norms” (2008) 39:1 *Netherlands Yearbook of International Law* 69 at 73.

³⁷³ Charlesworth and Chinkin, *The Boundaries of International Law*, *supra* note 171.

gendered impact³⁷⁴ but also for adopting a definition of innovation and patentable subject matter “that privileges men and perpetuates a male elite with economic power while inhibiting growth and development of other non-technological fields that are critical for the well-being of society.”³⁷⁵ In the context of TK, TRIPs and its enforcement through the WTO is resulting in misappropriation of TK held and practised by Indigenous and local women of the South. Take the case of the Neem tree in the Indian subcontinent, for example, where generations of Indigenous women have built up knowledge about the uses of the parts of the tree in medicinal and agricultural production.³⁷⁶ By attempting to patent the historically developed products, US biotechnology companies have, in fact, reaped the benefits of the generations of women who have received no recognition or compensation. In other words, the harm is twofold. First, without recognition of their TK, people who developed the use of the Neem for medicinal use do not enjoy the fruits of their collective creative endeavour. Secondly, due to the monopoly that patents create, once patented, the product or process becomes the private property of the patent-holder until the expiry of the patent right. As a result, the access of TK holders to their knowledge and products are restricted. Protecting TK through mechanisms similar to the conventional IPRs without paying attention to the specific characteristics of TK itself as a body of knowledge and the relation dynamics in ILCs can also lead to limited access for ILCs members themselves. Thus, protection mechanisms should be devised

³⁷⁴ For an example regarding the impact of TRIPs on access to essential medicine, the case of HIV provides a good instance of how IP laws can affect the status of women’s health more drastically than men. Since the start of the global HIV epidemic, in many regions, women have remained at a much higher risk of HIV infection than men. As a result, the restrictions on access to medicine due to IP laws affect women differently than men. See Lesley Doyal, “Putting Gender into Health and Globalisation Debates: New Perspectives and Old Challenges” (2002) 23:2 Third World Quarterly 233 at 238.

³⁷⁵ See Yavinsky-Ravid, “Eligible Subject Matter,” *supra* note 106 at 863. She asserts that the present definition of protectable inventions privileges men and perpetuates a male elite with economic power while inhibiting growth and development of other non-technological fields that are critical for the well-being of society. See also Sharmishta Barwa and Shirin M. Rai, “Knowledge and/as Power: A Feminist Critique of Trade Related Intellectual Property Rights” (2003) 7:1 Technology and Development 91.

³⁷⁶ For more details about Neem and other similar cases, see Vandana Shiva, “Bioprospecting as Sophisticated Biopiracy” (2007) 32:2 Signs: Journal of Women in Culture and Society 307.

in a manner to prevent misappropriations by outsiders while facilitating utilization of TK by TK-holders themselves through opportunities for TK-based products and services.³⁷⁷

3.2.2 United Nations Economic and Social Council (ECOSOC)

3.2.2.1 International Covenant on Economic, Social and Cultural Rights (ICESCR)

Human rights instruments, such as the Universal Declaration of Human Rights (UDHR)³⁷⁸ and the ICESCR,³⁷⁹ have provisions that some scholars have argued will cover claims of TK holders.³⁸⁰ While making no specific reference to IP, ABS, or TK as such, various provisions of both the UDHR and ICESCR are helpful interpretive tools for cases that involve TK and IP. In fact, several articles of these two instruments shed some light on the human rights status of the protection of TK as intellectual property. It has been argued that the prohibition against discrimination under Article 7 of the UDHR and the right to self-determination under Article 1 could be used to claim equality of protection in traditional and modern knowledge.³⁸¹ Article 7 of

³⁷⁷ For more discussion on how to resolve the tension between protection and access, see Carlos M. Correa, “Traditional Knowledge and Intellectual Property: Issues and Options Surrounding the Protection of Traditional Knowledge” (2001) The Quaker United Nations Office at 8, <<https://quakerservice.ca/wp-content/uploads/2011/07/TKcol3.pdf>>.

³⁷⁸ UN General Assembly, *Universal Declaration of Human Rights*, 10 December 1948, 217 A (III).

³⁷⁹ UN General Assembly, *International Covenant on Economic, Social and Cultural Rights*, 16 December 1966, 993 UNTS (entered into force 3 January 1976).

³⁸⁰ Article 27 states that: “(1) Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits. (2) Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.” For a more detailed analysis, see e.g. Graham Dutfield and Uma Suthersanen, “Traditional Knowledge and Genetic Resources: Observing Legal Protection through the Lens of Historical Geography and Human Rights” (2019) 58:2 (Special Issue on Traditional Knowledge and Intellectual Property) *Washburn Law Journal* 399.

³⁸¹ John Mugabe, “Intellectual Property and Traditional Knowledge: An Exploration in International Policy Disclosure” (1998) in Panel Discussion on Intellectual Property and Human Rights at 111, <https://www.wipo.int/pressroom/en/prdocs/1998/wipo_upd_1998_40.html>.

the UDHR³⁸² is the basis to argue that equal protection under the law implies that protection of intellectual property should also be available for Indigenous Peoples. It also provides a solid basis to argue that TK legal instruments should provide protection for Indigenous and local women's TK.

Article 15.1(c) of the ICESCR recognizes the “right to benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production....”³⁸³ The justification for the protection of TK here would be that, since TK holders produced and conserved TK for generations, they have human rights to benefit from it. From a gender perspective, Article 3 of the ICESCR requires the States that are Parties to the Covenant to ensure the equal right of men and women to the enjoyment of all economic, social and cultural rights set forth in the ICESCR.³⁸⁴ Therefore, according to this provision, TK protection should benefit women as much as men. However, there seem to be problems regarding the application of ICESCR to TK. On one hand, Article 15.1(c) of the ICESCR is focused on an individual “author” and therefore might not be readily applicable to the communal authorship dominant in ILCs. According to Mugabe, attempting to use the human rights route to justify the protection of TK brings challenges as the human rights literature mainly focuses on individual rights, which might not cover TK, as it often involves collective rights.³⁸⁵ As he rightly argues, since the obligation to realize human rights usually rests on States, and since various States have already declined to recognize TK, using a human rights approach to justify protection will be challenging. On the other hand, while Article

³⁸² *Universal Declaration of Human Rights*, *supra* note 378, Article 7 reads that “All are equal before the law and are entitled without any discrimination to equal protection of the law. All are entitled to equal protection against any discrimination in violation of this Declaration and against any incitement to such discrimination”.

³⁸³ *International Covenant*, *supra* note 379, Article 15 (c). The text under the Article is similar to the wording under Article 27 of the UDHR.

³⁸⁴ *International Covenant*, *supra* note 379, Article 3.

³⁸⁵ Mugabe, “Intellectual Property,” *supra* note 381 at 112.

3 of the ICESCR by its broad language requiring gender equality shows a degree of gender sensitivity, the inadequacy of ICESCR as a general treaty in terms of protecting women's human rights is well established.³⁸⁶

Such inadequacies in ICESCR and other general human rights instruments have been the basis for the calls for a specific universal convention on women's human rights.³⁸⁷ For example, feminist international human rights scholars have argued that the "sex-neutral norm that requires the equal treatment of men and women" in the general treaties such as ICESCR are insufficient to address "the pervasive and systemic nature of discrimination against women" and the social causes of gender discrimination.³⁸⁸ More specifically, Charlesworth argues that even international instruments that specifically address women (except for CEDAW),³⁸⁹ only incorporate a form of formal equality "providing that, in particular or general contexts, women should be treated the

³⁸⁶ The Committee on ICESCR has interpreted the treaty through non-binding general comments to address some of these critiques. While these are considered non-binding interpretations of the treaty provisions, they are considered to be authoritative understandings of States' obligations under the treaty. See e.g. the Committee on Economic Social and Cultural Rights' General Comment 16 and the Committee on Economic Social and Cultural Rights' General Comment 17. ESCOR, 34th Sess, UN Doc E/C.12/2005/4. (2005). ESCOR, 35th Sess, UN Doc E/C.12/GC/17. (2005)

³⁸⁷ The issue of inadequacy of general treaties for protection of women's human rights was addressed in the Human Rights Committee's General Comment 28, Article 3 [The Equality of Rights between Men and Women, UNHRC, 68th Sess, UN Doc CCPR/C/21/Rev.1/Add 10 (29 March 2000)].

³⁸⁸ Rebecca Cook, "Introduction: The Way Forward" in Rebecca J Cook, ed, *Human Rights of Women: National and International Perspectives* (Philadelphia: University of Pennsylvania Press, 1994) 3–36 at 11.

³⁸⁹ *Convention on the Elimination of All Forms of Discrimination Against Women* (CEDAW), 18 December 1979, 1249 UNTC (entered into force 3 September 1981). CEDAW is the core instrument that protects women's equality and not simply formal equality but substantive equality. It is one of the most widely ratified UN human rights treaties (although many states have made reservations to its core provisions). As Rebecca Cook observes, "CEDAW progresses beyond the earlier human rights conventions by addressing the pervasive and systemic nature of discrimination against women, and identifies the need to confront the social causes of women's inequality by addressing "all forms" of discrimination that women suffer." Cook, "Introduction," *supra* note 390 at 11.

same as men.”³⁹⁰ As she argues, although this has been an an important development in the international law, “it has not been adequate to address the subordination of women worldwide.”³⁹¹

Moreover, it seems that Article 15 of the ICESCR recognizes the “right to benefit from protection” if such protection is already recognized in the domestic law of the relevant jurisdiction. It does not seem to be required that protection for intellectual production be created by every member country. Therefore, Article 15 (c) of the ICESCR seems to be limiting the applicability of the provisions to jurisdictions that already protect TK.³⁹²

3.2.2.2 The Principles and Guidelines on the Protection of the Heritage of Indigenous Peoples

The Principles and Guidelines on the Protection of the Heritage of Indigenous Peoples of the OHCHR was one of the first attempts at establishing human rights standards for TK protection.³⁹³ These principles and guidelines aimed to set standards for governments to ensure that the heritage of Indigenous Peoples survives for future generations and continues to enrich the common heritage of humanity. Despite several revisions, the Principles and Guidelines were not adopted and they have not resulted in an enforceable instrument. While playing a role in promoting the global TK protection movement, the Principles and Guidelines failed to provide a satisfactory

³⁹⁰ Hilary Charlesworth, “What Are ‘Women’s International Human Rights?’” in Rebecca J Cook, ed, *Human Rights of Women: National and International Perspectives* (Philadelphia: University of Pennsylvania Press, 1994) 58–84 at 59.

³⁹¹ Charlesworth, “What Are ‘Women’s International Human Rights?’,” *supra* note 390 at 59.

³⁹² Mugabe, “Intellectual Property,” *supra* note 381 at 112. For more discussions around Article 15 of ICESCR and states’ sovereignty over GRs, see also Bitu Amani, *State Agency and the Patenting of Life in International Law: Merchants and Missionaries in a Global Society* (London: Routledge, 2016).

³⁹³ United Nations Economic and Social Council, “Human Rights and Indigenous Peoples: Report of the Seminar on the Draft Principles and Guidelines for the Protection of the Heritage of Indigenous People”, Seminar Report E/CN.4/Sub.2/2000/26 (Geneva: United Nations Economic and Social Council, 2000).

mechanism that would benefit ILCs.³⁹⁴ Moreover, the draft principles and guidelines did not reflect women's rights.

3.2.2.3 United Nations Declaration on the Rights of Indigenous People (UNDRIP)³⁹⁵

The ECOSOC has worked on TK protection through a number of initiatives. Its work on TK was carried out through two sub-institutions, the Working Group on Indigenous Populations and the Permanent Forum on Indigenous Issues. A key result of these deliberations is the UNDRIP, which was adopted in 2007. UNDRIP is, to date, the most explicit recognition in a human rights instrument of a specific set of rights over TK and TCEs.³⁹⁶ UNDRIP emphasizes the rights of Indigenous Peoples to maintain, control, protect, and develop their cultural heritage, TK and TCEs, as well as the manifestations of their sciences, technologies, and cultures, including human and genetic resources, seeds, medicines, and knowledge of the properties of fauna and flora. They also have the right to maintain, control, protect, and develop their intellectual property over such cultural heritage, TK, and TCEs.³⁹⁷ The way that UNDRIP frames intellectual property incorporates both the formal recognition of GRs, TK, and TCEs as intellectual property and the protections against intellectual property claims by others misappropriating GRs, TK, and TCEs. Although as a UN General Assembly declaration, UNDRIP is not legally binding per se,³⁹⁸ it

³⁹⁴ Quinn, "Protection for Indigenous Knowledge," *supra* note 357 at 309.

³⁹⁵ United Nations General Assembly, *United Nations Declaration on the Right of Indigenous Peoples* (2 October 2007) A/RES/61/295.

³⁹⁶ Lawson, "Relationships Between," *supra* note 92 at 67. As Lawson writes, it is noteworthy that UNDRIP does not establish new rights, but instead, "elaborates upon fundamental rights in the specific cultural, historical, social and economic circumstances of Indigenous Peoples" of which TK is only one of many.

³⁹⁷ *United Nations Declaration on the Right of Indigenous Peoples*, *supra* note 395, Articles 3, 31.1, and 31.2.

³⁹⁸ Some of UNDRIP provisions are considered customary international law, although not the provisions on TK. For more details, see Sylvanus Gbendazhi Barnabas, "The Legal Status of the United Nations Declaration on the Rights of Indigenous Peoples (2007) in Contemporary International Human Rights Law" (2017) 6 *International Human Rights Review* 242.

affirms a positive right of Indigenous People over their TK and “articulates the contemporary international consensus”³⁹⁹ on TK protection. If supported by state practice and *opinio juris*, TK protection would eventually become binding customary international law.⁴⁰⁰

The Declaration’s provisions on TK do not mention women or the gendered aspects of TK. Of 46 articles, the Declaration mentions women in three. Two of these are non-specific gender provisions where women are listed among other groups; Article 21.2 and 22.2 of the Declaration list women, as well as elders, youth, children, and persons with disabilities, as the populations that require particular attention. Article 22.2, considered to be the most important provision with regard to specifically safeguarding Indigenous women’s rights, calls for states, “in conjunction with Indigenous Peoples, to ensure that Indigenous women and children enjoy the full protection and guarantees against all forms of violence and discrimination.” Finally, Article 44 states that the Declaration applies equally to “male and female Indigenous individuals.” Although accounting for a degree of gender sensitivity, it seems that in these gender-related provisions, women are conceptualized as passive victims along with other vulnerable populations such as elders, children, and persons with disabilities. These provisions do not elaborate what the “rights and special needs” of women or the other aforementioned groups might be.⁴⁰¹

³⁹⁹ Oguamanam, *Intellectual Property in Global Governance*, *supra* note 51 at 154.

⁴⁰⁰ In principle, United Nations resolutions or declarations are non-binding under international law. The United Nations Permanent Forum on Indigenous Issues explains: “UN Declarations are generally not legally binding; however, they represent the dynamic development of international legal norms and reflect the commitment of states to move in certain directions, abiding by certain principles.” United Nations Permanent Forum on Indigenous Issues, “Declaration on the Right of Indigenous Peoples: Frequently Asked Questions”, <<https://www.un.org/esa/socdev/unpfii/documents/FAQsIndigenousdeclaration.pdf>>. See also Rosemary J. Coombe, “Protecting Traditional Environmental Knowledge and New Social Movements in the America: Intellectual Property, Human Right, or Claims to an Alternative Form of Sustainable Development” (2005) 17 Florida Journal of International Law 115 at 118.

⁴⁰¹ For more analysis regarding gender and UNDRIP, see Rauna Kuokkanen, “Indigenous Women’s Rights and International Law: Challenges of the UN Declaration on the Rights of Indigenous Peoples” in Corinne Lennox and Damien Short, eds, *Handbook of Indigenous Peoples’ Rights* (Milton Park, Abingdon: Routledge, 2016) 129–145.

3.2.3 Food and Agriculture Organization (FAO)

3.2.3.1 International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)⁴⁰²

FAO is one of the key fora in which plant GRs and TK have been discussed. The organization administers the ITPGRFA, which was adopted in 2001 after seven years of negotiations and entered into force in 2004.⁴⁰³ It should be noted that the ITPGRFA was designed to respond to outstanding issues not covered by the CBD. The treaty is in harmony with the CBD and complements the CBD's core principles of access and benefit sharing in the context of 'plant genetic resource for food and agriculture', aiming to find a balance between the interests of developing and developed countries and between the rights of farmers and breeders.⁴⁰⁴ The ITPGRFA recognizes the enormous contribution that local and Indigenous communities and farmers of all regions of the world have made and will continue to make for the conservation and development of plant GRs.⁴⁰⁵ These are known as "Farmers' Rights", and the treaty requires State Parties to take responsibility for realizing Farmers' Rights as they relate to plant GRs for food and agriculture with the obligation that, in accordance with their needs and priorities, each State Party should, as appropriate, and subject to its national legislation, take measures to protect and promote

⁴⁰² *The International Treaty on Plant Genetic Resources for Food and Agriculture*, 3 November 2001, UNFAO.

⁴⁰³ For a full history of the ITPGRFA, see "History of the International Treaty" in Introduction to the International Treaty on Plant Genetic Resources for Food and Agriculture, <<http://www.fao.org/3/i2631e/i2631e03.pdf>>.

⁴⁰⁴ *The International Treaty on Plant Genetic Resources for Food and Agriculture*, *supra* note 402, Article 9(2)(c) and Article 13.

⁴⁰⁵ *The International Treaty on Plant Genetic Resources for Food and Agriculture*, *supra* note 402, Article 9.

Farmers' Rights.⁴⁰⁶ The innovation of the treaty is in establishing a Multilateral System⁴⁰⁷ to facilitate access to plant GRs for food and agriculture and to share the benefits arising out of their use in a fair and equitable manner.⁴⁰⁸

A simple search of the treaty text reveals no mention of such words as “women”, “gender”, or “female farmers”. The Treaty does not make any attempt to address the gender implications of farmer's rights. Although the Treaty recognizes the enormous contribution farmers and their communities have made, and continue to make, to the conservation and development of plant GRs, it remains silent about women's role in it. Consequently, the Treaty's Multilateral System of access and benefit-sharing is not designed to take into account Indigenous and local women's interests and needs. The case studies show that local women play an important role in conservation and production of GRs such as saffron and plant dyes used in Persian carpet production; yet, they face numerous obstacles to their participation in any ABS agreement over their GRs unless explicit legal rules require and facilitate their participation.

Although the Treaty itself ignores gender, the Global Plan of Action (GPA) for Conservation and Sustainable Utilization of Plant Genetic Resources, which was adopted in 2011,⁴⁰⁹ is a supporting component of the Treaty. The GPA contains several references to the roles of women in the conservation of plant diversity. In particular, references are contained in the

⁴⁰⁶ *The International Treaty on Plant Genetic Resources for Food and Agriculture*, *supra* note 402, Article 9.2 and 9.3. For more information on sharing mechanisms, partnerships and collaboration between private and public sectors, mandatory and voluntary payments, see Ali Mekoaur, “A Global Instrument on Agrobiodiversity: The International Treaty on Plant Genetic Resources for Food and Agriculture” (2002) 24 FAO Legal Papers.

⁴⁰⁷ The Multilateral System is a common pool framework that covers a number of the most important crops for humankind and allows citizens of signatory countries to use the resources provided on the condition that they use them for non-commercial purposes and not to acquire IPRs over such resources.

⁴⁰⁸ *The International Treaty on Plant Genetic Resources for Food and Agriculture*, *supra* note 402, see Articles 10 and 12.3 and 13.2.

⁴⁰⁹ FAO Council, *The Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture*, 143rd Session, November 2011, <<http://www.fao.org/3/i2624e/i2624e00.htm>>. The first Global Plan of Action (GPA) for conservation and sustainable utilization of plant genetic resources was adopted in 1996, and the second GPA is an update of the 1996 GPA.

priority activities such as on-farm conservation, promoting the conservation of wild crops, promoting the development and commercialization of underutilized crops and species, and expanding and improving education and training. For instance, the significant role of women in maintaining and developing plant genetic resources and the associated knowledge is recognized in the GPA.⁴¹⁰ The GPA requires training programs to pay attention to the central role of women in influencing and directing the evolution of plant genetic resources and also to consider the different uses of such resources by women and men.⁴¹¹ The GPA also calls attention to the extensive knowledge that women have about the uses and usefulness of plants, as their responsibilities often range from propagating, producing, and harvesting crops to processing, storing, and preparing food/feed.⁴¹² Despite having a gender component, the GPA is a supporting piece of the Treaty added as a side document, and, at its best, it is a set of recommendations. Moreover, the Treaty itself frequently defers to national legislation, and, as such, the progress on TK protection through this instrument is limited, let alone the progress of TK protection in a gender-responsive manner through the GPA as a supporting piece of the Treaty with much lower enforceability than the Treaty. And finally, it should be noted that the Treaty deals only with a subcategory of TK, specifically plant GRs and associated TK. As such, the ITPGRFA cannot be seen as a TK instrument covering various forms of TK, TCEs, and GRs.

3.2.4 World Health Organization (WHO)

3.2.4.1 Inter-Regional Workshop on Intellectual Property Rights in the Context of Traditional Medicine

⁴¹⁰ *The Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture*, *supra* note 409, para 294.

⁴¹¹ *The Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture*, *supra* note 409, para 51.

⁴¹² *The Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture*, *supra* note 409, para 155.

As the UN specialized agency with the mandate on issues of global public health, the WHO has tackled the issue of TK from a public health angle, and, as a result, its work has been focused on a subcategory of TK, namely medicinal TK. The organization has passed several resolutions highlighting the importance of traditional medicine around the world, especially in developing countries.⁴¹³ In 2000, the Organization discussed the issue at an Inter-Regional Workshop on Intellectual Property Rights in the Context of Traditional Medicine.⁴¹⁴ Member states made 11 core recommendations, the most important of which include: (1) protection of TK (including through customary and sui generis means), (2) documentation of TK that is currently in the public domain, (3) establishment and strengthening of national and regional approaches, and (4) creation of benefit-sharing schemes.⁴¹⁵ A year later, the WHO published its first Traditional Medicine Strategy for the period 2002-2005, which focused on learning from the opportunities and obstacles to using traditional medicine in the domestic context.⁴¹⁶ Building on this document, the WHO published its Traditional Medicine Strategy: 2014-2023.⁴¹⁷ The strategy aims to support Member States in developing proactive policies and implementing action plans that will strengthen the role traditional medicine plays in keeping populations healthy. As such, the IP protection of medicinal TK is only a small part of the strategy, and, not surprisingly, gender is not featured in the IP-related parts of the strategy. Consequently, no mention of women's role in medicinal TK system is made.

3.2.5 International Labour Organization (ILO)

⁴¹³ See e.g. *World Health Assembly Resolution on Traditional Medicine*, WHA62.13. For a complete list of the Resolutions, see <<https://www.who.int/traditional-complementary-integrative-medicine/about/en/>>.

⁴¹⁴ Report of the Inter-Regional Workshop on Intellectual Property Rights in the Context of Traditional Medicine, workshop report (New Delhi and Geneva: World Health Organization, 2001).

⁴¹⁵ Report of the Inter-Regional Workshop on Intellectual Property Rights in the Context of Traditional Medicine, *supra* note 414, chapter 9 at 34–35.

⁴¹⁶ See generally, World Health Organization, *WHO Traditional Medicine Strategies (2002-2005)* (World Health Organization, 2002).

⁴¹⁷ WHO Traditional Medicine Strategy: 2014-2023, (December 2013), <https://www.who.int/medicines/publications/traditional/trm_strategy14_23/en/>.

3.2.5.1 Convention Concerning Indigenous and Tribal Peoples in Independent Countries (Convention 169)⁴¹⁸

ILO can be considered to be the first UN body that specifically dealt with Indigenous matters. In 1989, the Convention Concerning Indigenous and Tribal Peoples in Independent Countries, known as Convention 169, was adopted. This treaty entered into force in 1991. The Convention focuses on land rights, labour, social security, and education, and currently has a very limited membership of 22 states, of which 14 are located in Latin America. Although it is legally binding for its members, it does not include an enforcement and compliance mechanism.⁴¹⁹ While Article 3 of the Convention requires the provisions of the Convention to be applied without discrimination to male and female members of Indigenous and tribal peoples, and Article 15(1) provides for a rights-based approach to natural resources, the issues of TK and IPRs are, in fact, beyond the scope of the Convention.⁴²⁰ However, the Convention can help to interpret the term “Indigenous and local communities” within the context of ABS. The Convention provides criteria for describing the peoples it aims to protect.⁴²¹ It describes the difference between tribal and Indigenous Peoples,⁴²² which is also of relevance for the interpretation of the CBD and the Nagoya

⁴¹⁸ *Convention Concerning Indigenous and Tribal Peoples in Independent Countries* (27 June 1989) ILO, C169 (entered into force 5 September 1991).

⁴¹⁹ The limited membership is partially attributed to the Convention’s inclusion of Indigenous Peoples’ right to self-determination, with countries arguing that Indigenous autonomy undermines their own sovereignty and governance. Moreover, non-signatories – such as Canada and the United States – cite the international community’s inability to enforce these international instruments among their reasons for refusing to ratify them. For more details, see Brendan Tobin, “Now You See It Now You Don’t: The Rise and Fall of Customary Law in the IGC” in Robinson, Abdel-Latif and Roffe, eds, *Protecting Traditional Knowledge: The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore* (New York: Routledge, 2017) 192–215 at p 196.

⁴²⁰ Mugabe, “Intellectual Property,” *supra* note 381 at 113.

⁴²¹ *Convention Concerning Indigenous and Tribal Peoples in Independent Countries*, *supra* note 418, Article 1(2) states: “Self-identification as Indigenous or tribal shall be regarded as a fundamental criterion for determining the groups to which the provisions of this Convention apply.”

⁴²² *Convention Concerning Indigenous and Tribal Peoples in Independent Countries*, *supra* note 418, Article 1(1).

Protocol. These instruments speak of “Indigenous and local communities” without giving any indications who might be the actual members of these groups.

3.2.6 The United Nations Educational, Scientific and Cultural Organization (UNESCO)

3.2.6.1 The Universal Declaration on Cultural Diversity⁴²³

The Universal Declaration on Cultural Diversity, adopted by UNESCO in 2001, states the need for respecting and protecting TK but makes no reference to gender.⁴²⁴ The Organization has dealt with TK protection in a number of ways. It has partnered with the International Traditional Knowledge Institute to establish an open user-generated repository of TK, named the Traditional Knowledge World Bank.⁴²⁵ UNESCO has also created the Local and Indigenous Knowledge Systems in a Global Society (LINKS)⁴²⁶ project, which is a UNESCO interdisciplinary initiative that works to (1) secure an active and equitable role for local communities in resource management; (2) strengthen knowledge transmission across and within generations; (3) explore pathways to balance community-based knowledge with global knowledge in formal and non-formal education; and (4) support the meaningful inclusion of local and Indigenous knowledge in biodiversity conservation and management, and climate change assessment and adaptation.

In 1985, WIPO and UNESCO together developed the Model Provisions for National Laws on the Protection of Expressions of Folklore Against Illicit Exploitation and Other Prejudicial

⁴²³ *The Universal Declaration on Cultural Diversity*, Adopted by the 31st Session UNESCO, 2 November 2001.

⁴²⁴ Objective 14, *The Universal Declaration on Cultural Diversity*, <http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CLT/pdf/5_Cultural_Diversity_EN.pdf> reads as follows: “Respecting and protecting traditional knowledge, in particular that of Indigenous Peoples; recognizing the contribution of traditional knowledge, particularly with regard to environmental protection and the management of natural resources, and fostering synergies between modern science and local knowledge.”

⁴²⁵ Traditional Knowledge World Bank (TKWB), <http://www.tkwb.org/w/index.php/Main_Page>.

⁴²⁶ For more information about the project, see <<https://en.unesco.org/links>>.

Actions,⁴²⁷ and UNESCO, in 1989, adopted the Recommendation on the Safeguarding of Traditional Culture and Folklore.⁴²⁸ Both these measures, however, relied on national laws and guidance for their effective implementation, and this proved to be a weakness. Most significantly, UNESCO's and WIPO's model provisions have not yet been adopted by any state.⁴²⁹

3.2.6.2 The Convention for the Safeguarding of Intangible Cultural Heritage⁴³⁰

The Convention for the Safeguarding of Intangible Cultural Heritage was adopted at the UNESCO General Conference in 2003 as a response to the concern that earlier approaches for protection of cultural heritage were not effective. The term “intangible cultural heritage” is defined broadly under Article 2 of the Convention and therefore includes various practices that might overlap with certain types of TK. According to the convention, the “intangible cultural heritage” is manifested inter alia in the following domains: (1) oral traditions and expressions; (2) performing arts; (3) social practices, rituals, and festive events; (4) knowledge and practices concerning nature and the universe; and (5) traditional craftsmanship.⁴³¹ “Safeguarding”, on the other hand, is defined as measures aimed at ensuring the viability of the intangible cultural heritage, including the identification, documentation, research, preservation, protection, promotion, enhancement, and transmission, particularly through formal and non-formal education, as well as the revitalization of the various aspects of such heritage.⁴³² From a gender perspective, the Convention's approach to the safeguarding of intangible cultural heritage lacks sensitivity in

⁴²⁷ *Model Provisions for National Laws on the Protection of Expressions of Folklore Against Illicit Exploitation and Other Prejudicial Actions* (1985) <<https://www.wipo.int/edocs/lexdocs/laws/en/unesco/unesco001en.pdf>>.

⁴²⁸ UNESCO, “Recommendation on the Safeguarding of Traditional Culture and Folklore” (1989), <http://portal.unesco.org/en/ev.php-URL_ID=13141&URL_DO=DO_TOPIC&URL_SECTION=201.html>.

⁴²⁹ Lawson, “Relationships Between,” *supra* note 92 at 70.

⁴³⁰ *The Convention for the Safeguarding of Intangible Cultural Heritage*, 17 October 2003, UNTS 2368 (entered into force 20 April 2006).

⁴³¹ *The Convention for the Safeguarding of Intangible Cultural Heritage*, *supra* note 430, Article 2(2).

⁴³² *The Convention for the Safeguarding of Intangible Cultural Heritage*, *supra* note 430, Article 2(3).

the sense that there is no mention or recognition of women's role as custodians of intangible cultural heritage.

While the Convention obliges parties to take necessary measures for safeguarding intangible cultural heritage,⁴³³ it stops short of granting any specific rights when a country has identified an intangible cultural heritage.⁴³⁴ At the international level, a committee maintains a Representative List of the Intangible Cultural Heritage of Humanity⁴³⁵ and a List of Intangible Cultural Heritage in Need of Urgent Safeguarding.⁴³⁶ Registration on either list is thought to be a means for countries to mobilize assistance to protect intangible cultural assets.⁴³⁷ Registration as a UNESCO intangible heritage may additionally be useful for ILCs in making the case that certain TK belongs to them, and not to others.⁴³⁸ It seems, however, that the List can become more gender-responsive if gender tags are used for the registered intangible cultural heritage in cases where women are the primary custodians of such heritage. Women's role in developing and conserving such heritage should be documented during the registration processes.

3.2.6.3 The Convention on the Protection and Promotion of the Diversity of Cultural Expression⁴³⁹

The UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expression is a binding international legal instrument adopted in 2005. Major beneficiaries of the

⁴³³ *The Convention for the Safeguarding of Intangible Cultural Heritage*, *supra* note 430, Article 11(a).

⁴³⁴ UNCTAD, *The Convention on Biodiversity and the Nagoya Protocol: Intellectual Property Implications* (New York: United Nations Publications, 2014) at 45.

⁴³⁵ *The Convention for the Safeguarding of Intangible Cultural Heritage*, *supra* note 430, Article 16.

⁴³⁶ *The Convention for the Safeguarding of Intangible Cultural Heritage*, *supra* note 430, Article 17.

⁴³⁷ As will be discussed in Chapters 4 and 5, both traditional methods of saffron production and handwoven carpet production are registered in the Representative List of the Intangible Cultural Heritage of Humanity.

⁴³⁸ UNCTAD, *The Convention on Biodiversity*, *supra* note 434 at 45.

⁴³⁹ *The Convention on the Protection and Promotion of the Diversity of Cultural Expression*, 20 October 2005, UNTS 2440 (entered into force 18 March 2007).

Convention are the artists and practitioners of cultural expressions. For countries with the inability to produce and disseminate their own cultural expressions, the Convention provides financial assistance for their artists and practitioners of cultural expressions through its funding mechanism, the International Fund for Cultural Diversity (IFCD).⁴⁴⁰ The Convention recognizes the importance of TK as a source of intangible and material wealth, and its positive contribution to sustainable development, as well as the need for its adequate protection and promotion.⁴⁴¹ The importance of culture for social cohesion in general, and in particular its potential for the enhancement of the status and role of women in society is emphasized in the Convention's preamble.⁴⁴² Other references to women are in the form of non-specific gender provisions where women are listed among other groups. For instance, the Convention invites Parties to create in their territory an environment that encourages individuals and social groups "to create, produce, disseminate, distribute and have access to their own cultural expressions, paying due attention to the special circumstances and needs of women as well as various social groups, including persons belonging to minorities and Indigenous Peoples."⁴⁴³ Moreover, the Convention, like other UNESCO agreements, is a scheme for the protection of heritage and support for cultural diversity, and does not specifically address the intersections of IP, TK and TCEs. Recognizing women's role in the TK system and promoting it through gender-responsive TK protection mechanisms can play a significant role in conservation of cultural diversity by women. In fact, the case studies show that the majority of younger generations of local women do not have incentives to learn and practise

⁴⁴⁰ *The Convention on the Protection and Promotion of the Diversity of Cultural Expression*, *supra* note 439, Article 18.

⁴⁴¹ *The Convention on the Protection and Promotion of the Diversity of Cultural Expression*, *supra* note 439, Preamble.

⁴⁴² *The Convention on the Protection and Promotion of the Diversity of Cultural Expression*, *supra* note 439, Preamble.

⁴⁴³ *The Convention on the Protection and Promotion of the Diversity of Cultural Expression*, *supra* note 439, Article 7 on measures to promote cultural expressions.

the TK that their mothers hold, often due to the fact that their mothers have not been rewarded with what they deserve.⁴⁴⁴ Therefore, a proper gender-responsive TK instrument where women's contributions are recognized and fairly compensated can incentivize Indigenous and local women to continue and strengthen their role in practising and conserving their cultural heritage.

3.2.7 United Nations Conference on Trade and Development (UNCTAD)

3.2.7.1 Expert Meeting on Systems and National Experiences for Protecting Traditional Knowledge, Innovations, and Practices

As an agency with the broad mandate to work on issues at the intersection of global trade and development, UNCTAD has examined the relationships between TK protection, global trade, and development. In 2000, UNCTAD hosted an Expert Meeting on Systems and National Experiences for Protecting Traditional Knowledge, Innovations, and Practices,⁴⁴⁵ which was attended by leading experts from diverse fields who deliberated on policy options for TK protection.⁴⁴⁶ The background note by the UNCTAD secretariat recognized that TK is indispensable for the survival of those comprising the poorest segments of societies, particularly women, Indigenous People, and rural inhabitants of developing countries.⁴⁴⁷ It also included a statement recognizing “the important role of women as holders of TK and ensuring their participation in decision- and policy-making processes”⁴⁴⁸ in the list of objectives that countries

⁴⁴⁴ See e.g. Chapter four section 4.5 where the issue of intergenerational transmission of weaving knowledge among women is discussed.

⁴⁴⁵ UNCTAD, Systems and National Experiences for Protecting Traditional Knowledge, Innovations and Practices, Background note by the UNCTAD (TD/BCOM.1/EM.13/2) (UNCTAD, 2000).

⁴⁴⁶ The Organization followed up on this initial work with other seminars and a joint workshop with the Commonwealth Secretariat in 2004. For more details, see Sophia Twarog, “Preserving, Protecting and Promoting Traditional Knowledge: National Actions and International Dimensions” in Sophia Twarog and Promila Kapoor, eds, *Protecting and Promoting Traditional Knowledge: Systems, National Experiences and International Dimension* (New York and Geneva, 2004) 61–70..

⁴⁴⁷ UNCTAD, Systems and National Experiences, *supra* note 445 at 5.

⁴⁴⁸ UNCTAD, Systems and National Experiences, *supra* note 445 at 10.

may choose when designing systems to protect TK. Such explicit provisions requiring inclusion of women in decision-making and policymaking processes, if adopted and implemented, helps to increase countries' commitment to design gender-responsive TK law, policy, programs, and initiatives that benefit Indigenous and local women as much as Indigenous and local men.

3.2.8 United Nations Environment Programme (UNEP)

3.2.8.1 Convention on Biological Diversity⁴⁴⁹

Although being discussed later than the other instruments, the CBD is in fact the starting point for understanding the existing international framework (or regime complex) for TK protection. The protection of TK in general began as part of a larger negotiations on the conservation of biodiversity resources under the auspices of UNEP. The CBD was opened for signature at the 1992 United Nations Conference on Environment and Development in Rio de Janeiro, and entered into force in 1993.⁴⁵⁰ The Convention has three objectives, namely: (1) the conservation of biological diversity, (2) the sustainable use of the components of biological diversity, and (3) the fair and equitable sharing of the benefits arising out of the utilization of genetic resources. Despite the near universal acceptance of the core mission of conserving biodiversity, the details of the Convention and its implementation have proved contentious, mainly because the rights and obligations recognized in the Convention are general and vague.⁴⁵¹ Moreover, it should be noted that the CBD is not a TK instrument per se and does not expressly

⁴⁴⁹ *The Convention on Biological Diversity*, 29 December 1993, UNTS 1760. To date, the CBD has been ratified by 193 Parties, making it nearly universal. The United States of America remains a non-party despite having signed the treaty in 1993.

⁴⁵⁰ For historical account of the Convention including the various meetings and related documents, see Secretariat of the Convention on Biological Diversity, "History of the Convention", <<https://www.cbd.int/history/>>.

⁴⁵¹ Mugabe, "Intellectual Property," *supra* note 381 at 117. For instance, Article 11 calls on signatories to take measures that encourage the "conservation and sustainable use of components of biodiversity." As such, it is only a general framework convention in need of additional instruments in order to be effective. See also Articles 8(j), 10(c), 15, and 18(4) where the language is highly qualified through the use of phrases such as "as far as possible and as appropriate" and "subject to national legislation."

call for the protection of TK in general as a category of knowledge. TK, for the purpose of the CBD, is defined as “the knowledge, innovations and practices of Indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity.”⁴⁵² As such, the Convention only covers the section of Indigenous and local women’s TK that deals with plant and animal genetic resources.⁴⁵³

The key relevant sections to TK in the Convention include part of the preamble,⁴⁵⁴ and Articles 8(j), 10(c), 15, and 18(4). As Gebru argues, these provisions are more aspirational than substantive in that they use qualifying language including the phrases “as far as possible and as appropriate” and “subject to national legislation.”⁴⁵⁵ The most functional of these provisions is Article 8(j), which requires that State Parties “shall, as far as possible and as appropriate” and “subject to their national legislation” respect, preserve, and maintain knowledge, innovations, and practices of Indigenous and local communities and encourage the equitable sharing of benefits arising from the utilization of such knowledge, innovations and practices.⁴⁵⁶ Although the provision promotes the sharing of benefits arising out of the utilization of such TK, it leaves any measures to achieve this objective to the domestic policies of the CBD members. In other words, the article is completely dependent on the unilateral initiative of member states and on whether or

⁴⁵² CBD, “Glossary of Relevant Key Terms and Concepts within the Context of Article 8(j) and Related Provisions” CBD/COP/DEC/14/13 (30 November 2018), <<https://www.cbd.int/doc/decisions/cop-14/cop-14-dec-13-en.pdf>>.

⁴⁵³ For instance, in the context of the case studies, local women’s TK regarding saffron, plant dyes, and wool and silk production for handwoven carpets are examples of plant and animal genetic resources. The Convention does not apply to other categories of women’s TK involved in saffron and carpet production, for example the type of traditional cultural expressions that are involved in the production processes, such as folkloric literature and ceremonies.

⁴⁵⁴ The Preamble to the CBD provides:

Recognizing the close and traditional dependence of many Indigenous and local communities embodying traditional lifestyles on biological resources, and the desirability of sharing equitably benefits arising from the use of traditional knowledge, innovations and practices relevant to the conservation of biological diversity and the sustainable use of its components.

⁴⁵⁵ Gebru, “The Global Protection,” *supra* note 23 at 54.

⁴⁵⁶ *The Convention on Biological Diversity*, *supra* note 449, Article 8(j).

not they prefer to provide TK protection. The other relevant provisions are also highly qualified. All these vague and general obligations are subject to the existence of national legislation. In other words, they do not actually spell out what State Parties should do to fulfill their obligations. Part of the reason for this is that Parties negotiating the CBD did not agree on how far State Parties should be obliged to go to protect TK, and the Convention has functioned as a framework instrument requiring additional documents to be implemented. As a result, and in order to decrease the ambiguity of the text, several guidelines and protocols have been added to the Convention; however, they are not exclusively focused on TK. More specifically, in 1998, a working group on Article 8(j) and related provisions was established to implement the commitments of Article 8(j) on TK. In doing so, the working group has put forward several instruments that are discussed in the following parts.

Regarding the gender sensitivity of the Convention, in addition to paragraph 13 of the Convention, the preamble recognizes the vital role that women play in the conservation and sustainable use of biological diversity and affirms the need for the full participation of women at all levels of policymaking and implementation for biological diversity conservation. It should be noted that the gender references are in the preamble, which, compared to the provisions in the text, have less enforceability. In other words, the preamble establishes the framework for interpreting the treaty, but it is not legally binding and therefore not enforceable as the provisions in the body of the treaty are. Moreover, although relatively speaking, the Convention's mention of women's role and the need for their participation is a good step toward gender sensitivity, unfortunately the Convention does not incorporate a comprehensive treatment of women by including legally binding gender provisions (as opposed to the not legally binding preamble). The general reference to women's full participation, while important, needs to be complemented with other actions:

calling attention to Indigenous and local women's difficulties through participation in negotiations and decision making processes, raising issues of concern for Indigenous and local women, and achieving tangible gains (both monetary and nonmonetary) for Indigenous and local women as an outcome. In other words, from the four different components of gender perspective that are discussed in the introduction, the Convention contains only one, which is urging Indigenous and local women's participation and input in TK law and policy formulation. The other three components, which are (1) providing for material gains for Indigenous and local women based on an assessment of their particular needs and interests, (2) requiring a more holistic assessment of the different ways in which TK instrument provisions impact on Indigenous and local women, and (3) requiring an analysis of how the TK law and policy relate to the power relationships between men and women, are missing.

In 2006, the CBD Executive Secretary appointed a Gender Focal Point in line with a series of internal mandates within the UN system calling for gender equality and equity, and the mainstreaming of gender issues within all UN processes.⁴⁵⁷ The Executive Secretary's decision also fell in line with that of the UNEP's Governing Council's decision on Gender Equality in the Field of Environment.⁴⁵⁸ The Decision called on governments and UNEP itself to mainstream gender in their environmental policies and programs, to assess the effects on women of environmental policies, and to integrate further gender equality and environmental considerations into their work. In light of these developments, the Secretariat of the CBD adopted the first Gender Plan of Action in the 2008 Conference of Parties (COP).⁴⁵⁹ With this, the CBD became the first

⁴⁵⁷ Secretary General's Bulletin ST/SGB/1999/19, as well as the TORs for the departmental focal points for Women in the UN Secretariat (2004); the Substantive Sessions of ECOSOC (2004 and 2005); the Outcome of the 2005 World Summit (A/RES/60/1, Paragraphs 58, 59 and 116); ECOSOC Resolution 2005/31; Security Council Resolution 1325 on Women, Peace and Security (2000) as well as the Security Council Presidential Statement (S/PRST/2005/52).

⁴⁵⁸ UNEP 23rd session, 2005, Decision 23/11.

⁴⁵⁹ CBD, Conference of Parties, 2008, COP 9, Decision IX/24, <<https://www.cbd.int/decision/cop/?id=11667>>.

multilateral environmental agreement to have a Gender Plan of Action, which laid out actions to support the promotion of gender equality in measures to implement the Convention. The four objectives of the Gender Plan of Action are (1) to mainstream a gender perspective into the implementation of the Convention and the associated work of the Secretariat, (2) to promote gender equality in achieving the three objectives of the CBD, (3) to demonstrate the benefits of gender mainstreaming in biodiversity conservation, sustainable use, and benefit sharing from the use of genetic resources, and (4) to increase the effectiveness of the work of the Secretariat of the CBD.

Building on this Plan of Action, the Conference of the Parties adopted the 2015-2020 Gender Plan of Action in October 2014 at its twelfth meeting.⁴⁶⁰ The goal of the 2015-2020 Gender Plan of Action is to serve as a mandate for Parties on the integration of gender considerations and to strengthen the framework of actions for the Secretariat, to mainstream gender across policy, organizational, delivery, and constituency spheres. Undoubtedly, the adoption of the Plan of Action and the Secretariat's actions have led to an increasing awareness regarding the importance of women's role in environmental conservation and sustainable development, which, in turn, has an impact on increasing awareness of women's TK as it relates to genetic resources. In other words, by adopting the Gender Plan of Action, which is in fact the softest of soft laws, CBD has adopted a progressive and secondary response to gender issues in the context of GRs and TK. Moreover, it is worth mentioning again that as a forum primarily focused on environment, the CBD deals with the issue of women's TK to the extent that it relates to biodiversity conservation, and therefore, legal protection of women's TK as a category of knowledge from an IP lens is not on its agenda.

⁴⁶⁰ CBD, Conference of Parties, 2014, COP 12, Decision XII/7, <<https://www.cbd.int/decision/cop/?id=13370>>.

As mentioned earlier, several guidelines and protocols have been added to the Convention in order to decrease the ambiguity of the Convention. These guidelines are not exclusively focused on TK and the next part provides an overview of them to shed light on the extent that gender features in these soft law instruments.

3.2.8.1.1 Bonn Guidelines

Adopted in the 2002 COP, the Bonn Guidelines on Access to GRs and the Fair and Equitable Sharing of the Benefits Arising from Their Utilization⁴⁶¹ were the first move by the Convention parties to clarify and operationalize the CBD. The Guidelines aimed to serve as inputs when developing and drafting legislative, administrative, or policy measures on access and benefit-sharing with particular reference to provisions under Articles 8(j), 10(c), 15, 16, and 19; and contracts and other arrangements under mutually agreed terms for ABS. The Guidelines include the requirement of DOO in patent applications.⁴⁶² According to the DOO, patent applicants who directly or indirectly used a GR or TK in developing an invention have to disclose the source country or community for the genetic materials and associated TK, and it is hoped that this mechanism would allow countries/communities to participate in holding such applicants accountable over the sourcing of TK and GRs and with regard to ABS.⁴⁶³

Although the guidelines were influential and brought attention to the tension between GRs and patent instruments, their focus was still on GRs rather than TK. Moreover, the guidelines

⁴⁶¹ *Bonn Guidelines on Access to GRs and the Fair and Equitable Sharing of the Benefits Arising from Their Utilization* Secretariat of the Convention on Biological Diversity, Conference of the Parties to the Convention on Biological Diversity, 2002, COP 6 Decision VI/24, <<https://www.cbd.int/decision/cop/?id=7198>>.

⁴⁶² *Bonn Guidelines on Access to GRs and the Fair and Equitable Sharing of the Benefits Arising from Their Utilization* Secretariat of the Convention on Biological Diversity, *supra* note 461, para 16(d)(ii).

⁴⁶³ Following the inclusion of such a standard in the Bonn Guidelines, the Government of Switzerland championed an initiative to amend the Patent Cooperation Treaty (PCT) Regulations to require DOO in patent applications. For more details, see Oguamanam, *Intellectual Property in Global Governance*, *supra* note 51 at 160. It should be noted that this is one of the few cases in which a developed country has taken the lead in advocating for TK protection in an international forum.

remained completely gender-unaware. Throughout the guidelines, there is not a single mention of the role of women in biodiversity or whether the DOO and ABS mechanisms should consider issues specific to Indigenous and local women. Additionally, the fact that the Guidelines were voluntary and among the softest of soft laws limited their success. In 2002 at the World Summit on Sustainable Development (WSSD) in Johannesburg, a coalition of 15 of the most biologically diverse countries in the world⁴⁶⁴ pressed for a binding international regime on ABS.⁴⁶⁵ Consequently, the Ad Hoc Open-ended Working Group on Access and Benefit-sharing in 2004 was mandated by member states to work on an instrument that would elaborate on Articles 8(j) on TK and Article 15 on Access and Benefit-sharing. The resulting document was the Nagoya Protocol.

3.2.8.1.2 Nagoya Protocol

As mentioned earlier, pursuant to the 2000 World Summit on Sustainable Development, the 2004 COP mandated the Ad Hoc Open-ended Working Group on Access and Benefit-Sharing, with the collaboration of the Ad Hoc Open Ended Inter-Sessional Working Group on Article 8(j) and Related Provisions, to negotiate an instrument to effectively implement the provisions in Article 15 and Article 8(j) of the Convention and the three objectives of the Convention.⁴⁶⁶ Six years later, in 2010, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization⁴⁶⁷ was adopted, and entered into force

⁴⁶⁴ Including Bolivia, Brazil, China, Costa Rica, Colombia, Ecuador, India, Indonesia, Kenya, Mexico, Malaysia, Peru, the Philippines, South Africa and Venezuela.

⁴⁶⁵ For more details regarding the history and evolution of the negotiations, see Oguamanam, *Intellectual Property in Global Governance*, *supra* note 51 at 161.

⁴⁶⁶ CBD, Conference of Parties, 2004, COP 7, Decision VII/19, <<https://www.cbd.int/doc/decisions/cop-07/cop-07-dec-19-en.pdf>>.

⁴⁶⁷ *The Nagoya Protocol on Access and Benefit Sharing of the Convention on Biodiversity*, (12 October 2014), <<https://www.cbd.int/abs/doc/protocol/nagoya-protocol-en.pdf>>.

in 2014. The Nagoya Protocol is binding on the states that have ratified it,⁴⁶⁸ and this is one of the key improvements that the Protocol has brought about. The Protocol sets out the rules and mechanisms for access to GRs and associated TK, and supports the fair and equitable sharing of benefits arising from their utilization. In fact, the Protocol, along with the basic provisions of the CBD on ABS, forms the central body of law that defines how the ABS system operates. Article 7 of the Nagoya Protocol stipulates that Parties to the Protocol need to ensure that access to TK associated with GRs is based on prior informed consent and that there will be benefit sharing with holder communities (without defining TK and its utilization).⁴⁶⁹ Other highlights of the Protocol include Global Clearing-House and Multilateral Access and Benefit Sharing mechanisms.⁴⁷⁰

Critics have called the Protocol a “masterpiece of ambiguity” because of its lack of legal clarity.⁴⁷¹ Its shortcomings include its vagueness,⁴⁷² the fact that it subjects recognition of customary laws to the laws of domestic jurisdictions, and its express deference to other international instruments.⁴⁷³ This reduces the Protocol’s capacity to address issues related to access and benefit-sharing processes. Moreover, while laying down procedural requirements for the grant of FPIC, the Protocol leaves leeway to countries to determine the substantive conditions under which FPIC is required. Another important and contentious issue that the Protocol failed to address

⁴⁶⁸ There are currently 123 Parties to the Protocol. For more detail, see <<https://www.cbd.int/abs/nagoya-protocol/signatories/>>.

⁴⁶⁹ *The Nagoya Protocol on Access and Benefit Sharing of the Convention on Biodiversity*, *supra* note 467, Article 7.

⁴⁷⁰ *The Nagoya Protocol on Access and Benefit Sharing of the Convention on Biodiversity*, *supra* note 467, Article 10. The Article merely suggests the possibility of a global multilateral access and benefit-sharing mechanism. Developing such a mechanism is likely to take several more years. See Graham Dutfield, “TK Unlimited: The Emerging but Incoherent International Law of Traditional Knowledge Protection” (2017) 20 *Journal of World Intellectual Property* 144.

⁴⁷¹ Sebastian Oberthür and G. Kristin Rosendal, *Global Governance of Genetic Resources: Access and Benefit Sharing After the Nagoya Protocol* (New York, Routledge, 2014) at 2.

⁴⁷² The International Center for Trade and Sustainable Development (ICTSD) called the Protocol “a masterpiece of ambiguity.” ICTSD BIORES, “CBD Clinches ABS Protocol in Nagoya”, (8 November 2010) <<https://www.ictsd.org/bridges-news/biores/news/cbd-clinches-abs-protocol-in-nagoya>>.

⁴⁷³ Oguamanam, *Intellectual Property in Global Governance*, *supra* note 51 at 163.

is the interplay between the CBD framework and the global protection of IP covered under the TRIPs Agreement.⁴⁷⁴ It remains unresolved which instrument would trump the others in cases where protection of TK under CBD and TRIPs-protected IPRs conflict.⁴⁷⁵

Viewed from a gender perspective, the Protocol does not go a long way in operationalizing the CBD preamble language on women's "vital role" and "full participation" in the context of ABS. Women's full participation cannot be addressed by general provisions or other measures directed at representation alone. These must be accompanied by provisions requiring the identification of obstacles to women's participation and mechanisms to address them, identifying and training Indigenous and local women representatives, and facilitating networking between women from ILCs, including across different countries. Throughout the text of the Protocol, the word "women" is used six times. Two of the six instances were due to reiterating the CBD preambular language.⁴⁷⁶ Article 12 of the Protocol invites Parties to support ILCs to develop community protocols, minimum requirements for the MAT, and model contractual clauses for benefit sharing arising from the utilization of TK associated with GRs.⁴⁷⁷ According to the Article, Parties shall endeavor to support as appropriate the development of such protocols by ILC, including women within ILCs. The Article aims to support inclusion of and participation by Indigenous and local women in development of community protocols for ABS. Although a step in the right direction, the provision is couched in soft "best endeavors" language and does not appear

⁴⁷⁴ In accordance with Article 31 of the Nagoya Protocol, the Parties to the Protocol at their third meeting undertook the first assessment and review of the effectiveness of the Protocol. According to the assessment and review of the effectiveness of the Protocol conducted in November 2018, further efforts are still needed to make the Protocol fully operational. See <<https://www.cbd.int/doc/decisions/np-mop-03/np-mop-03-dec-01-en.pdf>>.

⁴⁷⁵ There are various issues that may trigger conflicts between the TRIPs and CBD. One such conflict instance might occur in the context of the disclosure of origin requirement. TRIPs, as it stands at the time of writing, does not require disclosure of origin for patent applications based on GRs and associated TK, while CBD has such a requirement. For more details, see Gebru, *Intellectual Property*, *supra* note 95 at 230.

⁴⁷⁶ *The Nagoya Protocol on Access and Benefit Sharing of the Convention on Biodiversity*, *supra* note 467, Preamble.

⁴⁷⁷ *The Nagoya Protocol on Access and Benefit Sharing of the Convention on Biodiversity*, *supra* note 467, Article 12.

to impose a legally binding obligation. The advisory language used in the Article—“Parties shall *endeavor to support, as appropriate...*”—defers it to the national discretion of the Parties and means the provision is difficult to enforce. Article 22 on capacity building invites Parties to identify their national capacity needs and priorities through national capacity self-assessments.⁴⁷⁸ The Article asks Parties in doing so to emphasize the capacity needs and priorities of women but does not provide any concrete recommendation regarding the approaches and tools that should be used to capture the capacity needs and priorities of women. Article 25 of the Protocol, which focuses on financial mechanisms and resources for implementing the protocol, requires the COP – in providing guidance with respect to the financial mechanism – to take into account the need of developing country Parties for financial resources, as well as the capacity needs and priorities of ILCs, including women within these communities.⁴⁷⁹ Whether such financial contributions are received and being spent in a manner that increases Indigenous and local women’s capacity with regard to access and benefit sharing is a topic that should be investigated.

Overall, compared to the other instruments from the other fora, CBD has shown a relatively higher degree of gender sensitivity. However, it should be borne in mind that the focus of the Convention has been the conservation of biodiversity resources, and TK has been discussed only insofar as it relates to this core objective. In other words, TK has not been discussed as a standalone issue. Protection of TK from an IP perspective and as a standalone issue began at WIPO in the late 1990s followed by its Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC).⁴⁸⁰

⁴⁷⁸ *The Nagoya Protocol on Access and Benefit Sharing of the Convention on Biodiversity*, *supra* note 467, Article 22.

⁴⁷⁹ *The Nagoya Protocol on Access and Benefit Sharing of the Convention on Biodiversity*, *supra* note 467, Article 25.

⁴⁸⁰ See generally, “Introduction: Mapping the Evolution, State-of-play and Future of the WIPO IGC” in Robinson, Abdel-Latif and Roffe, *Protecting Traditional Knowledge*, *supra* note 92 at 3.

3.2.8.1.3 Other CBD Guidelines

In addition to the Bonn guidelines and Nagoya Protocol, CBD has adopted some voluntary guidelines that, although not directly focusing on the issue of TK, have some relevance to the subject matter. The following paragraphs present a brief overview of these soft law instruments and the extent of their gender sensitivity.

The Akwé: Kon Guidelines⁴⁸¹ were adopted in the 2004 COP. The Guidelines serve as guidance for Parties, subject to their national legislation, in the development and implementation of their impact-assessment regimes whenever programs are proposed to take place on, or which are likely to impact, sacred sites or lands and waters traditionally occupied or used by ILCs. The Guidelines explicitly recognize women as a group who often bear a disproportionately large share of negative development impacts.⁴⁸² They call for gender consideration in examining the potential impacts of a proposed development on women in the affected community with due regard to their role in the TK system and as providers of food and nurturers of family, community decision-makers, and heads of households, as well as custodians of biodiversity and holders of particular elements of gender-specific TK, innovations, and practices.⁴⁸³ The Tkarihwaí:ri Code of Ethical Conduct,⁴⁸⁴ which was adopted in the 2010 COP, is to guide the development of models of codes

⁴⁸¹ *Akwé: Kon Guidelines for the Conduct of Cultural, Environmental and Social Impact Assessments Regarding Developments Proposed to Take Place or Which Are Likely to Impact on Sacred Sites and on Lands and Waters Traditionally Occupied or Used by Indigenous and Local Communities*, Conference of the Parties to the Convention on Biological Diversity, 2004, COP 7 Decision VII/16, <<https://www.cbd.int/doc/publications/akwe-brochure-en.pdf>>. *Akwé:Kon* is pronounced {agway-goo} and is a holistic Mohawk term meaning “everything in creation”. The name is provided by the Kahnawake community located near Montreal, where the guidelines were negotiated.

⁴⁸² *Akwé: Kon Guidelines*, *supra* note 481, para 3(b).

⁴⁸³ *Akwé: Kon Guidelines*, *supra* note 481, para 48.

⁴⁸⁴ *Tkarihwaí:ri Code of Ethical Conduct on Respect for the Cultural and Intellectual Heritage of Indigenous and Local Communities Relevant for the Conservation and Sustainable Use of Biological Diversity* Conference of the Parties to the Convention on Biological Diversity, 2010, COP 10 Decision X/42, <<https://www.cbd.int/traditional/code/ethicalconduct-brochure-en.pdf>>. *Tkarihwaí:ri* is pronounced {Tga-ree-wa-yie-ree}, which is a Mohawk term meaning “the proper way.”

of ethical conduct for research, access to, use, exchange, and management of information concerning TK. According to the Code, all activities and interactions with ILCs should be non-discriminatory, considering affirmative action, particularly in relation to gender, disadvantaged groups, and representation.⁴⁸⁵ Although affirmative action in relation to gender is recommended, the code is silent regarding the nature and mechanism for such an action. Similar to the Convention itself, the code affirms the need for the “full and effective participation of women at all levels of policy-making and implementation for biological diversity conservation, as appropriate.”⁴⁸⁶ No further elaboration is provided on how such participation should be realized.

The Mo’otz kuxtal Guidelines⁴⁸⁷ were adopted during the 2016 COP for the development of appropriate initiatives to ensure free, prior, informed consent and equitable sharing of benefits arising from TK and GRs, and to report and prevent unlawful appropriation of TK. Throughout the Guidelines, women are not mentioned. The only reference to gender is in Section B on fair and equitable sharing of benefits, stating “Benefit-sharing should be fair and equitable within and among relevant groups, taking into account relevant community level procedures, and as appropriate gender and age/intergenerational considerations.”⁴⁸⁸ The provision, as a gender reference in a side document (the Guidelines), does not have the same degree of legal bindingness as the main Convention itself has. The issue of Indigenous and local women receiving a fair share

⁴⁸⁵ *Tkarihwaïé:ri Code of Ethical*, *supra* note 484, para 9.

⁴⁸⁶ *Tkarihwaïé:ri Code of Ethical*, *supra* note 484, para 29.

⁴⁸⁷ *Mo’otz kuxtal Voluntary Guidelines for the Development of Mechanisms, Legislation or Other Appropriate Initiatives to Ensure the “Prior and Informed Consent”, “Free, Prior and Informed Consent” or “Approval and Involvement”, Depending on National Circumstances, of Indigenous Peoples and Local Communities for Accessing Their Knowledge, Innovations and Practices, for Fair and Equitable Sharing of Benefits Arising from the Use of Their Knowledge, Innovations and Practices Relevant for the Conservation and Sustainable use of Biological Diversity, and for Reporting and Preventing Unlawful Appropriation of Traditional Knowledge*, Conference of the Parties to the Convention on Biological Diversity, 2016, COP 13 Decision XIII/18, <<https://www.cbd.int/doc/publications/8j-cbd-mootz-kuxtal-en.pdf>>. Mo’otz kuxtal means “roots of life” in the Maya language.

⁴⁸⁸ *Mo’otz kuxtal Voluntary Guidelines*, *supra* note 487, para 14.

of benefits arising from their TK associated with GRs is crucial. However, women's participation in TK governance is also of critical importance. TK instruments should recognize not just the importance of women receiving a share of benefits arising from their TK; they should also recognize women's role and agency along with the constraints and limitations that women face to fully participate in decision-making processes.

As the latest development in the work of the COP on Article 8(j), the Rutzolijirisaxik Voluntary Guidelines were adopted in 2018.⁴⁸⁹ These Guidelines are concerned with the repatriation of TK of ILCs, and, interestingly, discuss gender-specific TK and how Parties should consider such TK in their TK repatriation efforts.⁴⁹⁰ The Guidelines call for special considerations to be given to gender-specific knowledge by both repatriating institutions and entities and receiving communities, as women's knowledge may culturally be appropriate to be accessible only to women. Therefore, the full and effective participation of ILCs in the identification of the original holders of this information is important. According to the Guidelines, gender-specific TK and related information should be accessed by culturally appropriate persons and advice can be provided about this from the receiving communities.⁴⁹¹

3.2.9 World Intellectual Property (WIPO)

⁴⁸⁹ *Rutzolij'saxik Voluntary Guidelines for the Repatriation of Traditional Knowledge of Indigenous Peoples and Local Communities Relevant for the Conservation and Sustainable Use of Biological Diversity*, Conference of the Parties to the Convention on Biological Diversity, 2018, COP 14 Decision 14/12, <<https://www.cbd.int/doc/decisions/cop-14/cop-14-dec-12-en.pdf>>. Rutzolijirisaxik means "Returning to one's place of origin" in the local traditional language, Maya Kaqchikel.

⁴⁹⁰ *Rutzolijirisaxik Voluntary Guidelines*, *supra* note 489, para 17(h).

17. Repatriation is best facilitated building on the following principles and considerations:

(h) Parties, repatriating institutions and entities should recognise the importance of repatriating secret or sacred, gender-specific or sensitive traditional knowledge as identified by the relevant Indigenous Peoples and local communities, as a priority for Indigenous Peoples and local communities;

⁴⁹¹ *Rutzolijirisaxik Voluntary Guidelines*, *supra* note 489, para 56. For instance, it may be culturally appropriate that women's knowledge is accessible only to women.

Pursuant to the adoption of CBD in 1992 and the 1994 United Nations General Assembly proclamation of the International Decade of the World's Indigenous Peoples,⁴⁹² WIPO established the Traditional Knowledge Division within WIPO, formerly known as the Global Intellectual Property Issues Division (GIPID).⁴⁹³ The Division conducted a series of fact-finding missions⁴⁹⁴ and prepared a report on the breadth and scope of the GRs, TK, and TCEs and IP. This was followed by the World Intellectual Property Declaration by the WIPO General Assembly,⁴⁹⁵ which expressly recognized the importance of traditional knowledge. During the Diplomatic Conference for the Adoption of the Patent Law Treaty in 2000, a proposal by developing countries on protection of genetic resources⁴⁹⁶ created disagreement and discussions among WIPO Member States. As a result of these discussions, Member States agreed that there was a need for a permanent forum to examine issues related to GR, TK, and TCEs. This brought together WIPO's past work on folklore along with the related issues of GR and TK. Thus, the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC) was

⁴⁹² *International Decade of the World's Indigenous People*, A/RES/48/163, UNGAOR, 48th Sess, (1994) <<https://undocs.org/A/RES/48/163>>.

⁴⁹³ Lawson, "Relationships Between," *supra* note 92 at 71.

⁴⁹⁴ WIPO undertook nine fact-finding missions throughout 1998 and 1999. This was an attempt to collect first-hand accounts of the 'intellectual property needs and expectations of knowledge holders' and included consultation with ILCs, governments, industry representatives and civil societies in several countries. Among other things, the fact-finding mission report highlighted the need to reform existing IP laws and to work on creating new legal tools for TK protection. World Intellectual Property Organization, *Intellectual Property Needs and Expectations of Traditional Knowledge Holders: WIPO Report on Fact-finding Missions on Intellectual Property and Traditional Knowledge (1998–1999)* (Geneva, WIPO, 2001).

⁴⁹⁵ For more details, see WIPO General Assembly, WO/GA/26/4, (2000), Policy Advisory Commission and Industry Advisory Commission, Memorandum of the Director General, Annex IV, <https://www.wipo.int/edocs/mdocs/govbody/en/wo_ga_26/wo_ga_26_4.pdf>.

⁴⁹⁶ At the conference, Colombia tabled the proposal that it had previously put forward at the SCP with the support of many developing countries. The proposal was to include a new provision for protection of GRs in the text of the draft Patent Law Treaty. For more details, see Proposal by the Delegation of Colombia, Protection of Biological and Genetic Resources, Standing Committee on the Law of Patents, 6–14 September 1999, SCP/3/10, <https://www.wipo.int/edocs/mdocs/scp/en/scp_3/scp_3_10.pdf>.

established in 2000 to formally bring together various discussions within WIPO about GRs, TK, and TCEs.⁴⁹⁷ The three key features that gave rise to the IGC have been summarized as follows:

First, it was established to address three new themes that shared certain distinct features: GRs, TK and TCEs were simultaneously regarded as the “common heritage of humanity” and as intellectual valuables requiring appropriate forms of IP protection. Second, GRs, TK and TCEs were seen as the intellectual assets of new key players in IP policy-making, namely developing countries and Indigenous and local communities. Third, and more broadly, the IGC was conceived as part of a larger and structured endeavor by WIPO to move towards a modern, responsive IP system that could embrace non-Western forms of creativity and innovation, be comprehensive in terms of beneficiaries, and be fully consistent with developmental and environmental goals.⁴⁹⁸

After almost a decade of deliberations, in 2009, Member States of the WIPO decided that the IGC should begin working toward one or more international instruments that would govern the issues of GRs, TK, and TCEs in a holistic manner rather than focusing on any particular aspect of it, with the hope that the IGC outcome would result in an effective international protection mechanism that provided clear solutions for TK protection.⁴⁹⁹

At the beginning of the formation of the IGC, the kinds of outcomes that were being negotiated in the IGC were unclear, with options including (a) binding or non-binding normative international instrument/s, (b) authoritative or persuasive interpretations or elaborations of existing legal instruments, (c) a high-level political resolution, declaration or decision stating a norm against misappropriation and misuse, (d) guidelines or model laws, and (e) coordinated national legislative developments.⁵⁰⁰ However, since 2011 and from the fifteenth IGC sessions onward, the

⁴⁹⁷ For more about the history of IGC, see Ahmed Abdel-Latif “Revisiting the Creation of the IGC: The Limits of Constructive Ambiguity?” in Robinson, Abdel-Latif and Roffe, *Protecting Traditional Knowledge*, *supra* note 92 at 10.

⁴⁹⁸ WIPO, “Background Brief No. 2: WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore” (2015) at 2, <https://www.wipo.int/edocs/pubdocs/en/wipo_pub_tk_2.pdf>.

⁴⁹⁹ WIPO General Assembly 2009, Decision on Agenda Item 28, IGC Mandate (WIPO/GRTKF/IC/15/REF-DECISION 28), <https://www.wipo.int/meetings/en/doc_details.jsp?doc_id=129913>.

⁵⁰⁰ See WIPO, Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, *Summary of Options for the International Dimension of the Committee’s Work*,

Committee has focused on text-based negotiations with the objective of reaching agreement on a text(s) of an international legal instrument(s).⁵⁰¹ Given the diverse and conflicting interests of the Member States, these negotiations have at times been highly contentious. In fact, various groups of like-minded countries have emerged during the process of the IGC negotiations. A general categorization of these groups shows that developing countries (especially those with a high concentration of biodiversity and ILCs like Brazil, India, Peru and some African countries) strongly advocate the international protection of TK while most developed countries prefer to maintain the status quo.⁵⁰²

A rough categorization of the negotiating countries shows divisions along levels of economic development. Developing countries, which are often fertile areas for GRs and TK, generally tend to advocate for stronger protection of TK, while developed countries, in which most multinational corporations that use TK reside, tend to resist strong protection of TK.⁵⁰³ However, there are some outlier developed countries such as New Zealand, Australia, Norway, and

WIPO/GRTKF/IC/14/6

(2009)

https://www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_14/wipo_grtkf_ic_14_6.pdf.

⁵⁰¹ WIPO, General Assembly, *Thirty-Eighth WIPO General Assembly: Report*, WO/GA/38/20 (2009), https://www.wipo.int/edocs/mdocs/govbody/en/wo_ga_38/wo_ga_38_20.pdf.

⁵⁰² Stefan Groth, *Negotiating Tradition: The Pragmatics of International Deliberations on Cultural Property* (Universitätsverlag Göttingen, 2012) at 44. Groth clusters the member country delegates at the IGC into ‘stalling’ delegates and ‘speeding up’ delegates to describe the general orientation of the delegates participating in the negotiation. He gives the following example to show how countries support like-minded states in politically strategic ways in order to use the political capital gained from such support in other international fora.

To give an example, Egypt has a notably strong voice in WIPO IGC negotiations on traditional knowledge and folklore. Yet, in private conversation, one high-ranking Egyptian delegate made clear to me that his country has no interest in the protection of TK or TCEs whatsoever – it is not on the domestic agenda, nor does it play a big role in diplomacy. Yet, in negotiations, the Egyptian delegate makes drastic statements and demands, increasing the pressure on the stalling delegations as much as possible. The delegate explained this position by noting that Egypt regards the current UN system as unbalanced and disadvantageous to developing countries. So to increase the pressure on industrialized nations, negotiation tokens from WIPO’s IGC are used to try to bring about changes in the UN system, including in neighboring fora like the WTO or CBD.

⁵⁰³ Gebru, “The Global Protection,” *supra* note 23 at 66.

Switzerland, that defy such categorizations by taking the middle ground on some occasions.⁵⁰⁴ It should be borne in mind that the divide in the IGC debate is more complex than just a simple North-South divide, i.e., grouping of countries based on their level of development.⁵⁰⁵ In fact, each country's position is adopted as part of its broader political strategy that spans various issues and international fora.

Generally, the IGC progress to date has been slow, and after almost two decades and 40 sessions, at the time of writing, there has yet to be any concrete outcome. Talking about the evolution of the IGC, Robinson, Roffe and Abdel-Latif write:

If the IGC continues to inch along at its current pace or fails to deliver, it may confirm the opinion of some critics of the process, that the negotiations were forum shifted into WIPO to maintain a status quo in the intellectual property system – managing developing country and Indigenous representative expectations against an ever higher ratchet of IP minimum standards through other forums or processes like regional trade agreements (RTAs) and bilateral free trade agreements (FTAs).⁵⁰⁶

Recently, the WIPO General Assembly renewed the mandate of the IGC for the 2020-2021 biennium.⁵⁰⁷ According to the mandate, the IGC will continue to expedite its work, with the objective of reaching an agreement on an international legal instrument/s relating to IP, which will ensure the balanced and effective protection of GRs, TK, TCEs with a primary focus on narrowing existing gaps and reaching a common understanding on core issues, including definitions, beneficiaries, subject matter, objectives, scope of protection, and what TK/TCEs subject matter is

⁵⁰⁴ Gebru, “The Global Protection,” *supra* note 23 at 66.

⁵⁰⁵ Wend Wendland, “The Evolution of the IGC From 2001 to 2016: An Insider’s Perspective” in Daniel F. Robinson, Ahmed Abdel-Latif and Pedro Roffe, eds, *Protecting Traditional Knowledge: The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore* (New York: Routledge, 2017) 31–55 at 40.

⁵⁰⁶ Robinson, Abdel-Latif and Roffe “Introduction: Mapping the Evolution,” *supra* note 480 at 3–4.

⁵⁰⁷ WIPO General Assembly Report, WO/GA/51/18, 51st Sess, (2019) <https://www.wipo.int/edocs/mdocs/govbody/en/wo_ga_51/wo_ga_51_18.pdf>.

entitled to protection at an international level, including consideration of exceptions and limitations and the relationship with the public domain.⁵⁰⁸

In following its mandate, the Committee, to date, has produced three Draft Articles on protection of TK, protection of TCEs, and IP and GRs, in addition to the most recent text: the Chair's Text on the Draft International Legal Instrument Relating to Intellectual Property, Genetic Resources and Traditional Knowledge Associated with Genetic Resources.⁵⁰⁹ The three Drafts are a work in progress but are perhaps the basis for what could eventually become broadly acceptable international instruments. The text of the Drafts is highly bracketed with multiple alternative language options for each provision, making the future prospects for the Draft Articles highly unpredictable. The key issues that have given rise to tension between the negotiating blocks may generally be summarized into four areas. These include: (1) the definition of TK, (2) the legal nature of the Draft Articles (binding international instrument v. soft law), (3) exceptions and limitations or flexibilities in the instrument, and (4) the interaction between TK systems of protection and existing IP laws in case of irreconcilable conflict.⁵¹⁰ These issues have divided the Members ever since details of the instrument began being discussed in the Committee.

According to the 2020-2021 mandate, the Committee will continue working on the documents, and the General Assembly will decide whether to convene a diplomatic conference and/or continue negotiations in 2021 based on the maturity of the texts, including levels of agreement on objectives, scope, and nature of the instrument(s).⁵¹¹ However, due to the fact that the nature of the documents will substantially change depending on which alternative wording or

⁵⁰⁸ WIPO General Assembly Report, *supra* note 507.

⁵⁰⁹ WIPO, the Intergovernmental Committee on Intellectual Property and Genetic Resources, *Chair's Text of a Draft International Legal Instrument Relating to Intellectual Property, Genetic Resources and Traditional Knowledge Associated with Genetic Resources*, WIPO/GRTKF/IC/41/5, 40th Sess, (2019) <https://www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_41/wipo_grtkf_ic_41_5.pdf>.

⁵¹⁰ Gebru, *Intellectual Property*, *supra* note 95 at 241.

⁵¹¹ WIPO General Assembly Report, *supra* note 507.

option is ultimately accepted, a detailed analysis of the rights and obligations proposed in them is not possible. The following part examines the gender sensitivity of the Draft Articles at the time of writing.

3.2.9.1 The IGC's Draft Articles

As mentioned earlier, the work of the IGC has led to the development of sets of documents, namely (a) The Protection of Traditional Knowledge: Draft Articles,⁵¹² (b) The Protection of Traditional Cultural Expressions: Draft Articles,⁵¹³ and (c) the Consolidated Document Relating to Intellectual Property and Genetic Resources.⁵¹⁴ The three Drafts on protection of TK, TCEs and TK associated with GRs consist of a preamble and articles laying out the objectives, subject matter of the instrument, definitions of beneficiaries, scopes and conditions of protection, disclosure requirement, and exceptions and limitations. There are also provisions on capacity building and awareness raising in all three.

None of the Drafts makes reference to Indigenous and local women. Even the preambles fail to acknowledge the role of Indigenous and local women. The section laying out the objectives of the Draft also remains silent on gender, even though the subject matter of the section offers a

⁵¹² WIPO, Intergovernmental Committee on Intellectual Property and Genetic Resources, *The Protection of Traditional Knowledge: Draft Articles Facilitators' Rev.*, WIPO/GRTKF/IC/40/18, (June 19, 2019), <https://www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_40/facilitators_text_on_tk.pdf>.

⁵¹³ WIPO, Intergovernmental Committee on Intellectual Property and Genetic Resources, *The Protection of Traditional Cultural Expressions: Draft Articles Facilitators' Rev.*, WIPO/GRTKF/IC/40/19, (June 19, 2019), <https://www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_40/facilitators_text_on_tces.pdf>.

⁵¹⁴ WIPO, Intergovernmental Committee on Intellectual Property and Genetic Resources, *The Consolidated Document Relating to Intellectual Property and Genetic Resources Rev. 2 Facilitators' Rev.*, WIPO/GRTKF/IC/40/6, (June 19, 2019), <https://www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_40/wipo_grtkf_ic_40_6.pdf>. At the 40th Session, the Chair of the Committee proposed a draft (reflecting his views and not those of the Organization or Member States) in an attempt to take account of the policy interests of all Member States expressed over the past nine years of text-based negotiations in the IGC. The reaction of the Members to the Chair's Draft remains to be seen at the Committee's 41st sessions onward. WIPO, the Intergovernmental Committee on Intellectual Property and Genetic Resources, *Chair's Text of a Draft International Legal Instrument Relating to Intellectual Property, Genetic Resources and Traditional Knowledge Associated with Genetic Resources*, WIPO/GRTKF/IC/41/5, 40th Sess., (2019) <https://www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_41/wipo_grtkf_ic_41_5.pdf>.

good opportunity to partially compensate for the lack of gender sensitivity in the entire Draft by highlighting the significance of recognizing and protecting women's TK for the ultimate objective, which is effective protection of TK.⁵¹⁵

Moreover, the articles on defining the subject matter and eligibility criteria in all three documents have multiple alternatives that, although formulated broadly, do not mention Indigenous and local women.⁵¹⁶ These provisions should ensure that there will be no gender discrimination in recognizing TK held and practised by women as the subject matter of the instrument, especially if, as some alternatives in the text suggest, it will be left to Member States' discretion to define the subject matter.

On the other hand, although the term "beneficiaries" is defined broadly in the Drafts (potentially including both women and men), it is left to governments to determine the selection criteria for beneficiaries.⁵¹⁷ There is no guarantee that such selection criteria will be informed with the role of Indigenous and local women in TK and their conditions unless the IGC instrument/s require the Member States to take into account women's role and their condition while formulating their selection criteria for beneficiaries. Even if beneficiaries are to be determined based on self-identification, it could still be possible that those Indigenous and local women who hold the respective TK might not make themselves known as they may feel they do not have the means, such as time, finances, or educational background, to participate as beneficiaries or they may

⁵¹⁵ *The Protection of Traditional Knowledge: Draft Articles*, supra note 512, Article 2. *The Protection of Traditional Cultural Expressions: Draft Articles*, supra note 513, Article 2; *The Consolidated Document Relating to Intellectual Property and Genetic Resources*, supra note 514, Article 2.

⁵¹⁶ *The Protection of Traditional Knowledge: Draft Articles*, supra note 512, Article 3. *The Protection of Traditional Cultural Expressions: Draft Articles*, supra note 513, Article 3; *The Consolidated Document Relating to Intellectual Property and Genetic Resources*, supra note 514, Article 3.

⁵¹⁷ *The Protection of Traditional Knowledge: Draft Articles*, supra note 512, Article 3. *The Protection of Traditional Cultural Expressions: Draft Articles*, supra note 513, Article 4.

become demotivated due to cultural and social norms. This highlights the importance of requiring gender sensitivity in determining beneficiaries.

As Ahmed Abdel-Latif says, the TK conundrum “is the biggest policy and normative challenge that WIPO has ever faced and that the future of the global IP system hinges upon its satisfactory resolution.”⁵¹⁸ The holistic approach of the IGC deliberations on TK protection requires addressing gender aspects of TK among other features of the issue. Despite the intensive negotiations in the IGC since 2000, the three Draft Articles and Chair’s Text as they stand today remain silent with regard to Indigenous and local women. As discussed earlier, compared to the other fora, CBD is more gender-responsive in its work related to GRs and TK. WIPO IGC could have easily used lessons learned from the CBD and Nagoya Protocol to incorporate gender into the draft and its work. But unfortunately, to date, the Committee’s work has remained gender-neutral, ignoring the fact that gender-neutral policies and programs are often not “gender neutral” in their impact; rather, these policies and programs affect men and women in a different way and to a different extent. Where women face initial and entrenched disadvantages (as is the case in many ILCs), they will not be able to participate in, and benefit from, mainstream measures, even when these are formally open to them.

3.3 TK and Gender in Domestic Law: The Case of Iranian Laws

Since the case studies examine two sectors of Iranian handwoven carpet and saffron production, this section examines the Iranian domestic legal framework for protection of TK to assess the gender sensitivity of Iranian national instruments. A review of the domestic IP laws of Iran relevant to TK reveals almost no gender sensitivity at all and illustrates how gaps and

⁵¹⁸ Ahmed Abdel-Latif, “WIPO and the Traditional Knowledge Conundrum” in Ahmed Abdel-Latif and Pedro Roffe, eds, *Protecting Traditional Knowledge: The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore* (New York: Routledge, 2017) 317–324 at 318.

omissions in the international law result in domestic laws that have no gender perspective in any of the four senses outlined in the introduction to this chapter.

According to Section 20 of the Constitution of Iran,⁵¹⁹ all members of the nation, both men and women, shall receive equal protection under the legal system and shall enjoy all human, political, economic, social and cultural rights, but with a fundamental condition at the end which changes everything: “...in conformity with Islamic criteria”.⁵²⁰ This condition has had a significant impact on the laws of the country from a gender perspective.⁵²¹ Section 21, the only section in the Constitution explicitly mentioning women’s rights, provides that “[t]he government must ensure the rights of women in all respects, in conformity with Islamic criteria.”⁵²² This includes women’s economic and social rights and therefore women’s right over their TK and TK-based products. Section 21 “strictly limits women’s rights according to the principles of Islam . . . [and ensures] that every dialogue about women’s rights must be understood in its religious context.”⁵²³

Unfortunately what constitutes “Islamic criteria” in sections 20 and 21 is very vague and the interpretations of sharia rules that are the basis of the ultimate definitions of women’s rights in Iran, have usually been made by the ultra-traditionalists as opposed to the reformists.⁵²⁴ In the context of Indigenous and local women’s right over TK in Iranian legal context, Islamic sharia law does not regulate IPRs per se by having detailed and precise rules, such as in the case of spiritual

⁵¹⁹ After the 1979 Revolution, a new Constitution was adopted, which established Islam as the basis for the legal system.

⁵²⁰ *Constitution of the Islamic Republic of Iran*, (24 October 1979) (amended on 28 July 1989), § 20, <<https://wipo.int/en/legislation/details/7697>>.

⁵²¹ For a review of the status of women’s rights in the Iranian legal system, see Mohammad H. Nayyeri, “Gender Inequality and Discrimination: The Case of Iranian Women” (2013) IHRDC Legal Commentary.

⁵²² *Constitution of the Islamic Republic of Iran*, *supra* note 520, § 20.

⁵²³ Delaram Farzaneh, “One Step Forward, Two Steps Back: A Brief History of Legal Discriminations Against Women in Iran and the Violations of International Human Rights” (2014) 20:1 Annual Survey of International & Comparative Law 201 at 223.

⁵²⁴ Farzaneh, “One Step Forward,” *supra* note 523 at 225.

duties or inheritance.⁵²⁵ In other words, sharia law does not have any overt implications for TK protection except when it comes to women's land inheritance. Islamic rules of inheritance as expressed through Iran's Civil Code prevent women in Iran from inheriting equally with men. Iran's Civil Code, which is based on the principles of the sharia law lays down the following rules of inheritance when it comes to women's inheritance: (a) Daughters are entitled to only half of the inheritance sons are entitled to.⁵²⁶ (b) The mother of a deceased person is entitled to one-sixth or one-third of the estate (depending on whether the deceased had children or siblings) while the father receives the rest.⁵²⁷ (c) A woman who marries a man who dies of an illness before the marriage is consummated is not entitled to any inheritance from him.⁵²⁸ (d) A wife may claim one-eighth or one-fourth of her deceased husband's estate (depending on whether the deceased had children or not). The husband, on the other hand, may inherit one-quarter or one-half of his deceased wife's estate (depending on whether the deceased had children or not) and all of the estate if there are no other heirs.⁵²⁹

In 2008, several religious decrees (Fatwa) spurred amendments in the inheritance laws of Iran, and, as a result, in 2009 the government of Iran began the implementation of the controversial legislation that allowed women to inherit all forms of their husband's property (still with the same unequal proportions of one-eighth or one-fourth depending on whether the deceased had children or not).⁵³⁰ Before the amendment of Articles 946–948, the wife of a deceased husband could inherit

⁵²⁵ For more information regarding the interaction of sharia law and intellectual property rights, see Bashar H. Malkawi, "The Alliance Between Islamic Law and Intellectual Property: Structure and Practice" (2013) 10:3 University of St. Thomas Law Journal 618.

⁵²⁶ Islamic Republic of Iran, *Civil Code*, (1929), Article 911.

⁵²⁷ Islamic Republic of Iran, *Civil Code*, (1929), Article 906.

⁵²⁸ Islamic Republic of Iran, *Civil Code*, (1929), Article 945.

⁵²⁹ Islamic Republic of Iran, *Civil Code*, (1929), Article 913.

⁵³⁰ For more details regarding the history of the amendment to inheritance laws in Iran, see Mohammad Hassan Sadeghi Moghadam, "Evolution in Wife's Inheritance of Husband's Real Estate" (2012) 2 Civil Law Knowledge 55, [original in Farsi].

one-fourth or one-eighth of only movable properties. According to the amended Articles 946 and 948, however, now land has been added to the property a woman may inherit from a deceased husband, something which was banned before.⁵³¹ However, there still remains some restrictions on the wife's inheritance of land where the wife inherits the value of the land, not the actual land. The law provides that a wife can acquire her share from the land itself only in cases where the heirs refuse to pay the wife the price of the land. In Chapter five of the thesis, the impact of the inheritance laws on women saffron growers and how land ownership affects their participation in the value chain and decision-making structure are examined.

Generally, there are various factors that hinder Iranian women's representation and participation in local, regional, and national political decision-making structures.⁵³² For instance Shojaei lists women's financial dependence to their husbands and fathers, prevalence of patriarchy beliefs in society, and traditional gender division of labour, which assigns housework only to women, among the obstacles to women's effective participation in society and their promotion in various occupational and managerial positions.⁵³³ In addition, Iran has not ratified the Convention on the Elimination of all Forms of Discrimination against Women (CEDAW).⁵³⁴ Since early 2002, serious debates have taken place in Iran over the ratification of the Convention, and although Iran's Parliament passed the Bill of Ratification of the CEDAW in August 2003, the Guardian Council

⁵³¹ Islamic Republic of Iran, *The Act to Amend Civil Code*, (2009) <<https://rc.majlis.ir/fa/law/show/135895>>.

⁵³² For a detailed analysis of obstacles preventing Iranian women's participation in society and job market, see Pouya Ala-Eddini and Mohammadreza Razavi, "The Condition of Women's Participation and Occupation in Iran" (2005) 12 *Social Welfare Quarterly* 131, [original in Farsi].

⁵³³ See generally Seyedeh Nosrat Shojaei, "Women in Politics: A Case Study of Iran" (2010) 3:2 *Journal of Politics and Law*, Canadian Center of Science and Education 257.

⁵³⁴ CEDAW, *supra* note 389.

has refused to confirm the treaty, even subject to a general reservation of compatibility with Islamic rules.⁵³⁵

Article 2 of the UDHR and Article 2 of the International Covenant on Civil and Political Rights (ICCPR), to which Iran is a party, protects every person's human rights without discrimination based on sex.⁵³⁶ Moreover, Iran is a party to ICESCR. On one hand, Article 3 of ICESCR requires the State Parties to ensure the equal right of men and women to the enjoyment of all economic, social, and cultural rights set forth in the present Covenant, and Article 15(c) of the ICESCR can be interpreted to protect TK.⁵³⁷ Therefore, one might argue that Iran has the obligation to ensure equal protection of TK for both men and women. However, generally the domestic IP instruments have remained completely gender neutral. The country's most recent relevant law regarding TK is the Protection and Utilization of the Country's Genetic Resources Act, adopted in 2018.⁵³⁸ The Act consists of 9 articles and aims to assure the sustainable use of all GRs located in the territory of Iran or GRs with Iranian origins and their associated TK. Throughout the Act, there is no mention of Indigenous or local women's role and how their needs and interests should be taken into account in implementation of the Act.

Moreover, Iran's *Patent Act* has no provisions regarding patents based on TK and GRs, and consequently, it has no DOO or FPIC requirement.⁵³⁹ In fact, written in compliance with TRIPs, the language of the Act repeats most of the TRIPs provisions and remains completely

⁵³⁵ For a review of the status of women's rights in the IRI's legal system, see Nayyeri, "Gender Inequality," *supra* note 521 at 59.

⁵³⁶ *Universal Declaration of Human Rights*, *supra* note 378, Article 2; *The International Covenant on Civil and Political Rights*, 16 December 1966, 999 UNTC 171 (entered into force 23 March 1976), Article 2.

⁵³⁷ See section 3.2.2.2 of the thesis and footnote 388.

⁵³⁸ Islamic Republic of Iran, *Protection and Utilization of the Country's Genetic Resources Act* (2018) <<http://www.fao.org/faolex/results/details/en/c/LEX-FAOC182127>>.

⁵³⁹ Islamic Republic of Iran, *Patents, Industrial Designs and Trademarks Registration Act* (2008) <<https://wipolex.wipo.int/en/legislation/details/7706>>.

gender neutral. Iran's *Act for Protection of Geographical Indication*,⁵⁴⁰ although mentioning handicrafts once,⁵⁴¹ makes reference to neither TK, TCEs, GRs, nor women. The country's *Act of Plant Varieties Registration, Control and Certification of Seeds and Seedlings*⁵⁴² protects IPRs of breeders of the improved plant varieties for up to 18 years with no mention of GRs and associated TK of ILCs, let alone Indigenous and local women's role in preserving GRs. Finally, and not surprisingly, the country's *Act for Protection of Authors, Composers and Artists Rights* (Copyright Law),⁵⁴³ is gender neutral in its entirety. Article 2 of the Act lists (a) articles of applied handicraft and industrial art, carpet and rug designs, and (b) works based on folklore and national heritage of culture and arts, as works that are protected by the copyright law, provided that they are original.⁵⁴⁴ The *Copyright Act* does not require any DOO, FPIC, or benefit sharing with the holder community. There is no reference in the *Copyright Act* to the role of Indigenous and local women in the conservation, application, and transfer of TK and TCEs.

3.4 Gaps and Omissions

TK protection is a crosscutting issue that has implications for environmental protection and biodiversity conservation, health and agriculture, socio-cultural and economic development. As a result, several deliberations have been carried out in parallel in various fora with each focusing on different aspects of the issue. Naturally, progress in each of these fora has been uneven with varying implications. The existing international instruments on TK are each located on different

⁵⁴⁰ Islamic Republic of Iran, *Act for Protection of Geographical Indications* (2005) <<https://wipolex.wipo.int/en/legislation/details/7707>>.

⁵⁴¹ *Act for Protection of Geographical Indications*, *supra* note 540. Article 1(b) reads as follows: "Good" means any natural or agricultural product, or any product of handicraft and industry.

⁵⁴² Islamic Republic of Iran, *Act of Plant Varieties Registration, Control and Certification of Seeds and Seedlings* (2003), <<https://wipolex.wipo.int/en/legislation/details/7705>>.

⁵⁴³ Islamic Republic of Iran, *Act for Protection of Authors, Composers and Artists Rights* (1970), <<https://wipolex.wipo.int/en/text/197798>>.

⁵⁴⁴ *Act for Protection of Authors*, *supra* note 543, Article 2.

places on the spectrum of hard-soft law. For example, if WTO members adopt the proposed amendment to TRIPs requiring the DOO of GRs and TK in patent applications, that commitment would be backed by the WTO's dispute settlement arrangements with possible trade retaliatory action,⁵⁴⁵ while failure to implement the CBD and Nagoya Protocol at best attracts arbitration or submission to the International Court of Justice.⁵⁴⁶

The Beijing Declaration of Indigenous Women⁵⁴⁷ and the Manukan Declaration of the Indigenous Women's Biodiversity Network⁵⁴⁸ clearly warn that the current IP regime threatens Indigenous women and the livelihood of their communities by depriving them of control over their knowledge and resources. Moreover, the Beijing Platform for Action adopted at the Fourth World Conference on Women in 1995, mentions explicitly the CBD and calls upon the protection and promotion of women's traditional knowledge.⁵⁴⁹ The United Nations Permanent Forum on Indigenous Issues also highlights the misappropriation of TK taking place under the current IP regime as an issue of concern for Indigenous women.⁵⁵⁰ This is mainly because women and men have particular needs, interests, and aspirations and make different contributions to the TK system. Examined from a gender perspective, references to women in the international instruments are fairly unimpressive. They often consist of vague references to participation. While all these references are important, they fall far short of comprising a comprehensive gender perspective in its four senses: where (1) Indigenous and local women's participation and input in TK law and

⁵⁴⁵ *Agreement on Trade-Related Aspects of Intellectual Property Rights*, *supra* note 352, Article 64.

⁵⁴⁶ *The Convention on Biological Diversity*, *supra* note 449, Article 27.

⁵⁴⁷ *The Beijing Declaration of Indigenous Women*, UN Fourth World Conference on Women, Beijing (4–5 September 1995), <http://www.ipcb.org/resolutions/htmls/dec_beijing.html>.

⁵⁴⁸ *The Manukan Declaration*, Indigenous Women's Biodiversity Network, Malaysia (4–5 February 2004), <www.ipcb.org/resolutions/htmls/manukan.html>.

⁵⁴⁹ *Beijing Platform for Action*, Fourth World Conference on Women (September 1995) Paragraph 253(c) under Strategic Objective K.1, <https://www.un.org/en/events/pastevents/pdfs/Beijing_Declaration_and_Platform_for_Action.pdf>.

⁵⁵⁰ ECOSOC, Permanent Forum on Indigenous Issues Report, 3rd Sess, E/C.19/2004/23, <https://www.un.org/en/ga/search/view_doc.asp?symbol=E/C.19/2004/23> at 12–14.

policy formulation is required in the instrument, (2) the instrument provides for tangible results (monetary and non-monetary gains) for Indigenous and local women, (3) a more holistic assessment of the Indigenous and local women's particular needs and interests and different ways in which TK instrument provisions have an impact on them is done by lawmakers and policymakers during the formulation of the instrument, and finally (4) an analysis is undertaken by law and policymakers regarding how the instrument specifically, and the TK law and policy generally, relate to and can improve the power relationships between men and women in ILCs.

Compared to the other fora and instruments that are discussed in this chapter, CBD is the only one highlighting the need for women's participation in decision-making with explicit recognition of women's role in the conservation and sustainable use of GRs and associated TK. Throughout its various programs of work and meetings, the COP has recommended that Parties, Governments, subsidiary bodies of the Convention, the Executive Secretary and relevant organizations, including ILCs, when implementing the program of work and other relevant activities under the Convention, fully incorporate women and women's organizations in the activities.⁵⁵¹ Although showing gender sensitivity, the general deferral to national laws in the Convention itself and the non-binding nature of the guidelines leave the gender provisions without both sufficient substance and enforcement power. Moreover, not all categories of Indigenous and local women's TK fall under the Convention's subject matter, which is biodiversity and genetic resources.

The quality of gender provisions in any TK instrument should be increased from general references to women toward firmer commitments to addressing gender inequality through recognizing Indigenous and local women's needs and constraints. The language and structure of

⁵⁵¹ For more details, see CBD's website, "Gender and Biodiversity", <<https://www.cbd.int/gender>>.

gender-related provisions in TK instruments need to become more comprehensive and specific. In doing so, in addition to the recognition of women's role in TK and the need for their participation in TK governance at various levels, including in FPIC and ABS processes, gender-based social, economic, and cultural constraints of women and the need for proper accommodations to facilitate their participation should be recognized and addressed. Moreover, TK law and policy should address the need for TK preservation in a gender-responsive manner where Indigenous and local women are seen as active agents of change equipped with gender-responsive capacity building and training.

History proves wrong the assumption that any gender-unaware legal mechanism will benefit women directly and automatically. One of the main objectives of international human rights law is the elimination of gender discrimination, and the issue of Indigenous and local women's TK should not be an exception.⁵⁵² Legal instruments that ignore the gender aspects of TK can have significant consequences for the survival and development of ILCs and TK itself as a living body of knowledge. International and domestic TK instruments should both empower women to seek their rights and fair share by recognizing their TK, requiring documentation of TK in a gender-responsive manner, and ensuring participation of women in TK governance including in the free prior informed consent and ABS processes. However, the failure of the United States (as a key power and player in the global economy) to ratify the CEDAW and ICESCR presents impediments in advancing substantive equality and consensus building around these issues in international law. Now that WIPO has assumed a lead role in the TK issue with negotiations taking place at the IGC in a holistic manner, it would go against the existing international commitments to gender equality if the outcome instrument/s remain silent about women's TK. In other words,

⁵⁵² *The Convention on the Elimination, supra* note 389.

the IGC outcome should provide adequate protection for TK while taking into account policy objectives such as women's empowerment. The IGC should ensure that the outcome of its work (1) recognizes women's TK; (2) strengthens their access to community's TK, TCEs, and GRs; (3) requires participation of women in governance of their TK, TCEs, and GRs including in FPIC and ABS processes; (4) strengthens women's capacity on matters pertaining to the conservation, maintenance and protection of their TK, TCEs and GRs; and (5) promotes culturally appropriate and gender-specific ways in which women can utilize their TK to improve their situation. Building on this chapter assessing the TK instruments to determine the extent to which gender is taken into account, the next chapter examines how to include women in TK law and policy in order to have a fully gender-responsive TK instrument aiming to empower Indigenous and local women while taking into account their constraints and potentials.

CHAPTER 4: PERSIAN CARPETS, TK, AND WOMEN

4.1 Introduction

In Iranian culture, an image of women sitting behind a loom immediately pops up when the phrase “carpet weaving” is heard. The dominant presence of women in carpet weaving is a well-accepted fact even without referring to the official statistics according to which there are 1.2 million weavers in Iran, of which 82% are women.⁵⁵³ Local and rural women either weave independently with friends and family in their homes and sell the final product themselves, or weave for a dealer, who provides material, tools, and a rough pattern with a guaranteed wage when the carpet is completed. In order to learn more about the complex technology that Iranian women have employed to create Persian carpets, I visited *Torajomehrab* workshops in Kashan and interviewed the women weavers. Mr. Vajedi, who is an entrepreneur known in the town for his philanthropic activities and for providing no-interest loans (*qard-al-hasan*)⁵⁵⁴ to low-income people, established *Tornajmehrab* carpet weaving workshops in partnership with his friends in 2007 with the aim of creating jobs for women who possess the highly valuable weaving skills and yet are unemployed and have no income. Instead of receiving charity, the women are offered a job so that they can benefit both from the economic gains and the desirable work environment where they weave alongside their colleagues. After taking the big order for the holy shrines’ carpets,

⁵⁵³ “Standardizing Women Weavers’ Productions in Nine Provinces: 82% of Weavers Are Female” *Islamic Republic News Agency (IRNA)* (27 July 2015), [original in Farsi] <www.irna.ir/news/81696984>.

⁵⁵⁴ Qard al-hasan, which means benevolent loan, is a form of interest-free loan that is extended by a lender to a borrower on the basis of benevolence (ihsan). From a sharia point of view, qard al-hasan involves a facility granted only for the sake of tabarru’ (donation) for a specified period of time. At the end of that period, the face value of the loan (asl al-qard) with no interest is to be paid off. For more information, see “Glossary of Islamic Finance” in Noripah Kamso and Tsu Mae Ng, eds, *Investing in Islamic Funds: A Practitioner’s Perspective* (John Wiley & Sons Singapore Pte.Ltd., 2013) 215–234 at 227.

known as *Atabat Al-Aliyat*,⁵⁵⁵ the number of Torajomehrab workshops was increased to five, and at the peak of the project, there were 1400 women employed from all age groups, with daughters, mothers and even grandmothers working together on the same loom.⁵⁵⁶

Predominantly performed by women, weaving is one of the oldest forms of creative labor, the product of which reflects events, emotions, and desires.⁵⁵⁷ By creating carpets, women weavers not only construct and preserve their communities' identity, they also transmit and perpetuate the cultural heritage that makes this identity unique. Despite their bold presence in the carpet production, however, women are often overlooked in policy discussions around legal protection and economics of carpet. One of the themes that emerged from my interviews with the weavers was that weavers have never received the recognition and monetary compensation that they truly deserve. Women have far less involvement in the marketing and trading of the final product they produce. The presence of women becomes less evident as we move up the carpet value chain. According to Ms. Fallah, one of the participants, women have woven for years and generated wealth for others.⁵⁵⁸ Her words stuck in my mind and I remembered them when I was travelling in Morocco. On one of the tours, I visited a home weaving workshop in a village. An elderly woman was quietly sitting behind a loom, weaving, while a man standing beside the loom with his hands on his hips (a power gesture), was confidently explaining the weaving process as a part of his sale pitch for the rugs. Although it is also the case for Persian carpets, that it is the carpet merchants at the bazaar who exchange the wealth that women weavers create, the scene that I

⁵⁵⁵ Atabat Al-Aliyat is the phrase referring to the holy shrines of six Shia Imams, which are located in four cities of Iraq.

⁵⁵⁶ Although the project had been a huge success, by the time of my interviews (October 2017), unfortunately only two of the workshops were functional and the number of weavers had decreased to only 80 due to the harsh economic conditions in the country.

⁵⁵⁷ For more details about the history of weaving, see Clinton G. Gilroy, *The Art of Weaving by Hand and by Power: With an Introductory Account of Its Rise and Progress in Ancient and Modern Times* (Baldwin, 1844).

⁵⁵⁸ Interview No. 14, Interview by Ghazaleh Jerban, 14 October 2017, Kashan.

described was a neat frame showing the sharp contrast of how wealth is created silently and humbly by women and exchanged confidently by men. This chapter sheds light on women weavers' TK-based contribution in handwoven carpet production and calls for recognizing and protecting their TK in the IP regime as a means of acknowledging and respecting their agency.

4.2 Persian Carpets: A History of Resilience

Persian carpets are art objects, crafts, and commodities. In fact, a Persian carpet is “an in-between object, not entirely defined by art, crafts, or the world of commodities.”⁵⁵⁹ As Moallem writes:

The concept of art in Farsi has a more extensive meaning, including knowledge, science, perfection, bravery, virtue, and wisdom. The carpet combines all these ideas going beyond the separation of art, craft, and commodity.⁵⁶⁰

Given the complexity of Persian carpets as an object of study, an overview of their history helps to elucidate the cultural context of their production. The association of the words “Persian/Iranian”⁵⁶¹ and “carpet” is deep-rooted with a history as long as Persia itself.⁵⁶² Carpets and carpet weaving have been part of Iranian life and culture for at least two and a half millennia.⁵⁶³ From the museums to the halls of the United Nations Headquarters in New York City, Persian carpets are a prestigious symbol of Iranian culture.

⁵⁵⁹ Moallem, *Persian Carpets*, *supra* note 4 at 8.

⁵⁶⁰ Moallem, *Persian Carpets*, *supra* note 4 at 10.

⁵⁶¹ The terms *Iranian* and *Persian* are often used interchangeably. The name “Persian carpet” was given to carpets produced in Iran in the nineteenth century, associating them with the Persian empire. Moallem, *Persian Carpets*, *supra* note 4 at 22. “Persia” is derived from the ancient kingdom of Pars and the Persian Empire was the official name of Iran prior to 1935. For more information, see Ehsan Yarshater, “Communication” (1989) 22:1 *Iranian Studies* 62 where he examines the question of Persia or Iran, Persian or Farsi?

⁵⁶² The term “oriental” has also been used in the North American parlance with reference to carpets and rugs. Generalizing the Persian carpet as “Oriental” is problematic as the term “oriental” refers to a much wider number of origin countries in addition to Iran. As will be discussed in the text, Iranian carpets have historically been distinguished for their quality, material, design, weaving techniques, density of knots, etc.

⁵⁶³ Iran National Carpet Centre, *The Persian Carpet: Heritage, Craft, Design* (Tehran: Hali Publication Ltd, n.d) at 7.

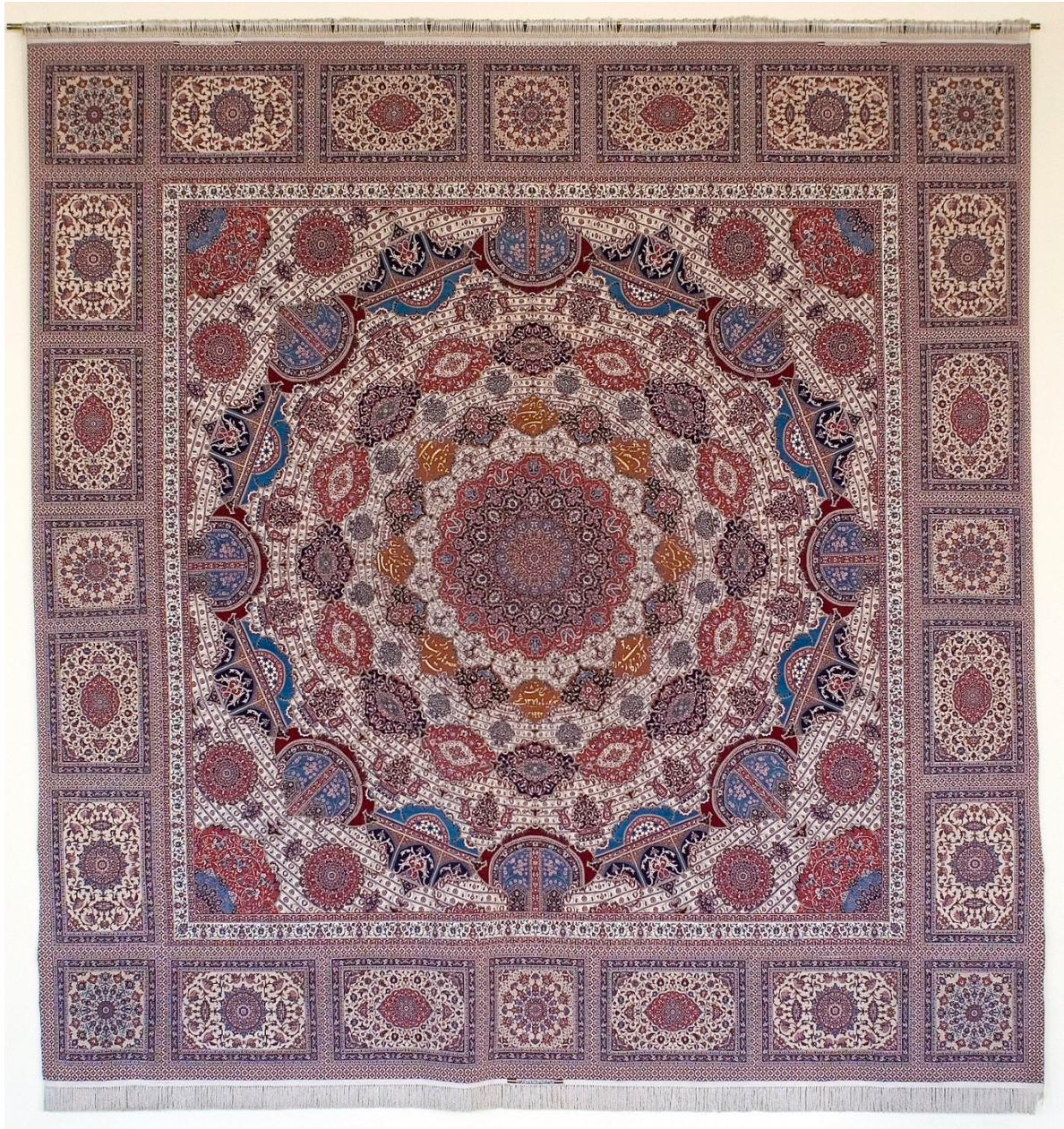


Figure 4
Handwoven Persian carpet gift from Iran to UN
Honoring UN Year of Dialogue among Civilizations⁵⁶⁴
Photo credit: United Nations

⁵⁶⁴ Handwoven carpets have also been used as a site of diplomacy. In the middle of the carpet, a famous Poem [by Saadi, Classical Persian Poet (c. 1184-1292)] is woven. Translated from Persian, it reads as follows:
“All human beings are members of one frame
Since all, at first, from the same essence came.
When time afflicts a limb with pain
The other limbs cannot at rest remain
If thou feel not for other’s misery
A human being is no name for thee”

Many of the great historic Persian carpets can be seen in museums around the world, evidence of the high regard in which these masterworks are held.⁵⁶⁵ The oldest surviving complete handwoven carpet known today belongs to 800-364 BCE (Figure 5) when Persia was ruled by Medes, followed by the Achaemenid Empire founded by Cyrus the Great.⁵⁶⁶



Figure 5
The oldest surviving complete handwoven carpet known today
Origin probably Luristan, carbon-14 dated to 800–364 BCE, private collection, Geneva
Photo credit: Jeff Spurr⁵⁶⁷

While handwoven carpets have been an object of trade between Iran and the West since the sixteenth century, it was not until the late nineteenth century that the Persian carpet became a mass-produced commodity and major export to the West.⁵⁶⁸ According to Helfgott, the author of one of

⁵⁶⁵ For a list of the world's best museums for Persian carpets, see Iran National Carpet Centre, *The Persian Carpet*, *supra* note 563 at 14–15.

⁵⁶⁶ Iran National Carpet Centre, *The Persian Carpet*, *supra* note 563 at 8. Persian-carpet connoisseur books link the history of the handwoven carpets to the history of Persia, and even before the time of Cyrus the Great of the Achaemenid Empire (600–530 BC). See Fabio Formenton, *Oriental Rugs and Carpets* (London: The Hamlyn Publishing Group, 1972).

⁵⁶⁷ Michael Franses, “Early Carpets and Flatweaves” (2016) 24:2 “View from the Fringe,” Newsletter of the New England Carpet Society, at 9.

⁵⁶⁸ Leonard Helfgott, *Ties That Bind, Social History of the Iranian Carpet* (Washington, DC: Smithsonian Institution Press, 1994) at 275.

the most comprehensive studies of Persian carpets, “In the thirty-year period between 1873 and 1914, handknotted carpets evolved from luxury furnishings for the very wealthy to mass-produced.”⁵⁶⁹

Before this period, in the early nineteenth century, the aspiration to own a Persian carpet was accompanied with the desire to produce it in Europe with new technological developments. Therefore, with the invention of the power loom in Europe, Persian carpets were copied by European countries like England to replace handwoven Persian carpets through mass-produced machine-made carpets.⁵⁷⁰ Kidderminster in England was the center of British carpet industry in the eighteenth and nineteenth centuries.⁵⁷¹ In 1826, on the occasion of the visit of the Duke of York, Kidderminster’s workers showed him their imitation of the famous Ardebil carpet (a stunning handmade carpet from the Iranian Safavid era)⁵⁷² that they made using power looms.⁵⁷³ Impressed by the beauty of the Ardebil carpet, in his Town Hall speech, the Duke observed:

After what you have shown me, I am at a loss to understand why the public are inclined to prefer ... Oriental carpets when they can obtain such beautiful ones made by British labor: and I assure you that I shall do everything in my power to draw attention to your magnificent production.⁵⁷⁴

Despite his aspiration, the British machine-made carpet industry did not last,⁵⁷⁵ and in its place a new chapter in Persian carpet history began. As a result, handwoven Persian carpets, even before

⁵⁶⁹ Helfgott, *Ties That Bind*, *supra* note 568 at 15.

⁵⁷⁰ Moallem, *Persian Carpets*, *supra* note 4 at 35.

⁵⁷¹ Moallem, *Persian Carpets*, *supra* note 4 at 75.

⁵⁷² For more detail about the Ardabil carpet, see Iran National Carpet Centre, *The Persian Carpet*, *supra* note 563 at 25.

⁵⁷³ Moallem, *Persian Carpets*, *supra* note 4 at 76.

⁵⁷⁴ Souvenir brochure of the Royal Visit to Tomkinson and Adam’s Works, reprinted from *Furnishing Traders, Kidderminster*, 1926 cited in Moallem, *Persian Carpets*, *supra* note 4 at 76.

⁵⁷⁵ For more details about the weavers’ strikes in England in the early nineteenth century, see Melvyn Thompson, *Woven in Kidderminster* (Kidderminster: David Voice Associates, 2000).

the exploration and colonization of oil,⁵⁷⁶ became major export products due to their quality and popularity in Europe.⁵⁷⁷

Subsequently, some British companies settled in Tabriz, Arak, Isfahan, and Kashan and started to produce handmade carpets in various parts of Iran.⁵⁷⁸ The establishment of the carpet empire, under British protection, changed the nature of carpet production in Iran in significant ways. The dyeing process changed radically with the importation of chemical dyes from Europe to Iran.⁵⁷⁹ The replacement of vegetal dyes with low-quality, cheaper, and toxic chemical dyes facilitated the mass production of handwoven carpets, creating space for European firms to take control of the carpet industry. This took place rapidly, since synthetic dyes made Western countries independent of expensive tropical plants while Iranian labor became more dependent on the European import.⁵⁸⁰ The profit made from these foreign-owned businesses was repatriated from Iran and was not injected back into the country's economy.⁵⁸¹ Moreover, sometimes complying with the European taste meant that weavers had to change their old recognized patterns to

⁵⁷⁶ The Cambridge History of Iran, *supra* note 4. Moallem, *Persian Carpets*, *supra* note 4 at 82.

⁵⁷⁷ Handwoven carpets have long constituted a significant part of Iran's exports in the non-petroleum sector and hence play a major role in the country's economy. According to the country's official statistics, the export value of handwoven carpets was US\$426.2 million in the one-year period ending in March 2018. Iran National Carpet Centre, Ministry of Industry, Mine and Trade, <<https://bit.ly/2E1l3fE> <https://bit.ly/2EoE8cZ>>. According to the official statistics acquired from IRICA (Islamic Republic of Iran Customs Administration), the value of non-petroleum exports for the same period was US\$47.0 billion. This means that handwoven carpet exports constitute about 1% of the country's non-petroleum exports. According to the official statistics, however, the share of handwoven carpets in non-petroleum exports has declined in the last two decades, constituting 7.5% of non-petroleum exports in 2004. This figure was 17.5% in 1999. See Saeed Shojaei, "Iran's Handwoven Carpet: Prospects, Challenges and Strategist for Ending Recession", (2017) Islamic Parliament Research Center of Iran, at 8, [original in Farsi] <http://rc.majlis.ir/fa/mrc_report/show/1005224>.

⁵⁷⁸ These businesses included Ziegler and Co.; The Persian Carpet Manufacturing Co, a subsidiary of Hotz; and The Oriental Carpet Manufacturers Ltd, (O.C.M.). Also, some smaller British firms, including Gray, Paul and Co.; Lynch Bros Trading; and The Persian Gulf Trading Co., established carpet manufacturing in various parts of Iran, especially Tabriz, Sultanabad (currently Arak), and Isfahan. Denis Wright, *The English Amongst the Persians: During the Qajar Period 1787–1921* (Galway, Ireland: MW Books, 1977) at 99–100.

⁵⁷⁹ Wright, *The English Amongst*, *supra* note 578 at 101.

⁵⁸⁰ Nicolas Fokker, *Persian and Other Oriental Carpets for Today* (London: Lewis, Allen and Unwin, 1973) at 32.

⁵⁸¹ A. Seyf, "Carpet Manufacturers of Iran in the Nineteenth Century," (1990) 26:2 Middle Eastern Studies 204 at 208.

accommodate European designs, which could impair Persian carpets' harmony. According to a carpet connoisseur:

They [Messrs Ziegler and Company] keep them [the weavers] gradually employed, but one condition is that they shall not give rein to their tastes, but like machines, they shall continually reproduce the designs which are found to meet the prevailing fashion in Europe.⁵⁸²

This process separated the weavers from their product and turned them into a carpet-producing machine where there was no room for expressing their creativity and their cultural heritage, aspects that are integral to women weavers' work as producers of carpets.

The resilience of the carpet production in Iran, despite its uneasy history with the West, illustrates how deeply carpets are woven into the fabric of Iranian society and culture. In fact, Persian carpets have been a vital part of the country's economy and cultural heritage. As a hugely diverse country composed of a large number of different ethnic and tribal groups, there is a variety of Persian carpet types belonging to different cities, towns, and villages in Iran. To this level of diversity, add the various methods used in each step of carpet production – from processing raw material, drawing designs, preparing tools, weaving and finishing – and the result will be numerous variations of Persian carpets, each with specific characteristics. In other words, similar to a nation's language that can be spoken with many different regional accents, Iranian carpets from across the country have their own unique characteristics and are usually named after the city or the region in which they are made. Among the most popular are Tabriz, Kashan, Naeen, Sarough, Qom, Isfahan, Mashhad and Kerman.

⁵⁸² Samuel G.W. Benjamin, *Persia and the Persians* (London: London J. Murray, 1887) at 423, cited in Seyf, "Carpet Manufacturers," *supra* note 581 at 207.

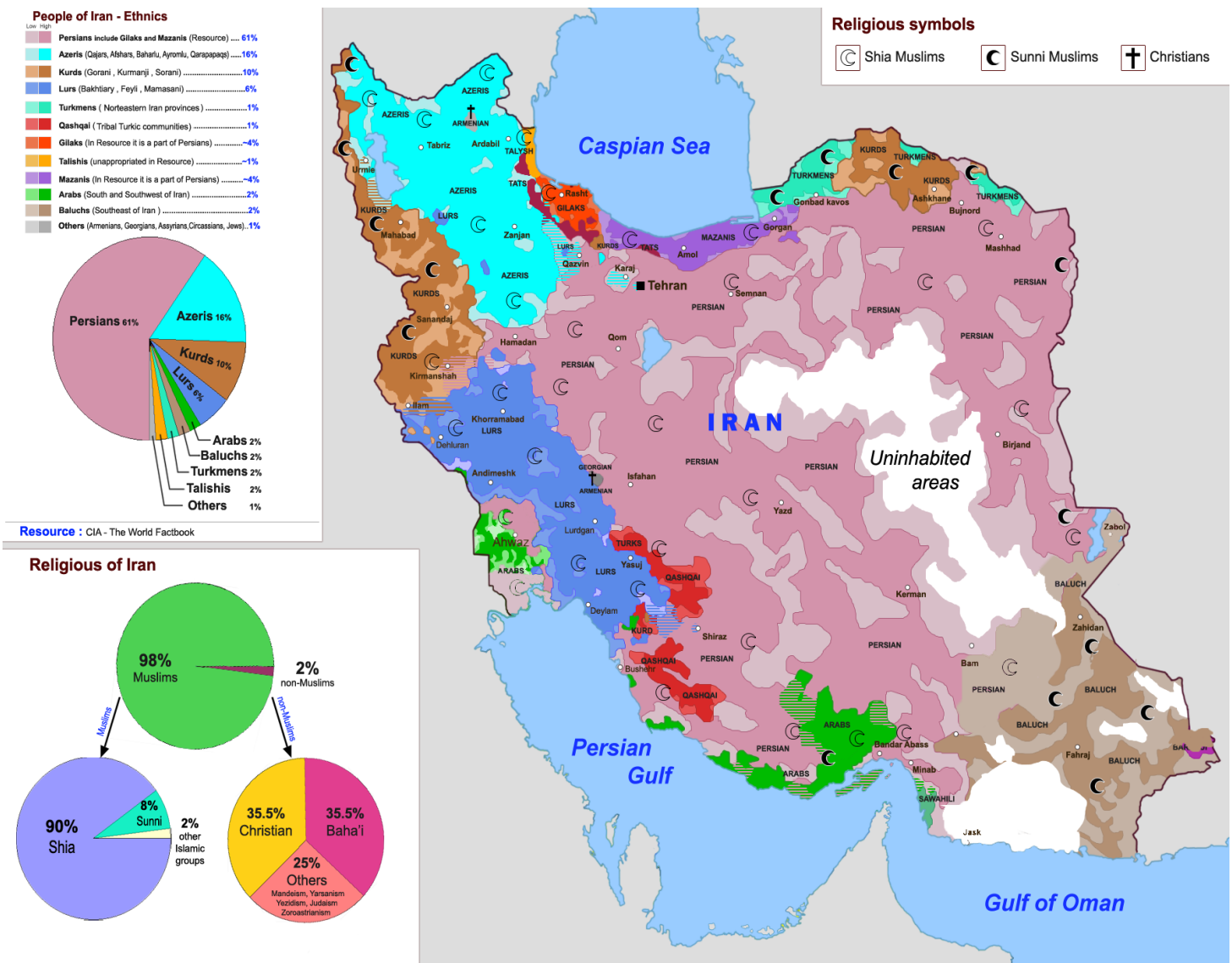


Figure 6
Iran ethnic and religious diversity
Source: Wikipedia based on CIA, The World Factbook

4.3 Carpet is More than Flooring: A Site of Cultural Expression through Collective Traditional Knowledge

In Iran, weaving carpet is much more than a practical necessity. Persian carpets are not only flooring material; rather, they constitute an important part of Iranian identity. It is said that Persian carpets are the second flag of the country. Examining the cultural context of carpet

production, rather than viewing handwoven carpets in isolation, expands the understanding of its place in women weavers' cultural identity.

Generally speaking, there have been four types of Persian carpet production, including: (a) nomadic, (b) cottage (rural), (c) workshops (town), and (d) royal carpets.⁵⁸³ All of Iran's four different types of carpet production have their own personalities but equally share certain primary aspects such as weaving, design, materials, and aesthetics. This gives Iranian carpets a unified and easily recognizable character, whether they are made in city workshops or woven by nomads in their tents. Every part of the handwoven Persian carpet creation process – from shearing the sheep, dyeing the wool, and creating the yarn, to weaving the fibres, washing the carpet, and finishing the carpet – is done through traditional methods. Persian carpets are usually named for the town or province in which they were made, and each has distinguishing features, depending on conditions such as culture of the region, traditions and rituals, type of usage, material, weaving styles, designs and patterns, dying and colours used, weaving tools, and climatic and geographical conditions. As such, Persian carpets appear as an endless ocean encompassing every aspect of Iranian people's life from weddings and funerals to religious and national ceremonies. Therefore, it would be impossible to examine all aspects of Persian carpets in this thesis. I instead provide a general overview of the carpet production context that is common among the most popular carpet weaving regions in Iran, to lay the ground for the legal issues around women weavers' TK.

Persian carpets have been prominently depicted in literature, art, and music for thousands of years. Reciprocally, depictions of ancient stories and famous historic scenes are woven into carpets. Carpet and carpet weaving have been woven into folk culture as well. One prominent example is the practice of *naqshekhāni*, which is reading the design plate. *Naqshekhāni* involves

⁵⁸³ See Seyed Mohammad Mehdi Mirza-amini, "Examining Various styles of Iranian Carpet and Each Region's Characteristics" (2013) 2 Pajoohesh Honar 89, [original in Farsi].

a form of folk songs where the knotting sequence and their colours are called out in a rhythmic way like singing a song. There is also an array of songs recited by carpet weavers during their work.⁵⁸⁴ These work songs⁵⁸⁵ create a nice atmosphere during the weaving, and their content is usually about encouraging to weave faster, or is about the feelings and desires of weavers.⁵⁸⁶ A study shows that lullabies and songs entailing religious beliefs comprise the majority of the work songs recited by weavers.⁵⁸⁷ Women weavers have used work songs to share their deepest concerns and most heartfelt needs, both as consumers and as creators of the songs. These traditional work songs are deeply woven into the meanings and manners of the everyday life of carpet weavers as young girls, wives, and mothers where they share their love stories and complain about their life's challenges and poverty. One of the functions of these songs is to transfer the ethnic culture to the next generation, which creates a sense of belonging to a specific culture.⁵⁸⁸ Most of the women that I interviewed said that they have heard such songs from their mothers and grandmothers, but only a few of them were able to remember and recite some pieces of those songs. Unfortunately, the carpet folklore songs are in danger of disappearing due to the fact that carpet weaving itself is becoming less and less common.⁵⁸⁹ With the work songs being forgotten, a factor which used to shape and strengthen the common identity among carpet weavers is being lost.

⁵⁸⁴ Bahareh Barati et al, *Examining the Content of Women's Carpet Weaving Work Songs* (Tehran: Saman Danesh, 2013), [original in Farsi].

⁵⁸⁵ A work song is a piece of music closely connected to a form of work, either sung while conducting a task (usually to coordinate timing) or a song linked to a task which might be a connected narrative, description, or protest song. For more details, see Ted Gioia, *Work Songs* (Durham: Duke University Press, 2006).

⁵⁸⁶ Hadi Sharafi and Amir-Hossein Chitsazian, *Songs and Folkloric Lyrics of Carpet Weavers* (Tehran: Iran National Carpet Centre, 2007), [original in Farsi].

⁵⁸⁷ Afsaneh Ghani, "Classifying Carpet Weaving Songs in Chaleshtor" (2018) 6:23 Bimonthly Journal of Culture and Folklore 183 at 184, [original in Farsi].

⁵⁸⁸ Ghani, "Classifying Carpet," *supra* note 587 at 187.

⁵⁸⁹ Ghani, "Classifying Carpet," *supra* note 587 at 185, 189.

In addition to carpet work songs, there is also an array of rituals associated with carpet weaving.⁵⁹⁰ Carpet cutting (*Qāli-borān*), for example, is the ritual of descending the carpet from the loom.⁵⁹¹ It is a traditional ceremony for celebrating the completion of weaving a carpet. When the weaving is complete, the carpet is cut off the loom and washed with water. Traditionally, it would have been taken to a local stream and washed in the stream, a practice still followed by the nomadic tribes. There are special customs to bring the carpet down from the loom once weaving is completed after months of intensive labour. It involves giving thanks to God and prayers for abundance. According to the customs, weavers try to bring the carpet down in happy days of the year or on a Friday, which is a blissful day in the Islamic calendar. Weavers avoid beginning a new carpet or finishing a carpet during the sad observances. The ceremony usually involves inviting friends and families and serving food. The bigger the size of the carpet, the more serious and merrier the celebration becomes. People recite prayers and special songs. Everyone who has a wish, including young girls wishing to marry, or married women desiring a baby, hold the scissors with which the carpet will be cut and ask God to fulfill their wish. It is believed that, since the weavers have put so much positive energy and love into the weaving, the carpet has become a source of abundance. The weavers usually receive gifts from their husbands and friends as a courtesy for their prolonged efforts. Once the carpet is cut and off the loom, the discarded warps are released in a creek. The tradition goes back 300 years and demonstrates the historical, social, and cultural aspects of carpet weaving among the communities.⁵⁹² Unfortunately, in the face of

⁵⁹⁰ *Farsh-e bad*, which is a film from director Kamal Tabrizi (made in 2003), is an ethnographic movie that depicts the process of carpet weaving, and all the rituals before and after a carpet is woven. *Farsh-e bad*, Directed by Kamal Tabrizi. Tehran, 2003.

⁵⁹¹ Ahmad Daneshgar, *Iran's Carpet Encyclopedia* (Tehran: Commercial Print and Publications Company, 2011), [original in Farsi].

⁵⁹² Daneshgar, *Iran's Carpet*, *supra* note 591.

modernity and its hegemonic impact on traditional lifestyles, the tradition is not practiced as in the past for several reasons. First, the carpet weaving itself has become less common among women in the younger generation, and second, carpet training methods have shifted toward formal institutionalized methods⁵⁹³ where the nuanced cultural aspects are not necessarily incorporated in the carpet production processes. As a result, the next generations of women weavers are losing the chance of learning and passing on these aspects of their cultural heritage. The Iranian Cultural Heritage, Handcraft and Tourism Organization has put on its agenda to revive the traditions that are in danger of becoming forgotten.⁵⁹⁴ However, with carpet weaving itself becoming less common, it is not clear how the associated customs and traditions will be preserved.

4.3.1 Designs of Persian Carpets: Dream of Paradise⁵⁹⁵

The carpet weaving process starts with a design. Some weavers use established designs; some create their own. The latter method entails weaving from memory or what is called *zehni-bāft*. In this case, the carpet loom is like a painting canvas on which the weaver either creates her original design or weaves from memory without a design plate in front of her.⁵⁹⁶ The artistic value of such carpets is very high as a unique design originates from the mind of the weaver and reflects the personalities of the weavers. This method is more common in nomadic carpets, and the specific patterns are part of the family or tribal tradition.⁵⁹⁷ *Zehni-bāft* carpet weavers tell their stories in

⁵⁹³ See section 4.5.1 where the formal methods of training are examined.

⁵⁹⁴ Afsaneh Arvand, "Qaliboran Ceremony in Khomein" *Islamic Republic News Agency (IRNA)* (30 July 2016), [original in Farsi] <www.irna.ir/news/82168866/>.

⁵⁹⁵ For works examining the symbolism of Paradise in Persian carpet, see e.g. Mahnaz Shayestehfar and Tayebe Sabaghpour, "Reflection of Paradise in Qajar Carpets Based on Islamic Resources: With a Focus on Samples from National Carpet Museum of Iran" (2009) 136 *Ketab-mah Honar* 40, [original in Farsi]. See also Walter Denny, *How to Read Islamic Carpets* (New York: Metropolitan Museum of Art, 2014) at 118. An example of the Paradisiacal imagery can be seen in the Anhalt Carpet that is from Iran and belongs to the first half 16th century. The Carpet is currently held at the Metropolitan Museum and consists of the repetition of images of peacocks. The birds have long been identified with Paradise in Islamic art.

⁵⁹⁶ For more details, see Touraj Jouleh, *A Research on Iran's Carpet* (Tehran: Yasavoli, 2002) at 21–51.

⁵⁹⁷ Jon Thompson, *Carpet Magic: The Art of Carpets from the Tents, Cottages, and Workshops of Asia*, Barbican Art Gallery at 6, 11.

every knot through selection of symbols and motifs. For this reason, such carpets may have a less uniform and complex design than their village and city counterparts, which of course is an indication of their authenticity. In fact, as Brian Spooner notes, authenticity resides not in the carpet itself but in the relationship between carpet and weaver.⁵⁹⁸ The second method is weaving from a sketch, called *naqsheh*, in which the design phase is independent from the weaving phase.⁵⁹⁹



Figure 7
Carpet designers painting the carpet designs
Photo credit Fatemeh Abedi, Fars News Agency

Once the sketch is ready, the weaver follows the patterns as they are drawn by hand by a designer (*naqqāsh*) who carefully draws the patterns to scale in the proper colours on graph paper. The resulting design plan is called a cartoon. Once completed, the cartoon is cut into horizontal sections (design plates) that can be conveniently placed on the loom in front of the weaver where she reads it like a sheet of music and weaves the carpet.

⁵⁹⁸ Brian Spooner, “Weavers and Dealers: The Authenticity of an Oriental Carpet” in Arjun Appadurai, ed, *The Social Life of Things* (Cambridge University Press, 1986) 195–235 at 223.

⁵⁹⁹ For more details, see Jouleh, *A Research*, *supra* note 596 at 21–51.



Figure 8



Figure 9

In the past, the cartoons were attached to a piece of wood but today they are laminated.
 Left: pieces of old wooden cartoons used to decorate a wall. Right: pieces of laminated cartoons used by weavers
 Photo credit Ghazaleh Jerban, Kashan, 2019

Symbolism is widely used in designing Persian carpets. In fact, pattern and colours have meanings.⁶⁰⁰ All these patterns charged with significance can only be understood by reference to the culture of those that use them. Weavers and designers have used symbols to communicate and convey ideas and information from one generation to the other.⁶⁰¹ They include their emotions and thoughts during the creation process using colours, symbols, and motifs as mediums to express their ideas. The symbols are selected not only for aesthetic reasons, but are also influenced by factors in the weaver's or designer's personal life, culture, and religion.⁶⁰² For example, a type of handwoven carpet known as Lion Rugs is woven by tribal women in Fars province as a tribute to their men and celebration of acts of bravery (or perhaps as a means of inciting them to such noble

⁶⁰⁰ See generally, Seyed Jalaedin Bassam, *Paradis Dream: The Art of Carpet Weaving* (Tehran: Sazmane Etkā, 2004), [original in Farsi].

⁶⁰¹ Thompson, *Carpet Magic*, *supra* note 597 at 6, 11.

⁶⁰² See e.g. Parviz Tanovoli, *Shahsavan: Iranian Rugs and Textiles* (New York: Rizzoli, 1985) at 45–62.

acts). According to Parviz Tanavoli, these rugs are in fact a “faithful and complete reflection of the women weavers themselves.”⁶⁰³ He believes that although some of the ferocious lions depicted have more masculine qualities, the delicacy that has gone into the designs and colouring of the floral motifs in these rugs is truly feminine.⁶⁰⁴

One of the common elements used in Persian carpet designs is circular medallion or *Shamseh*, which is also known as *Khorshid Khanoom* meaning Lady Sun.⁶⁰⁵ The Khorshid-Khanoom is a symbol of power with mercy and grace.⁶⁰⁶ This element is a mixture of two components: the Sun and a feminine face. Since Sun gives light, warmth, and life, it was worshiped as God in the past. At the Achaemenian period, during which the common religion was Zoroastrianism, the Sun appeared on ancient flags representing the light of Ahura Mazda.⁶⁰⁷ The Sun kept its significance in Iranian culture even after the Islamic conquest, as in the Islamic culture the Sun has an important position to the extent that there is a chapter (*Surah*) in Quran called “Shams” meaning the Sun. On the other hand, a woman was also known as the source of power, life, and fertility in the ancient Iran.⁶⁰⁸ Mixing the two images of the Sun and woman due to their

⁶⁰³ Parviz Tanavoli, “A Collector’s Memoir” (2016) 188 Hali 79 at 76–80. Parviz Tanavoli is a renowned Iranian sculptor, painter, scholar and art collector and has written various books on Persian carpets, one of which specifically examines lion rugs. Parviz Tanavoli, *Lion Rugs: The Lion in the Art and Culture of Iran* (New York: Basel, 1985).

⁶⁰⁴ Tanavoli, “A Collector’s Memoir,” *supra* note 603 at 70–80.

⁶⁰⁵ Mohammadreza Shahparvari and Seyed Mohammad Mehdi Mirza Amini, “Manifestation of *Khorshid-Khanoom* in Persian Carpets”, (2015) 15 Art Manifest 55, [original in Farsi].

⁶⁰⁶ Ramoona Mohammadi, “Sun Imagery in Islamic Art” (2008) 2 Naghsamayeh 51 at 54. See also Shahparvari and Mirza Amini, “Manifestation of,” *supra* note 605 at 59, [original in Farsi].

⁶⁰⁷ See Mehrdad Izadpanah, *An Introduction to Zoroastrianism* (Tehran: Mehvar, 2002), [original in Farsi]. Ahura Mazda is the creator and highest deity of Zoroastrianism.

⁶⁰⁸ For the importance of women in Iranian Culture and Mysticism see Izadpanah, *An Introduction*, *supra* note 607 at 127–28. Mohsen Jahangiri, “Women in the Eye of Ibn Arabi” (2005) 65 Baztab-e-Andisheh 116, [original in Farsi]. Mohsen Salehi, “The Women Entry” in *The Shia Encyclopedia*, vol. 8 (Tehran: Nashre Shaid Saeed Mohebi: 2000) at 494–97, [original in Farsi].

similar attributes has happened from the early age as can be seen in archeological findings from Iran belonging to 1000-1200 B.C.⁶⁰⁹



Figure 10
Part of an Isfahan carpet belonging to 1898
Photo credit Mohammadreza Shahparvari and Seyed Mohammad Mehdi Mirza Amin

Animal figures are another common elements in Persian carpets, especially in the nomadic carpets. For example, a camel can be seen in the Northern Khorasan rugs where this animal is used for carrying cargo. A study shows that in the past, the robe for the first camel in the caravan was usually given to the most powerful girl in the tribe.⁶¹⁰ According to the tribal culture of this region, women should work alongside men and participate in daily chores and the most powerful girl of the tribe is the best wife.⁶¹¹ Subsequently the young girls of the region desired to be known as the most powerful girl of the tribe and therefore imagined themselves holding the robe of the first

⁶⁰⁹ Andre Godard, *The Art of Iran*, translated by Behrouz Habibi, 3rd ed (Tehran: Shahid Beheshti University, 1998) at 63.

⁶¹⁰ Dariush Kazempour and Mohsen Soleimani, "A Study of Patterns Used in Northern Khorasan's Carpet and Their Usage in Designing Signs" (2012) 21 Scientific Association of Iran's Carpet Periodical 45 at 52, 54, [original in Farsi].

⁶¹¹ Kazempour and Soleimani, "A Study of Patterns," *supra* note 610 at 52, 54.

camel in the caravan while weaving the carpet. This explains the fact that in all of the carpets from this region depicting camel caravans, there is always a female holding the robe of the first camel as they reflect the desire of their weavers.⁶¹²

4.3.2 Traditional Practices and Know-how

Handwoven carpet production is comprised of various steps. Women have an active presence in each and every step from raw material processing to weaving. Each step involves traditional practices requiring technical expertise. The following two parts examines the traditional practices that are used for raw material processing and weaving with a focus on women's role in these processes.

4.3.2.1 Traditional Practices in Carpet Material Production

For centuries, Persian carpet weaving has depended primarily on local materials processed by traditional techniques. The basic raw materials for carpets are natural fibres. They are woven with wool, silk, and cotton that are locally sourced. There is also a type of silken thread that is a combination of silk and gold and/or silver threads named “*golābētun*”, which is used in luxurious carpets.⁶¹³

⁶¹² Kazempour and Soleimani, “A Study of Patterns,” *supra* note 610 at 52, 54.

⁶¹³ Maurice Sven Dimand and Jean Mailey, *Oriental Rugs in the Metropolitan Museum of Art* (New York: New York Graphic Society, 1973) at 2, 59.



Figure 11
The portraits of the Secretary-Generals of the UN rendered as woven silk carpets. Gift from Iran.
United Nations' Headquarters. Photo taken during Ghazaleh Jerban's UN internship in 2016.

The materials used to weave carpets can vary widely depending on the area in which they are woven simply because in an ecologically diverse country like Iran the availability of raw material differs in each area. For example, a wool base is indicative of a tribal or nomadic carpet as wool is an accessible resource to nomads, whereas cotton and silk is a resource that requires farming and is commonly used in the villages and towns. Weavers also choose the material and design based on the budget and the function of the carpet.

One of the basic raw materials for carpet production is sheep's wool. The finest qualities of wool are obtained from sheep reared primarily for this fibre. After centuries of artificial selection by the local people, domestic sheep now have longer wool than their ancestors, which can be easily spun.⁶¹⁴ Breeding of sheep from their prehistoric forebearers to the pure and domestic breeds is an excellent example demonstrating the role that the Iranian local people have played in modifying and conserving genetic resources and passing the associated TK between the generations.⁶¹⁵ With

⁶¹⁴ Iran National Carpet Centre, *Rug and Carpets Raw Material* (Tehran: INCC, n.d) at 14.

⁶¹⁵ For a list of Iranian sheep breeds, see Iran National Carpet Centre, *Rug and Carpets*, *supra* note 614 at 10–13.

sheep husbandry being common all around Iran, different breeds of sheep are raised in different parts of the country.⁶¹⁶ Accordingly, the wool output of these breeds and their characteristics, such as delicacy and thickness, length, strength, smoothness, natural colour, quality of adaptation in the dying process and bearing of each string, varies. The knowledge of these differences is held by the local women. For example, the wool of the Khorasan breed is famous for its elegance, and it has the best dye-taking quality.⁶¹⁷ It gets its characteristics from the temperate climate, fertile lands, and, of course, from the long history of TK in sheep husbandry in the region passing from one generation to the next.⁶¹⁸

In fact, the empirical selection of animals by local people over the last centuries has resulted in an adapted animal that produces the type of raw material that can be processed using the traditional weaving technologies.⁶¹⁹ Local people have applied traditional methods to manipulate genetic composition of their livestock. These traditional methods include information, practices, and skills that are developed throughout generations. These traditional practices are informed by socially embedded customs influencing the animals' gene pool such as taboos on selling female animals outside the community or rules for passing on animals from one generation to next.⁶²⁰ Iranian local women, as the "invisible guardians",⁶²¹ play a prime role in livestock management. Women's traditional practices such as hanging sacred beads and woods around the neck of the

⁶¹⁶ Iran National Carpet Centre, *Rug and Carpets*, *supra* note 614 at 9.

⁶¹⁷ Arthur Cecil Edwards, *The Persian Carpet. A Survey of the Carpet-Weaving Industry of Persia* (London: Duckworth, 1953) at 166.

⁶¹⁸ Iran National Carpet Centre, *Rug and Carpets*, *supra* note 614 at 15.

⁶¹⁹ See generally, Somayeh Dehdari, et al, "Examining Women's Traditional Knowledge in Producing and Managing Animal Husbandry", (2017) 11:3 *Journal of Rangeland* 306, [original in Farsi].

⁶²⁰ Abdolhamid Popzan and Nashmil Afsharzadeh, "Traditional Knowledge in Identifying, Reproducing and Optimal Selection of Livestock among Nomadic Women of Kalhor Tribe", (2010) 13:4 *Village and Development Journal* 161, [original in Farsi].

⁶²¹ FAO, "Invisible Guardians: Women Manage Livestock Diversity", (2012) *Animal Production and Health Paper* No. 174.

animals and using ram designs in their carpets show the significance of these animals as providers of carpets' raw material for local women.⁶²²

Once the wool is sheared and washed and combed using traditional techniques, the next step is spinning. Traditional techniques and know-how play an important role in the quality of the fibre which distinguishes it from synthetic, chemically dyed, factory-spun fiber.⁶²³ For example, the high-grade wool used in Iranian carpets is the wool that is sheared by scissors from a live animal as opposed to wool that is cut mechanically from a dead animal.⁶²⁴ Two methods of spinning are commonly used: machine spun and hand spun. Although nowadays spinning machines are becoming widespread, the traditional methods still yield the best results because the machines make the wool thin and fragile and reduce its elasticity.⁶²⁵ According to the tradition, spinning is a female occupation where local women use a spindle, a rod used for spinning fibre into yarn (*dūk*) to twist the wool into yarn.⁶²⁶

⁶²² Popzan and Afsharzadeh, "Traditional Knowledge," *supra* note 620 at 175.

⁶²³ For more details, see Jouleh, *A Research*, *supra* note 596 at 52–60.

⁶²⁴ For more details, see Jasleen Dhamija, "Carpets ii. Raw Materials and Dyes" *Encyclopædia Iranica*, IV/8, 839–843, <<http://www.iranicaonline.org/articles/carpets-ii>>.

⁶²⁵ Iran National Carpet Centre, *Rug and Carpets*, *supra* note 614 at 18.

⁶²⁶ See e.g. Seyf, "Carpet Manufacturers," *supra* note 581 at 209 where he notes the long history of spinning by Iranian women. See also Iran National Carpet Centre, *Rug and Carpets*, *supra* note 614 at 18–19.



Figure 12
A local woman spinning fiber into yarn
Photo credit: Iran National Carpet Centre

Once the fibers (wool, silk, and cotton) are ready and spun into threads, they are dyed prior to the weaving process. In Iran, dyeing masters (*rangraz*) still dye the wool by hand using natural colours and traditional techniques. Using natural dyes in Iranian carpets upholds an ancient connection between the land, its minerals and plants, and the carpets. Persian carpets have been renowned, among many other features, for their dyes for many centuries.⁶²⁷ The Persian traditional dyeing techniques were much sought after across the world. Richard Hakluyt (an English writer known for promoting colonization through his works) asks M. Morgan Hubblethorne, who was sent to Persia, to learn the secrets of dyeing wool and silk in the Persian manner.

In Persia you shall finde carpets of course thrummed wooll, the best of the world, and excellently coloured: those cities and townes you must repaire to, and you must vse meanes to learne all the order of the dying of those thrummes, which are so died as neither raine, wine, nor yet vineger can staine: and if you may attaine to that cunning, you shall not need to feare dying of cloth: For if the colour holde in yarne and thrumme, it will holde much better in cloth.⁶²⁸

⁶²⁷ For more details, see Dhamija, “Carpets ii.,” *supra* note 624.

⁶²⁸ Richard Hakluyt, “Certaine Directions Given by M. Richard Hackluit of the Middle Temple, to M. Morgan Hubblethorne, Dier, Sent into Persia, 1579,” in Hakluyt, *Voiages, Traffiques and Discoveries of the English*

As mentioned earlier, the Persian handwoven carpet industry has suffered from the introduction of chemical dyes from Europe in the nineteenth century. Ever since, however, there have been efforts to reject the use of chemical dyes. For example, Herbert Coxon in his book *Oriental Carpets* writes: “the present Shah, Nasr Eddin, [of the Qajar dynasty] has forbidden the importation of foreign wools and dyes, and ordered that all carpets manufactured in his dominions must be made in the old recognized Persian patterns, free from European designs.”⁶²⁹

Using natural dyes through traditional techniques of dying has been one of the unique characteristics of Persian carpets pivotal to their authenticity. Compared to chemical dyes, natural dyes age beautifully. The colours become more subtle over time as they fade, yet they still retain their initial beauty. Natural dyes have mineral, plant, or animal origins. They are made from natural ingredients such as pomegranate, turmeric, acorn shells or green leaves, which are boiled in huge pots with the threads. In remote rural areas and among nomad people dyeing is done by women, who gather flowers, bark, fruit seeds and peelings, nuts, and the urine of cows and horses (for fermentation and to achieve special tints). Their skills and knowledge are passed on to their daughters and daughters-in-law.⁶³⁰ The most commonly used plant dyes are indigo (*nīl*), which is originally obtained by extracting and fermenting the leaves of the indigo plant and is used for the colour blue.⁶³¹ The expensive saffron flower is used to create rare shades of yellow.⁶³² Madder

Nation, vol.4,

<<http://www.gutenberg.org/ebooks/7769>>,

<<http://www.gutenberg.org/cache/epub/7769/pg7769-images.html>>.

⁶²⁹ Herbert Coxon, *Oriental Carpets: How They Are Made and Conveyed to Europe* (London: T. Fisher Unwin, 1884), at 56–57.

⁶³⁰ Dhamija, “Carpets ii.,” *supra* note 624.

⁶³¹ Heinrich Jacoby, “Materials Used in the Making of Carpets,” in Arthur Upham Pope et al, eds, *Survey of Persian Art* (Ashiya: SOPA, 1981) 2456–2466 at 2460.

⁶³² James Opie, “Vegetal Dyes: Iran Restores an Ancient Tradition” (1992) 3:10 *Oriental Rug Review* 26.

(*rūnās*), which is produced by boiling the dried, chunked root of the madder plant, creates a red colour.⁶³³



Figure 13
Sattari dyeing workshop, Kashan, 2017
Photo credit Ghazaleh Jerban

Dyes yield different hues, shades, and tints, depending on, for example, the age of the plant from which the dye is extracted, the season in which it is harvested, etc. Moreover, not every batch of *rūnās*, for example, creates the same colour; therefore, it takes a lot of experience and skill to produce homogenous and consistent colours, especially when the weavers run out of yarns in the middle of weaving a carpet. Any slight discrepancy in the colour of yarns will show in the carpet. The art of producing evenly dyed yarns with a variety of colours is a treasure that is in the hands of few dyeing masters whose number is decreasing.

⁶³³ The color red also is created by using insects such as the Cochineal scale *Coccus cacti*, and certain *Porphyrophora* species (Armenian and Polish cochineal). For more details, see Edwards, *The Persian Carpet*, *supra* note 617 at 33–34.



Figure 14
After days of boiling in hot pots, the threads are dried by the cool winds. Sattari workshop 2017
Photo credit Ghazaleh Jerban

4.3.2.2 Women's Traditional Practices in Weaving

All hand knotted carpets are woven on a loom (*dār-e-qāli*), the frame that holds the carpet together while it is being woven. Carpet looms are either vertical or horizontal. A horizontal loom is stacked on the ground and is common among nomad women as it can easily be dismantled and reassembled while migrating. Vertical looms, on the other hand, are found in carpet weaving workshops and homes of the rural and town weavers, as they are extremely difficult to dismantle and reassemble.



Figure 15
Horizontal loom
Photo credit Iran National Carpet Centre



Figure 16
Vertical loom
Photo credit Ghazaleh Jerban 2017

Loom preparation consists of laying the warps on the loom and is accomplished by a professional warp winder (*čhellehkašh*). Warp winding (*čhellehkašhi*) entails very accurate calculations as it provides the main frame and basis on which the carpet will be woven. Warp winders are traditionally men since the job requires heavy physical labour and working at a height, and under the current gendered perceptions in the society, men are seen as capable and women as incapable of heavy physical labour and working at a height.⁶³⁴ Any miniscule error in calculation or implementation at the warp winding stage jeopardizes the outcome of the weavers' work that usually takes months or even years to finish. Once the warp winder finishes his job, the blank canvas calls the weaver to create the carpet through her fingertips.

⁶³⁴ Shojaei, "Women in Politics," *supra* note 533 at 264. This issue is more closely examined in section 4.6 of the thesis.



Figure 17
Blank loom, ready to be woven on Toranjomehrab 2017
Photo credit Ghazaleh Jerban

Each carpet is, in fact, composed of thousands of tiny knots, which are lovingly and painstakingly woven. The quality of a handwoven carpet among other things is determined by the number of knots per square inch (KPSI), which is the number of vertical knots across one inch of carpet multiplied by the number of horizontal knots in the same area. Carpet weaving is a highly technical job and requires dedication, precision, patience, discipline, and love. The carpet-weaving sector in Iran is dominated by women, who according to the available data, comprise more than four fifths of the weavers' population in the country.⁶³⁵ The weaving comprises techniques of knotting (*gereh-zadan*), securing (*pūd-dādan*), and finishing. The basic components of the carpet are the warps (*tār*), which run from top to bottom of the carpets, and the wefts (*pūd*), which are passed from side to side alternately over and under the warps, thus binding them together to produce the foundation of the carpet.

⁶³⁵ "Standardizing Women Weavers," *supra* note 553.

One specific feature that distinguishes Iranian carpets from other types of oriental carpets is the delicate methods of weaving and the type of knots that are used. The types of knots used in Persian carpets are different from those in Turkish carpets. The Turkish knot is a symmetrical knot called a *Ghiordes or Gordes* knot. The Persian knot is an asymmetrical knot that also goes by the name *Senneh* knot. To form this knot, yarn is wrapped around one warp strand and then passed under the neighbouring warp strand and brought back to the surface. With this type of knot, a finer weave can be created. The symmetrical Turkish knot, on the other hand, is passed over two neighbouring warp strands. Each end of the yarn is then wrapped behind one warp and brought back to the surface in the middle of the two warps. The double (*jufti*) knot is another type of knot that can be seen in the carpets of the Khorasan region in Iran. This knot can be either symmetrical or asymmetrical and is usually tied over four warps making the weaving process faster.⁶³⁶

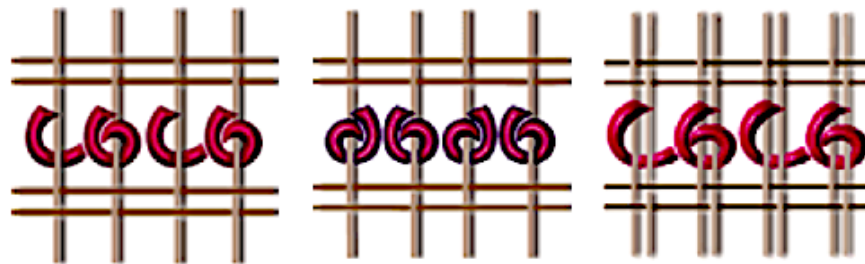


Figure 18
From left to right
Asymmetrical knot, symmetrical knot, and jufti knot
Photo credit unknown, web

In weaving Persian carpets, women use various traditional tools, which have remained similar over centuries. One of these traditional tools is the hook (*qolāb*), which is a knife-like tool with a very narrow tip. Women use this tool for three purposes: (i) separating the warp strands to tie a knot around them and then (ii) pulling out the yarn through the warp strands; and (iii) the side

⁶³⁶ Unless intentionally desired, making jufti knots is considered as cheating and in the weavers' community, it is seen as an unethical practice. In order to have legitimate (*halal*) income, weavers should avoid making jufti knots.

of the hook, which works like a knife, is used for cutting the yarn after each knot is tied. The successive rows of knots and wefts are compacted with a comb beater (*dastak* or *daftīn*,) which slides and beats down the weft between rows of knots in order to secure them before a new row is started. The preliminary trimming (*čhīdan*) of the pile, which occurs during the weaving process and before the final clipping (*pardākht*), is done through special scissors (*qeyčhī*). The complete weaving process consists of several stages, each demanding different skills.



Figure 19
From left to right: Special scissors, sharpener, fibre, hook, comb beater
Photo credit Ghazaleh Jerban

Depending on the type of material that is being used and the type of design, different levels of skills are required for weaving different carpets. For example, a silk carpet with complex design requires a highly skilled weaver. The skill level of a weaver can also show itself in the amount of the material that she uses. The more skilled the weaver, the shorter the knots she can make where the residual yarn, which is cut by scissors, is less, meaning the material is used more efficiently. Moreover, women who have higher skills can correct the mistakes that occur during weaving, for example, when an incident occurs such as the breaking of a warp thread. This is a skill set that not every weaver possesses.



Figure 20
Two examples of wraps being broken which should be fixed by a skilled weaver.
Tornajomehrab workshop, 2017
Photo credit Ghazaleh Jerban

Carpet quality is the direct result of the carpet weavers' skill. Incompetence in any of the weaving skills is reflected in the quality of the carpet and diminishes its value. For example, uneven force with which the knotted row is hit with the comb results in a waviness along the sides of the carpet when it is laid flat on the floor. Inability to follow a pattern and unevenness of pounding also result in distortions in the pattern. Incompetence in shearing the pile at an even thickness results in a fuzzy look of the pile. The level of weavers' skill depends on their experience and their seniority. In fact, there is a hierarchy among the weavers based on their level of skills. In collective workshops, the master weaver (*ostād*), who is often head of the workshop, supervises the apprentices (*shāgerd*). Promotion from the level of skilled weaver to the next, which is master weaver, is due to experience, a comprehensive skill set of weaving and fixing errors, and the ability to train and supervise other weavers. A master weaver can detect the quality of weaving by

techniques that are known only to experts. Ms. Ghadami,⁶³⁷ who is the head of one of the workshops and 80 years old, can judge the quality of the weaving by tapping the carpet and listening to the sound that it generates. She says a good woven carpet should create a sound like a drum.⁶³⁸ Another method that she uses is checking the back of the carpet where she examines the quality of the knots and wefts.



Figure 21
Back of a carpet on the loom which the master examines for a quality check
Toranjomehrab, 2017
Photo credit Ghazaleh Jerban

Weaving is a demanding job requiring multitasking and a high degree of control over hand movements. The level of skill required for the job is revealed when a person with zero weaving

⁶³⁷ As stated in Chapter 1 of the thesis, for confidentiality and anonymity the real names of the participants are replaced by pseudonyms.

⁶³⁸ Interview No. 2. Interview by Ghazaleh Jerban, 10 October 2017, Kashan.

knowledge and skill, like me, tries to make a single knot on the loom. The warps on the loom are very close to each other, such that separating the right pair for making a knot is a challenging task for a beginner. Once the right pair is selected, the next step is to make the knot. After rounds of explanation by various weavers, it took me about one minute to separate the warps and make a single knot. Compare this to less than five seconds that a weaver who is not even very skilled needs to separate the warps and make a knot. The more skilled the weaver, the faster she weaves. For a highly skilled weaver, making a single knot can require as little as three seconds. Carpet weaving requires precise calculations and, although most of the women weavers especially in older generations do not have formal training and education, their precision in calculating is admirable.

4.4 Women's Contributions with Carpets Constitute TK and TCE

Weaving is not just following the design plates; rather, it involves improvising so that the harmony and symmetry of a design can be maintained throughout the weaving. As Moallem writes:

the weaver is the one who puts the design into action, and she is indeed the one with the power to make things happen. She is positioned in a place where both the pattern and the product could be interrupted, reinvented, and transgressed.⁶³⁹

Personal creativity plays an important role in the weaving process. In fact, if two weavers are given a similar plan and material, the final products will not be the same unless they harmonize their weaving. For example, in carpets with the same design, differences will be found if one traces the delicate patterns of a carpet, where one weaver, for example, has woven a flower using mint thread while her counterpart selected to fill the space with a different flower or pattern. These artistic deviations are a hallmark of Persian handwoven carpets. In fact, weavers add their own artistic touches as they work. As a result, each carpet is a unique piece of art distinguished from the mass production in machine woven carpets. In other words, although weavers employ their collective

⁶³⁹ Moallem, *Persian Carpets*, *supra* note 4 at 95.

TK in the weaving process, even with a similar plan everyone of them still has room for exercising their individual creativity.⁶⁴⁰ As Moallem writes:

The juxtaposition of the artistic, the technical, and the mathematical in the act of weaving creates webs of connections between the past and the present, the technical and the artistic, and the collective and the individual to bring the corporeal together with something that will live for an extended period.⁶⁴¹

To date, there has been no agreement on one common definition of TK. In international debates, traditional knowledge refers to the body of knowledge resulting from intellectual activity in a traditional context and includes the know-how, skills, innovations and practices embodied in traditional lifestyles of Indigenous and local communities, which are developed, sustained and passed between generations.⁶⁴² Traditional cultural expressions (TCEs), on the other hand, refer to tangible and intangible forms in which traditional knowledge and cultures are expressed, communicated or manifested. Examples include traditional music, performances, narratives, names and symbols, designs and architectural forms.⁶⁴³ Given the existing definitions for TK, TCEs, and associated TK with GRs, each step of carpet weaving entails traditional practices that are well qualified as TK and TCEs, for example: (1) women weaver's production methods, know-how and skills as TK; (2) designs, motifs, styles, colours and other artistic expressions as TCEs; (3) the ceremonies and songs associated with carpet as TCEs; and (4) the knowledge associated with animal and plants for production of wools, fibers, and dyes. There are various case studies examining similar goods and practices in different communities around the world and how they should be protected as TK and TCEs. For example in one of its publications, WIPO examines

⁶⁴⁰ Where there is more than one weaver working on the same carpet, they weave in harmony and their work is supervised by the master to ensure consistency throughout the work. One of the participants (Ms. Fallah) showed me a video where she and her 17 colleagues were simultaneously weaving the same carpet that was ordered for the holy shrine of Ali ibn Abi Talib in Iraq.

⁶⁴¹ Moallem, *Persian Carpets*, *supra* note 4 at 143.

⁶⁴² World Intellectual Property Organization, "Glossary of Key Terms," *supra* note 1 at 40.

⁶⁴³ World Intellectual Property Organization, "Glossary of Key Terms," *supra* note 1 at 39.

basket weaving techniques, which derive from Maningrida as a case of TCE.⁶⁴⁴ Another publication by WIPO examining the issue of TK and TCEs protection puts carpets and textile under a category called “tangible expressions of folklore.”⁶⁴⁵ Similar cases include Tibetan rugs that are typically woven for prayer and other spiritual purposes,⁶⁴⁶ or Navajo weavings.⁶⁴⁷ Other traditional methods for textile production, such as the one used by Kuna people to create Mola⁶⁴⁸ or the one to create Adinkra and Kente in Ghana,⁶⁴⁹ or the one used by quilters of Gee's Bend,⁶⁵⁰ have been the subject of studies examining how such TK and TCE should be protected under the IP regime.

Iranian handwoven carpets tell a powerful story of complex know-how, skills, and practices (TK) that Iranian women have employed through using traditional tools and techniques to express their culture (TCEs). Women's weaving knowledge entails the know-how, skills, and practices that are developed, sustained, and passed between generations throughout the time. Women weavers have learned the know-how and skills from their mother through hands-on experiential learning, and as revealed in the interviews, they use similar methods to pass these techniques to the next generation of young weavers. Such knowledge is a good example of TK, as weaver's knowledge is (1) created, maintained, developed and governed in a collective context, (2) linked with the cultural identity of Iranian, and (3) passed from generation to generation.

⁶⁴⁴ Terri Janke, “Case Studies on Intellectual Property and Traditional Cultural Expressions”, (2003) WIPO Study No.1.

⁶⁴⁵ See Valsala G. Kutty, “National Experiences with the Protection of Traditional Cultural Expressions/Expressions of Folklore - India, Indonesia, the Philippines”, (2002) WIPO Study No.2.

⁶⁴⁶ See William Fisher, “The Puzzle of Traditional Knowledge”, (2018) 67 Duke Law Journal 1511.

⁶⁴⁷ For the work examining cultural appropriation of Navajo weaving, see Kathy M'Closkey, *Swept Under the Rug: A Hidden History of Navajo Weaving* (Albuquerque: University of New Mexico Press, 2002).

⁶⁴⁸ See Irma De Obaldia, “Western Intellectual Property Law and Indigenous Cultures: The Case of the Panamanian Indigenous Intellectual Property Law”, (2005) 23 Boston University International Law Journal 337.

⁶⁴⁹ See Boateng, *The Copyright*, *supra* note 125.

⁶⁵⁰ Phillips, “Commodification,” *supra* note 155.

Moreover, women's contribution with carpets is a form of traditional cultural expression. Traditional skills of carpet weaving of Iran are inscribed on the UNESCO's Representative List of the Intangible Cultural Heritage of Humanity.⁶⁵¹ UNESCO uses the term "intangible cultural heritage" in the similar meaning as the "traditional cultural expression and folklore," the definition of which is as follows:

Folklore is the totality of tradition based creations of a cultural community in so far as they reflect its cultural and social identity; its standards and values are transmitted orally, by imitation or by other means. Its forms are, among others, language, literature, music, dance, games, mythology, rituals, customs, handicrafts, architecture and other arts.⁶⁵²

In fact, weavers use their creation as a medium in which with loving detail and infinite patience they present themes drawn from various aspects of their cultural and social identity. In doing so weavers provide us with tangible artefacts that embody their intangible cultural heritage. Weavers' individual talents find expression within a collective framework where their finished product is a testimony of the specific characteristics of their community. As such the Iranian handwoven carpet is a product of both TK and TCE.

4.5 Intergenerational Transmission of Weaving Knowledge among Women

In Iranian culture, weaving has a long, historical connection to motherhood. The metaphor of mother and child was used by several participants to describe the relationship between a weaver and the carpet she weaves. For them, weaving is like giving birth to a child and witnessing its

⁶⁵¹ More specifically, traditional skills of carpet weaving in Fars and Kashan are inscribed in the list so far. <<https://ich.unesco.org/en/RL/traditional-skills-of-carpet-weaving-in-kashan-00383>>.

<<https://ich.unesco.org/en/RL/traditional-skills-of-carpet-weaving-in-fars-00382>>.

⁶⁵² UNESCO, Recommendation on the Safeguarding of Traditional Culture and Folklore, 15 November 1989, <http://portal.unesco.org/en/ev.php-URL_ID=13141&URL_DO=DO_TOPIC&URL_SECTION=201.html>.

continuing growth until the weaver celebrates the fruit of her endeavor.⁶⁵³ All of the weavers that I interviewed had learned their skills from their mothers from their early childhood before they started school. In fact, mothers are the mentors of the next generation. The learning process is a continual and gradual process. Having seen carpet looms around them since they opened their eyes to this world, most of the weavers do not remember the exact age at which they wove their first knots. The weavers' mothers used to sing lullabies and swing their cradle while weaving. This special bond, almost from birth, has made carpets and carpet weaving an inseparable part of weavers' life. In fact, traditional knowledge of carpet weaving is set within their identity. From an early age, children⁶⁵⁴ show much enthusiasm to mimic their mothers when they are weaving by asking their mothers to teach them how to weave. The presence of children around their mothers, even if they are only watching or being given simple tasks (such as passing the yarn) to participate in, ensures that they familiarize themselves with the operation over a long period before it is taught to them.



Figure 22
Three generations in one workshop.

⁶⁵³ See Kathryn Sullivan Kruger, *Weaving the Word: The Metaphorics of Weaving and Female Textual Production* (Cranbury, NJ: Associated University Presses, 2001), 37–38.

⁶⁵⁴ “Children” refers to boys and girls, and “girls” when boys typically do not participate in the practice.

From left to right, Ms. Ghadami reading a design plate, Ms. Hashemi (Ms. Ghadami's daughter) and her 17-year-old daughter (Ms. Ghadamis's granddaughter) who occasionally attends the workshop after school.

Photo credit Ghazaleh Jerban

Mothers are responsible for the intergenerational transmission of weaving knowledge through techniques of work and play. Children first start by learning the colours and fetching the fiber as the mother calls it. After getting familiar with the tools, they experience their first knots. Mothers begin the training with simplifying the process of weaving for the children by separating warps and putting them on a bar so that the children can easily match them together. With the help of their mothers, children use their tiny fingertips to tie their very first knots. Ms. Taheri, a senior weaver, remembers that once when she was a child, in response to her insistence on trying weaving, her mother and aunts asked her and her cousins to wash and bring the wooden sticks of the popsicles that they just had eaten, and then they used the stick to put the separated warps on the wooden sticks, so the children could learn how to make a knot in a simplified manner.⁶⁵⁵



Figure 23

Ms. Taheri separating warps to show how mothers simplify the warp selection for children

Photo credit Ghazaleh Jerban

⁶⁵⁵ Interview No. 5. Interview by Ghazaleh Jerban, 11 October 2017, Kashan.

As the children grow and watch their mothers' hands, they learn how to separate the right pair of warps to make a knot, so there is no longer a need for mothers to separate the warps for them. At this stage they are allowed to weave the parts with only one colour and without any design. While sitting next to their mentor, children's work is constantly supervised in order to correct their mistakes immediately. This hands-on training method, where seeing and repeating plays a crucial role in learning, helps the young children to improve their skills gradually where they can separate the warps faster and more accurately. For most of today's skilled weavers, the passion to learn did not stop at this stage, and they were keen to move beyond weaving the single colour areas, so they asked their mothers to be allowed to weave the colourful designs where they can create images on the loom. Weaving the designed areas requires the skills of reading and following the design plate, which is not an easy skill to learn. Not every weaver learns to weave the designed areas. Some weavers can only weave the designs when a skilled weaver reads the plate aloud and they follow the instructions. Learning to read and follow the design plate leads to promotion in the hierarchy of weavers. When looking at a design plate, an ordinary person like me feels lost but a skilled weaver navigates the design card easily.



Figure 24

Ms. Hashemi trying to explain to Ghazaleh Jerban how a weaver reads the design card and implements it on the loom
Photo credit Ghazaleh Jerban

Although usually all the children in a house were trained by the same mentor, who was usually their mother, not all of them possess the same level of skill. The differences between the level of skills among sisters who are trained by their mothers show the influence of personal characteristics in carpet weaving. The Noori sisters, three sisters with an age difference of five to seven years and the oldest in her 60s, are a good example of how people with the same mentor possess different levels of skills. Ms. L. Noori, the middle sister is a master weaver, while Ms. F. Noori is a skilled weaver who weaves the designs, and Ms. G. Noori only weaves the single colour areas. In the past, in each family, there was usually one member who had more weaving skills than others and was a reference point when other weavers in the family needed help.⁶⁵⁶



Figure 25
3 Noori sisters working on the same carpet, Tornajomerhab 2017
Photo credit Ghazaleh Jerban

⁶⁵⁶ Interviews No. 3, 7, 8, 9, 10, 12, 15, 16. Interview by Ghazaleh Jerban, 10–15 October 2017, Kashan.

Unfortunately, today under the influence of modernity, weaving has been viewed as a low-prestige job. This perception prevailing with wealthy urban dwellers has been gaining ground among the younger generation and in rural areas.⁶⁵⁷ Ms. Haghi says her older daughter is 22-years-old and is a highly skilled weaver, but, under pressure from her aunt and cousins, who live in the capital city (Tehran), her daughter quit weaving. Ms. Haghi says her sister-in-law encouraged Ms. Haghi's older daughter to stop weaving, saying it is no longer prestigious for a girl to weave carpets.⁶⁵⁸ Although the beauty and luxury of a handwoven carpet is appreciated by any generation, the interest in learning the skills and keeping the sector alive is an entirely different issue. Ms. Hashemi's 17-year-old daughter, who attends the workshop occasionally after school and knows the basics of weaving, says carpet weaving is something that belongs to the past.⁶⁵⁹ According to the participants, the pressure to abandon weaving increases with each passing generation, and, unlike in the past, many girls no longer know how to weave.⁶⁶⁰ The younger generation is simply not interested in learning and transferring the knowledge. In fact, in a relatively short amount of time, what was once common knowledge for generations is becoming a rarity.

4.5.1 Traditional Training Methods versus Formal Training

The traditional and informal training methods have remained almost entirely the same among the generations. Younger generations have used their mothers' and grandmothers' methods to teach their children only with slight changes. Ms. Taheri, who has brought her own six-year-old granddaughter to the workshop a couple of times, has used a similar technique to teach her after the child had kept insisting to learn.⁶⁶¹ However, in parallel to traditional training methods, formal

⁶⁵⁷ Unfortunately, there is no official statistics or empirical research examining the lack of interest toward weaving in the younger generation. However, this was an issue that almost all of my participants talked about and expressed concerns about.

⁶⁵⁸ Interview No. 7. Interview by Ghazaleh Jerban, 12 October 2017, Kashan.

⁶⁵⁹ Interview No. 4. Interview by Ghazaleh Jerban, 11 October 2017, Kashan.

⁶⁶⁰ Interviews No. 2, 3, 5, 7, 8, 10, 11, 12, 14, 15, Interview by Ghazaleh Jerban, 10–15 October 2017, Kashan.

⁶⁶¹ Interview No. 5. Interview by Ghazaleh Jerban, 11 October 2017, Kashan.

courses for various stages of carpet production including weaving are presented in the form of modern education at high schools, academic institutions (at Bachelor and M.A level) and governmental institutions such as the Iran Technical and Vocational Training Organization (TVTO) which, after completion of the courses and final exam, issues a certificate of skill. When asking her about the differences between these two methods of trainings, Ms. Ghadami says that not everything can be documented in the text books; rather, in order to transfer the knowledge to the next generation, dedicated people are required to work under the supervision of an elderly person in the field and to gain hands-on experience.⁶⁶² She asserts that a graduate with an MA in carpet may not have a fraction of the skills possessed by a weaver with traditional training.⁶⁶³ On the contrary, weavers who have learned their skills through informal traditional training from their early age, can easily pass the TVTO's exam and receive the certificate of skill.⁶⁶⁴ For this reason, to begin working as a weaver at the workshops, there is no need to provide an official certificate. Usually, the job applicant works for a week on probation, and if the head of workshop approves the quality of her work, she can continue.

The general pattern in informal training is that the training period is spread over a number of years beginning from childhood. Unlike the formal education, which is more theoretical, in the traditional method, which is hands-on, the young learner would join an elder in doing different

⁶⁶² Interview No. 2. Interview by Ghazaleh Jerban, 10 October 2017.

⁶⁶³ In the curriculum passed by the Ministry of Science, Research and Technology of Iran for attaining a bachelor degree in carpet with concentration on weaving (there are two concentrations: carpet design, carpet weaving and restoration) at the Art University of Isfahan, there are only 4 mandatory courses of weaving with total 384 hours, among other required practical and theoretical courses. This amount equals to 48 working days (8-hours per day), whereas in the traditional form of training the young weavers start to receive their training in an extended time period with almost full access to their mentors. For more details about the curriculum, see <http://shirazu.ac.ir/art_dep/sites/art_dep/files/sarfasl-farsh.pdf>.

⁶⁶⁴ Interview No. 2. Interview by Ghazaleh Jerban, 10 October 2017, Kashan. In an interview with a number of graduates with university degrees in carpet field about their barriers in entering the job market, one of them specifically complained about the fact that most of their curriculum is comprised of theoretical courses as opposed to practical training. For the full text of the interview, see <<http://carpetour.com/fa/part.asp?AID=24638&p=4020>>.

tasks in the weaving process. They would observe the mentor (usually mothers, sisters, or other female relatives), listen to what they say, ask questions and then proceed to try their own hand. In this model, observation is an integral part of the experiential learning. Thanks to the presence of mothers and expert mentors, learning is made less stressful as the learners know that they can learn at their pace and that there will always be somebody more experienced who will support them during the early learning stages or correct technical deficiencies or problems at later stages. In fact, the system of learning works by scaffolding, by which young weavers progressively learn the easiest tasks before going on to learn the next stages. Ms. Vahidi says that learning ability is sharper at childhood and teaching during childhood through traditional and experiential methods ensures that both weaving knowledge and cultural aspects are transferred to the next generation.⁶⁶⁵ In other words, formalizing carpet education in the form of institutes and universities is at least an attempt to document and preserve the carpet production methods. However, unlike informal traditional training methods, there is no room for transferring specific cultural aspects associated with carpet production. For example, folkloric work songs are not recited as part of carpet weaving courses where carpet education is institutionalized, and therefore the line in transferring such cultural aspects associated with carpet production to the next generations is broken.

The traditional training is in fact an experiential learning entailing a process of “learning by doing” where the weaver engages in direct “experience”. It is also a “place-based education”⁶⁶⁶ in which teaching is grounded in the context of community, both natural and social. In the

⁶⁶⁵ Interview No. 15. Interview by Ghazaleh Jerban, 14 October 2017, Kashan. Given the importance of carpet and carpet weaving as part of Iranian’s cultural identity, there should be efforts to preserve the knowledge and tradition. Introducing this aspect of the cultural identity to children helps them to internalize it from early age. There is a study on the impact of storytelling in transferring the cultural heritage related to carpet to children. Mehdi Hajvani and Seyed Habibollah Lezgi, “Manifestation of Carpet in Children’s Literature” (2006) 2 Goljam, Iran’s Scientific Association of Carpet 25, [original in Farsi].

⁶⁶⁶ The term was coined in the early 1990s by Laurie Lane-Zucker of The Orion Society and Dr. John Elder of Middlebury College. Place-based education promotes learning that is rooted in what is local—the unique history, environment, culture, economy, literature, and art of a particular place.

traditional mode of training, during training weavers are in constant contact with their mentors and, due to the nature of their work (sitting behind the loom for hours), they have a lot of time to converse with each other. During these informal conversations, the young weavers gradually absorb and internalize the unique history, culture, and art of their community. However, today the context of knowledge transfer has changed where rarely a young girl learns how to weave from her mother while the mother is singing a lullaby for the younger sibling. Instead, the younger generation, if interested at all, mostly will learn weaving through formal education where certified instructors and text books have replaced traditional mentors and their methods.⁶⁶⁷

Ms. Karami says that in the past, there was a carpet loom in almost every household and from their early days, children, both boys and girls, were exposed to the world of carpet. But today, the practice is fading away and the new generation has lost its point of contact with the carpet world as carpet looms are rarely found in the houses.⁶⁶⁸ According to the participants,⁶⁶⁹ in the past, both daughters and sons were trained by mothers. However, due to the traditional gender norms, after a certain age, boys tend to move away from weaving and prepare for a career in the public sphere and girls tend to receive more serious carpet weaving training. This explains both the relatively small number of male weavers and the average lower level of carpet weaving skills among men.⁶⁷⁰ Moreover, in the past, girls' schooling tended to stop at a certain point, usually after primary or junior high school, for several reasons.⁶⁷¹ (1) Most villages only had schools until

⁶⁶⁷ TVO certified institutions across the country offer formal courses in weaving. The below link includes a list of such institutions in Tehran Province, where apprentices can register and receive training in weaving, and, once they pass the exam, they will receive a certification. <http://www.tehrantvto.ir/uploads/semahechaharom_14698.pdf>.

⁶⁶⁸ Interview No. 9. Interview by Ghazaleh Jerban, 12 October 2017, Kashan.

⁶⁶⁹ Interviews No. 3, 5, 6, 7, 9, 12, 13, 14, 15, 16. Interview by Ghazaleh Jerban, 10–15 October 2017, Kashan.

⁶⁷⁰ According to the statistics less than 20% of professional carpet weavers are male. "Standardizing Women Weavers'," *supra* note 553.

⁶⁷¹ See generally Zahra Farzizadeh, Mahdi Taleb and Mahmoud Motevaseli, "Examining Education Barriers for Rural Girls: A Qualitative Research" (2016) 129 *Talim-o-Tarbiyat Journal* 115, [original in Farsi].

junior high and to continue their education at high school level, children needed to move or commute to other villages or towns that had high schools. In fact, the long distances between villages and schools were a hurdle keeping daughters from continuing their education compared to their male counterparts.⁶⁷² (2) Traditional gender norms of society were used to limit the presence of women and girls in the public.⁶⁷³ (3) Families' weak financial conditions did not allow them to invest in their children's education, especially for girls, who often entered marriage at an early age.⁶⁷⁴

Generally, for these reasons, it was common for girls in previous generations to quit school and, with social norms limiting their presence in the public, carpet weaving was among the few choices that women had for economic activity. Ms. Haghi says, that as it is expected nowadays for young girls to go to university in order to receive academic qualifications, in the past it was expected that young girls would learn weaving as a profession.⁶⁷⁵ Girls were not only learning a valuable skill; they were also learning about their cultural traditions. In fact, it was a way to empower the future generation of women. Weaving skills used to significantly affect the future of young girls, since carpet weaving generated income and financially empowered the weaver. Although there were no formal methods of training involved, weaving was seen as a form of education, and education (formal or informal) is almost universally considered a form of empowerment.⁶⁷⁶ As with pursuing other modes of schooling, weaving could also provide a source of income should children choose to continue weaving in their adult life. Where a daughter was a

⁶⁷² Interview No. 6. Interview by Ghazaleh Jerban, 11 October 2017, Kashan.

⁶⁷³ Interview No. 11 Interview by Ghazaleh Jerban, 13 October 2017, Kashan.

⁶⁷⁴ Interview No. 14 Interview by Ghazaleh Jerban, 14 October 2017, Kashan.

⁶⁷⁵ Interview No. 7. Interview by Ghazaleh Jerban, 12 October 2017, Kashan.

⁶⁷⁶ See e.g. Paulo Freire, *Pedagogy of the Oppressed*, 30th anniversary edition (New York: Continuum, 2000). See also M. Anne Hill and Elizabeth King "Women's Education and Economic Well-being" (2009) 1:2 Feminist Economics 21.

skilled weaver, it was her family's honour showing that their daughter had a proper upbringing.⁶⁷⁷ At the time of marriage, it was an asset if a girl was a weaver. As David Attenborough in his documentary⁶⁷⁸ puts it, the weaving knowledge and skills were a bride's "invisible gift" to her new husband and his family. In fact, carpet weaving training was seen as equipping young women with income-generating tools where mothers transfer their knowledge to their daughters to make them economically self-sufficient.⁶⁷⁹ Ms. F. Noori says her mother used to encourage her to learn weaving because, in her mother's view, the skill was going to come in handy one day. Ms. F. Noori says her mother was right, as later in her life when she got married and moved to Tehran, they needed money to build their new house. Then, she started to weave, and her income contributed to cover the cost of the new house.⁶⁸⁰

When I asked about the relation between formal education and weaving, participants believed that continuing formal education and carpet weaving are not mutually exclusive. One of them referred to a highly educated weaver (a doctor) who has in fact, used weaving to cover her educational costs and living expenses while she was at school.⁶⁸¹ Ms. Vahidi's daughter is a highly skilled weaver who has finished her bachelor's degree and, due to financial problems, has not been able to afford a master's education, so she now works as a dental assistant at a clinic in Kashan while weaving part time as the income of neither of her jobs is sufficient to compensate for the high costs of living.⁶⁸² As Ms. Haghi and her other colleagues say, unlike in the past, there is no

⁶⁷⁷ Interviews No. 2, 3, 5, 7, 12, 14. Interview by Ghazaleh Jerban, 10–15 October 2017, Kashan. If a girl did not know weaving, it was expected that she would have acquired other skills, such as tailoring or embroidery.

⁶⁷⁸ *The Woven Garden* by David Attenborough, cited in Patricia L. Baker, "Twentieth-Century Myth-Making: Persian Tribal Rugs", (1997) 10:4 *Journal of Design History* 363 at 369. The documentary "Woven Gardens" is written and narrated by David Attenborough. "Woven Gardens" is a fifth part of the "Tribal Eye," which is a seven-part BBC documentary series on the subject of Tribal art.

⁶⁷⁹ Interviews No. 5, 7, 12 Interview by Ghazaleh Jerban, 10–15 October 2017, Kashan.

⁶⁸⁰ Interview No. 12. Interview by Ghazaleh Jerban, 13 October 2017, Kashan.

⁶⁸¹ Interview No. 6. Interview by Ghazaleh Jerban, 11 October 2017, Kashan.

⁶⁸² Interview No. 15. Interview by Ghazaleh Jerban, 14 October 2017, Kashan.

expectation for the younger women generation to learn carpet weaving; rather, the primary goal for them is to pursue their education at the university level. The priorities have changed, and carpet weaving is more like a hobby for those who are interested to learn.⁶⁸³ Ms. Ghadami says that, with the younger generation of women showing no interest in learning weaving, it is not a surprise that the number of young men who know the basics of weaving is fewer than in the past.⁶⁸⁴

With the advent of modernity, Iranian gender ideology has gone through a historical transformation. Iranian women's level of education after the 1979 Revolution has increased significantly, and today there are more diverse career options for them.⁶⁸⁵ The presence of women in the public sphere and even in traditionally male professions as mechanics is now better accepted in the society compared to the past.⁶⁸⁶ Women's career options and level of education has raised significantly compared to 4 decades ago,⁶⁸⁷ and no longer is carpet weaving the only choice that

⁶⁸³ Interviews No. 7 and 2, 3, 5, 6, 9, 10, 11, 12, 13, 15. Interview by Ghazaleh Jerban, 10–15 October 2017, Kashan

⁶⁸⁴ Interview No. 2. Interview by Ghazaleh Jerban, 10 October 2017, Kashan. For the decreasing trend in the population of the carpet weavers, see Shahdokht Rahimpour, Seyed Abdoljaber Ghodrati, Amir-hossein Chitsazian "Factors Influencing the Decrease in Rural Women's Interest Toward Carpet Weaving in Shiraz" (2017) 21:1 Village and Development 115 at 116, [original in Farsi]. See also the interview of the Chief of Chaharmahal-Bakhtiari Province Carpet Office, according to which the number of carpet weavers in the province in 2019 is 100,000, which shows a 10% decrease compared to the previous year. "Decrease in Carpet Weavers Number in Chaharmahal-Bakhtiari Province", *Iranian Students' News Agency* (ISNA) (22 May, 2019), <<https://www.isna.ir/amp/98031908159/>>.

⁶⁸⁵ See generally Golnar Mehran, "Doing and Undoing Gender: Female Higher Education in the Islamic Republic of Iran" (2009) 55:5-6 *International Review of Education* 541. The state of educational attainment among rural and ethnic minority females in Iran, however, is still lower when compared to urban, non-minority peers, as they are not forced to attend school and often enter marriage at an early age. Report of the UN Secretary-General, *Situation of Human Rights in the Islamic Republic of Iran*, UNGAOR, 70th Sess, UN Doc A/70/352 (2015).

⁶⁸⁶ See e.g. IFP Editorial Staff, "Women Mechanics Receiving Training in Iran" *Iran Front Page* (28 August 2017), <<https://ifpnews.com/women-mechanic-iran>>. See also "Two Iranian Girls Training to Become Mechanics" *Iran Front Page* (9 November, 2019), <<https://ifpnews.com/two-iranian-girls-training-to-become-mechanics>>.

⁶⁸⁷ See generally Mehran, "Doing and Undoing," *supra* note 685 at 541. See also generally Khadijeh Safiri, "Women and Post Secondary Education", (2006) 18:56-57 *Journal of Faculty of Literature and Humanities* 101, [original in Farsi].

women have. However, given the current high unemployment rate among women,⁶⁸⁸ the development of the carpet industry promotes employment among women, especially in rural areas.

4.6 Weaving as a Gendered TK: A Tradition with a Reason

The connection between women and weaving runs deep in history and in most cultures. In other words, weaving has usually been associated with women and considered as a women's craft in many cultures and at many times.⁶⁸⁹ Historians of technology attribute the invention of weaving to women.⁶⁹⁰ Some scholars even argue that weaving was more than a utilitarian task and was integral to the identity of women.⁶⁹¹ Women and men have different experiential knowledge depending on the sexual division of labour (SDL) in their society. In her research examining division of labour by sex and the reason behind it, Judith Brown suggests that in addition to the physiological and psychological reasons, there is a further explanation for the SDL. Based on the ethnographic evidence, she comes upon an explanation for the type of labour carried out by women, which is the compatibility of such labour with the demands of child care.⁶⁹² According to her, "no where in the world is the rearing of children primarily the responsibility of men...therefore, women's job must be compatible with simultaneous child watching."⁶⁹³ Brown relies on ethnographic studies arguing that women's jobs have the following characteristics: (1)

⁶⁸⁸ According to the latest official statistics, the general female unemployment rate has been 17.3%, while the figure for male unemployment in the same period has been 9.2%. The unemployment rate among female university graduates is 25.3% compared to 12.4% among male graduates. *Seasonal Economic Report of Iran: Spring 2019*, (Tehran: Statistical Centre of Iran, 2019), [original in Farsi] <<https://www.amar.org.ir/news/ArticleType/ArticleView/ArticleID/11512>>.

⁶⁸⁹ Barber, *Women's Work*, *supra* note 153.

⁶⁹⁰ Barber, *Women's Work*, *supra* note 153.

⁶⁹¹ Margaret Mead, *Cultural Patterns and Technical Change* (London: Mentor Books, 1953).

⁶⁹² Judith K. Brown, "Note on the Division of Labour by Sex", (1970) 72:5 *American Anthropologist* 1073 at 1075.

⁶⁹³ Brown, "Note on the Division," *supra* note 692 at 1075. Brown's stipulation revolves around reliance, not around ability. Thus, females are quite able to hunt and often do (as she points out); males are quite able to cook and weave, and often do among the cultures of the world. The question is whether the society can afford to rely on the women as a group for all of the hunting or all of the sewing.

they are not far from home, (2) the work is not dangerous to children, and (3) it can be performed in spite of interruptions and is easily resumed once interrupted.

In response to my question about why weaving is done by women, the participants provided a variety of reasons, some of which are in line with Brown's explanation. First, the level of delicacy and patience that is required for weaving has made it more common among women. Although both genders from their early age show interest in learning the techniques from their mother, their interest in the job does not remain the same. Ms. Ahmadi says that she had a carpet loom at home and her husband used to help her occasionally in his free time by weaving the single colour areas. Ms. Ahmadi remembers that once she was weaving a complex design with many nuances. She says, as usual, her husband tried to weave alongside her but after weaving just for a few minutes, he stopped and never helped her again, complaining that he did not have the patience to do such a delicate job.⁶⁹⁴ It is noteworthy that this attitude toward men's and women's capabilities is not necessarily due to their biological attributes. Rather such attitudes stem from gender stereotypes that are formed in the cultural and traditional structure of a society.⁶⁹⁵ The members of any society recognize individuals based on their conventional and gender roles, according to which different behaviours are expected from men and women. Men are usually seen as independent, brave, adventurous, able and controlling, but women are regarded as dependent, passive, sensitive, gentle and mild.

⁶⁹⁴ Interview No. 6. Interview by Ghazaleh Jerban, 12 October 2017, Kashan.

⁶⁹⁵ There are two prominent views about the origins of gender differences in human behavior; Some theorists see gender differences as a reflection of biological differences. They have been criticized for their essentialist views. On the other hand, some theorists see gender differences as social constructions. Judith Butler in her book *Bodies That Matter* made an important contribution to debates in gender theory that saw gender as "constructed" and sex as something determined by biology.

The second reason behind weaving being a woman's profession is its very low wage. According to the participants, the low income of weaving repels men from the job, and they do not consider weaving as a serious career and source of income.⁶⁹⁶ In addition to its low wage, gender norms of society see weaving as a feminine and delicate job.⁶⁹⁷ According to Ms. Haghi, nowadays men do not choose carpet weaving as their profession.⁶⁹⁸ Weavers' wage is determined based on their level of skills, their speed, type of carpet, size of carpet, intricacy and carpet density. For example, weavers who only weave the single colour areas, receive less money than those who weave the designs. Moreover, since the wages are determined based on the lines (*raj*) that weavers complete, the faster a weaver works, the more money she receives. In fact, weavers with the same hours of working may not receive the same wages as their speed and skills may differ. Overall, weaving has a low wage despite the added value that it creates and the level of skill and expertise that it requires. A highly skilled weaver can finish at the maximum only three lines of a big carpet with a complex design in a day with the wage of IRR180000 (US\$1.50).⁶⁹⁹ Ms. Haghi says the

⁶⁹⁶ Interviews No. 2, 5, 6, 7, 9, 10, 11, 12, 15. Interview by Ghazaleh Jerban, 10–15 October 2017, Kashan. According to the Women's Committee's Chief at the Grand Association of Workers Unions, women in Iran receive lower pay for longer hours of work compared to their male counterparts. She also revealed that 80% of the jobs without insurance is occupied by women. "Women's Unemployment Rate is Twice as Male's and 80% of the Jobs Without Insurance Benefits Are Occupied by Women," *Iran Kargar*, [original in Farsi] <<https://bit.ly/2QLaCVk>>.

For analysis on why women choose low paying jobs, see Linda Walsh and Liz James "Women Choose Low Pay?" in Liz Sperling, Mairead Owen, eds, *Women and Work: The Age of Post-Feminism?* (London: Taylor and Francis, 2017) 89–107.

⁶⁹⁷ Interviews No. 2, 4 5, 6, 7, 8, 10, 11, 12, 15. Interview by Ghazaleh Jerban, 10–15 October 2017, Kashan.

⁶⁹⁸ Interview No. 7. Interview by Ghazaleh Jerban, 12 October 2017, Kashan.

⁶⁹⁹ At the time of the interview (Fall 2017), this amount was equal to US\$4, but due to severe US sanctions it has decreased to US\$1.5. For recent US sanctions against Iran, see U.S. President, Executive Order, "Reimposing Certain Sanctions With Respect to Iran, Executive Order 13846 of August 6, 2018." *Federal Register* 83, no. 152 (7 August 2018), 38939, <https://www.treasury.gov/resource-center/sanctions/Programs/Documents/08062018_iran_eo.pdf>.

U.S. President. Executive Order. "Imposing Sanctions With Respect to Iran, Executive Order 13876 of June 24, 2019," *Federal Register* 84, no. 123 (26 June 2019); 30573, <<https://www.treasury.gov/resource-center/sanctions/Programs/Documents/13876.pdf>>.

monthly wage of a janitor (general labour) at a company is about IRR10 million (about US\$200)⁷⁰⁰ with insurance and retirement benefits, while she, as a weaver with similar working hours and a specific skill set, receives half of this amount with no insurance and retirement benefits.⁷⁰¹ Given the lengthy process of development of weaving skills, the labor involved in carpet weaving can be classified as skilled labor, although it is not regarded as such by employers, their relatives, and sometimes weavers themselves.⁷⁰² Due to the gender stereotypes and prevalence of patriarchal beliefs in the society, skills and specialization are merged with gender, meaning when there is a woman performing a job this signals the inconsequentiality of the skill and specialization in it. In other words, the gender of the worker is an indicator of its level of importance.

⁷⁰⁰ With the sharp fluctuations in the exchange rate due to the current US sanctions, this amount has decreased to US\$100 at the time of writing. Iran has a multi-tiered exchange rate system. The official exchange rate which is an official subsidised exchange rate is IRR 42,000 to US\$1. However, the open market rate is constantly fluctuating with around IRR 130,000 fetching US\$1 (at the time of writing, December 2019). For the official exchange rate, see Iran's Central Bank website <https://www.cbi.ir/default_en.aspx>. The open market rate is not documented in an official source. For more information about Iran's multi-tiered exchange rate system, see Maziar Motamedi, "Why Does Iran Have Three Foreign Exchange Rates?" *Aljazeera* (2 July 2019), <<https://www.aljazeera.com/ajimpact/iran-foreign-exchange-rates-190627185807737.html>>.

⁷⁰¹ Interview No. 7. Interview by Ghazaleh Jerban, 12 October 2017, Kashan. The official minimum monthly wage in Iran for the fiscal year ending in March 2020 is about IRR 15170000 (about US\$110). Supreme Labour Council, Circular No. 265156 passed on 19 March 2019. Ministry of labour and Social Affairs, <http://edarekol.com/wp-content/uploads/2019/03/moz98_bakhshnameh1.pdf>. Despite having the chance to apply for a loan based on their certificate from Technical and Vocational Training Organization, most of the participants had chosen not to use the loan for three main reasons. First, a lack of fix monthly income to return the loan is one of the main hurdles in using the loan. Second, the loan's high interest rate (12%) is an obstacle for most of the weavers who do not have the ability to pay the monthly instalments until the carpet is finished and sold. Third, a lack of the required proficiency and financial literacy to navigate the administrative, paper work and also banking system was also a hurdle preventing the women from applying for the loan. At the time of the interviews (2017), the minimum monthly wage was about IRR 11112700 (with the lower exchange rate at that time it was equal to US\$200). Supreme Labor Council, Circular No. 2364 passed on 21 March 2018, <<http://edarekol.com/wp-content/uploads/2018/04/bakhshnameh1397.pdf>>.

⁷⁰² Diane Elson and Ruth Pearson, "The Subordination of Women and the Internationalization of Factory Production," in in Nalini Visvanathan et al, eds, *The Women, Gender and Development Reader* (New York: Zed Books Ltd, 2011) no sequential page numbers at 150. She notes that the informal and privatized process of skill acquisition leads to the classification of jobs which use these skills as "unskilled". Similarly, Anne Phillips and Barbara Taylor "Sex and Skill: Notes Towards a Feminist Economics", (1980) 6 *Feminist Review* 79, observe the tendency for technically similar jobs to be identified as 'unskilled' if they are done by women and as 'skilled' if performed by men, and argue that these classifications have little to do with objective training requirements.

The third reason provided by participants to explain why the majority of weavers are women is that weaving is compatible with weavers' traditional responsibilities as women in the family for domestic chores and child and elder care. In the past weaving at home was more common, which made weaving a suitable job for women given their multiple responsibilities. Even today for those women who still weave at home, the flexibility of working at home allows women to alternate their weaving with their domestic duties, and they can generate income while they manage to attend to their other responsibilities. Ms. Hashemi believes if weaving receives the wage that it deserves, it becomes a very suitable job for women as a mother weaver can both take care of her children and weave at home. Even in a collective weaving workshop model, the proximity to home plays an important role. With the workshop being open every day from 6:00 am until 8:00 pm, the weavers have flexible work hours. They can adjust their work hours with their daily schedule. Ms. Vahidi, the head of one of the workshops, says that when she arrives to open the workshop at 6:00 am, she sees weavers who have been sitting behind the door and are ready to start their work. They come to the workshop immediately after their morning prayer so that they can finish their work by noon and allocate the rest of the day to their multiple responsibilities.⁷⁰³ Ms. Taheri and her daughter both work at the workshop but in opposite shifts, so that Ms. Taheri can take care of her grandchild while her daughter attends the workshop and vice versa.⁷⁰⁴ Ms. Taheri says one of the young weavers had to stop working at the workshop due to the distance between her house and the workshop. According to Ms. Taheri, she could not align the working hours with her other duties such as dropping off and picking up her child from school.⁷⁰⁵ The patriarchal culture of Iranian society has resulted in dividing the responsibilities into domestic and

⁷⁰³ Interview No. 15. Interview by Ghazaleh Jerban, 14 October 2017, Kashan.

⁷⁰⁴ Interview No. 5. Interview by Ghazaleh Jerban, 11 October 2017, Kashan.

⁷⁰⁵ Interview No. 5. Interview by Ghazaleh Jerban, 11 October 2017, Kashan.

public work and leaving the domestic work to women. Restricting women to domestic work and assuming that their other activities are less important and should have a lower priority undermines their creativity, exacerbates their financial dependence on male relatives and undermines their self-confidence in terms of actively participating in society.⁷⁰⁶

As discussed, not being far from home is one of the specifications that Brown suggests to explain the SDL. In the rural areas and villages, the list of women's responsibilities is longer as they also participate in farming, processing the crops, and animal husbandry. Weaving is very common in Iranian villages because most families cannot survive on agriculture alone, which is a seasonal occupation. Ms. Afshar (one of my participants for the saffron case), also has a carpet loom in her house where she weaves in addition to her other duties as a rural woman. The backbreaking hours of work have left her with paucity of time at her disposal.⁷⁰⁷ She hardly has enough time to go to town in order to repair her broken glasses frame. Instead, she temporarily fixed the glasses so that she can finish the carpet before the deadline when the dealer comes to the village to pick it up.⁷⁰⁸

A UN report, published in 2018, estimates that women do 2.6 times the amount of unpaid care and domestic work that men do.⁷⁰⁹ Childcare, cooking, and cleaning, even things like picking up children from school or taking elderly parents to the doctor, are tasks that disproportionately fall to women who are not compensated for this work. This is while the economic value of

⁷⁰⁶ Jaleh Shaditalab, *Development and Challenges of Iranian Women* (Tehran: Ghatreh, 2002) at 6, [original in Farsi].

⁷⁰⁷ The term "time poverty" refers to the fact that some individuals do not have enough time for rest and leisure after taking into account the time spent working, whether in the labor market or domestic work. For more on gender and time poverty, see Julian Walker, "Time Poverty, Gender and Well-being: Lessons From the Kyrgyz Swiss Swedish Health Programme" (2013) 23:1 *Development in Practice* 57.

⁷⁰⁸ Interview No. 16. Interview by Ghazaleh Jerban, 23 October 2017, Khorasan.

⁷⁰⁹ UN Women, 2018, "Turning Promises into Action: Gender Equality in the 2030 Agenda for Sustainable Development", <<https://www.unwomen.org/en/digital-library/sdg-report>>. See also OECD Development Centre, 2014. "Unpaid Care Work: The Missing Link in the Analysis of Gender Gaps in Labour Outcomes", <https://www.oecd.org/dev/development-gender/Unpaid_care_work.pdf>.

women's domestic work is estimated to be between 20% and 60% of countries' GDP.⁷¹⁰ According to Shahra Razavi, chief of the research and data section at UN Women, women's care and domestic work is unpaid and not calculated in GDP mainly because society still sees "women's work" as less valuable.⁷¹¹ Most TK held by women is developed, practiced, and performed in the context of domestic work, specifically when it is carried out at home. Unfortunately, as is the case with the rest of domestic work, TK-based productive activities of women also remain unpaid (or poorly paid as is the case with carpet weaving) and unrecognized. Women's TK-based activities are seen as an extension of their daily chores with no or little value. Feminists have argued that the work that is done in the context of home and within the framework of the domestic mode of production is considered non-work and unskilled labour associated with body in contrast to the more "skilled" labor of the mind.⁷¹² In the context of carpet weaving for example, Cecil Edwards, a well-known Persian carpet connoisseur, denies tribal women even the ability to think. He writes, "A tribal weaver, as she crouches over her horizontal loom, is more likely, I think, to seek inspiration from what she sees than from what she thinks—if, indeed, she thinks at all."⁷¹³ Unfortunately, under the influence of such false views, sometimes women themselves see their work and their TK as less valuable than the work of their male counterparts. In the case of carpet, women weavers see dyeing yarn and loom preparation as more technical jobs. This can be seen in their attitudes and in the way they describe their male counterparts' work, using adjectives such as "highly technical"⁷¹⁴

⁷¹⁰ UNDP, Human Development Reports, "Valuing Care Work" (15 March 2016), <<http://hdr.undp.org/en/content/valuing-care-work>>; UN Women, 2018, "Facts and Figures: Economic Empowerment", <<https://www.unwomen.org/en/what-we-do/economic-empowerment/facts-and-figures#notes>>.

⁷¹¹ Julia Carpenter, "The Unpaid Work that Always Falls to Women," *CNN* (21 February 2018), <<https://money.cnn.com/2018/02/21/pf/women-unpaid-work/index.html>>.

⁷¹² Foster, "Situating Feminisms," *supra* note 60 at 309.

⁷¹³ Edwards, *The Persian Carpet*, *supra* note 617 at 51.

⁷¹⁴ Interview No. 7. Interview by Ghazaleh Jerban, 12 October 2017, Kashan.

and “complicated” in response to why warp winding is mostly done by men.⁷¹⁵ On the other hand, the phrase “*pashm gereh-zani*,” meaning “wool knotting” and which involves a derogatory view of weaving as a skill, has been used by people who wanted to diminish the value of weavers’ work.⁷¹⁶ This is while the main portion of value added in the carpet production process occurs during the weaving phase, which turns raw material into actual carpets and which is conducted by women weavers.

4.7 Carpet Weaving from a Third World Feminist Perspective

In the early 20th Century, Mahatma Gandhi, the leader of India’s independence movement, famously used hand-spun khadi weaving as a symbol of freedom.⁷¹⁷ Gandhi saw women weavers not as objects of reform and humanitarianism but as self-conscious subjects who could, if they chose, become active agents of change. As Kishwar writes: “It was with a remarkable insight that Gandhi, without challenging their traditional role in society, could make women an important social base for the movement.”⁷¹⁸ The Persian carpet is not just a commodity from Iran; rather, it is a national commodity displaying both the unity and diversity of the Iranian nation. Persian carpets are the signifier of a nation unified, regardless of hierarchies of class, gender, and ethnicity that exists within the populace. Considering the US embargo against Iranian commodities, especially the Persian carpet, certain commodities have become a site of national resistance.⁷¹⁹ Therefore, handwoven carpets bring the spirit of nationalism into every home. In this way, abstract political ideas, such as struggle against imperialism, assumes concrete form for ordinary people and women weavers. Handwoven carpets bridge the gap between women’s life as weavers to the

⁷¹⁵ Interview No. 2. Interview by Ghazaleh Jerban, 10 October 2017, Kashan.

⁷¹⁶ Interview No. 6, 9, 10 Interview by Ghazaleh Jerban, 11–13 October 2017, Kashan.

⁷¹⁷ For more detail, see Suruchi Thapar, “Women as Activists; Women as Symbols: A Study of the Indian Nationalist Movement” (1993) 44 *Feminist Review* 81.

⁷¹⁸ Madhu Kishwar, “Gandhi on Women” (1986) 28:1 *Race & Class* 43 at 45.

⁷¹⁹ Moallem, *Persian Carpets*, *supra* note 4 at 116.

economic-political life of the country. Under such circumstances to weave carpet and buy handwoven carpet comes to be seen as a symbol of agency, self-reliance, and regeneration. Weaving carpets advocates the self-reliance movement under which national goods should be promoted, and foreign copies should be prohibited and boycotted.

4.7.1 Carpet Weaving: A Form of Artistic Expression

It will be objected that such art for the masses as folk art was developed under rudimentary conditions of production — and that a good deal of folk art is on a high level. Yes, it is — but folk art is not Athene, and it's Athene whom we want: formal culture with its infinity of aspects, its luxuriance, its large comprehension.⁷²⁰

Although in modern Western society, weaving might not be considered as an art or particularly empowering for women (especially given the sexual division of labour), in Iranian culture, weaving is an art that encompasses crucial Persian philosophies like balance and harmony. It takes considerable time and effort to cultivate and apply such creative, detail-oriented knowledge. As Parviz Tanavoli⁷²¹ a renowned artist and collector who has extensively worked on Persian carpets, puts it:

In the western artistic hierarchy, painters enjoy pride of place. Sometimes this respect, focused on the signature of well-known artists, is carried out to excess. If a renowned painter creates a mediocre or repetitive piece, or he goes a step further and merely signs his name on a blank sheet of paper or an unmarked canvas, he (or his heirs) can command a high price for it. If, on the other hand, an unknown artist excluded from the ranks of the elite produces the most creative rug, ceramic, or anything else, his work will be labelled handicraft.⁷²²

Until recently, the art experts considered the 'high arts' of Western men superior to all other forms of art. Those arts done by non-Western people, low-class people, and women were categorized as

⁷²⁰ Clement Greenberg, "Avant-garde and Kitsch" (1939) quoted in Valerie Jaudon and Joyce Kozloff, "Art Hysterical Notions of Progress and Culture" (1978) 4:1 *Heresies Magazine* 38 at 41.

⁷²¹ Parviz Tanavoli is an Iranian sculptor, painter, scholar and art collector. Tanavoli's work has been auctioned around the world leading to overall sales of over \$6.7 million, making him the most expensive living Iranian artist.

⁷²² Tanavoli, "A Collector's", *supra* note 603 at 81.

‘minor arts,’ ‘primitive arts,’ ‘low arts,’ etc.⁷²³ In rereading the basic texts of Modern Art, Valerie Jaudon and Joyce Kozloff unveil a disturbing belief system that is based on the moral superiority of Western civilization and has created a long history of prejudice based on hierarchies such as fine art above decorative art, Western above non-Western art, men’s art above women’s art.⁷²⁴ Throughout the history of art, decoration and domestic handicrafts have been regarded as women’s work, and, as such, not considered “high” or fine art. The age-old aesthetic hierarchy that privileges certain forms of art over others based on gender associations has historically devalued “women’s work,” specifically because it was associated with the domestic and the “feminine.”⁷²⁵ Such view is evident in quotes like, “There is a hierarchy in the arts: decorative art at the bottom, and the human form at the top. Because we are men.”⁷²⁶ More specifically regarding carpet, Andre Malraux in *The Voices of Silence*, writes:

The design of the carpet is wholly abstract; not so its color. Perhaps we shall soon discover that the sole reason why we call this art “decorative” is that for us it has no history, no hierarchy, no meaning. Color reproduction may well lead us to review our ideas on this subject and rescue the masterwork ... and assign its due place (a minor one, not because the carpet never portrays Man, but because it does not express him) ...⁷²⁷

⁷²³ Jaudon and Kozloff, “Art Hysterical,” *supra* note 720 at 41. Jaudon and Kozloff’s research shows that within the discipline of art history, the following words are continuously used to characterize what has been called ‘high art’: man, mankind, the individual man, individuality, humans, humanity, the human figure, humanism, civilization, culture, the Greeks, the Romans, the English, Christianity, spirituality, nature, true form, science, logic, purity, evolution, revolution, progress, truth, freedom, creativity, action, power and greatness. In the same texts other words are used repeatedly in connection with so-called ‘low art’: Africans, Orientals, Persians, Slovaks, peasants, the lower classes, women, savages, pagans, sensuality, pleasure, chaos, anarchy, impotence, cosmetics, ornament, decoration, carpets, weaving, patterns, and domesticity.

⁷²⁴ Jaudon and Kozloff, “Art Hysterical,” *supra* note 720 at 38.

⁷²⁵ See generally Lucy Lippard, *From the Center: Feminist Essays on Women’s Art* (New York: E.P. Dutton, 1976). Lippard writes that in the quest for a “female aesthetic” or artistic style specific to women, many 1970s feminist artists sought to elevate “women’s craft” to the level of “high art,” and away from its derogatory designation as “low art” or “kitsch.”

⁷²⁶ Le Corbusier and Amédée Ozenfant, “On Cubism” (1918), quoted in Jaudon and Kozloff, “Art Hysterical,” *supra* note 720 at 41.

⁷²⁷ Andre Malraux, *The Voices of Silence* (1953) quoted in Jaudon and Kozloff, “Art Hysterical,” *supra* note 720 at 41.

Persian carpets are in fact, piece of arts that are produced by women through their traditional techniques embodying their cultural identity. As such Persian carpet is where being a *decorative, non-Western, and women-made* art intersect with each other. Lately, feminist artists have called attention to activities that are practiced by women using traditional techniques to achieve their art.⁷²⁸ According to Hollister and Weatherford, women's traditional art has been neglected by the mainstream western writers not only because it is utilitarian but because it is almost always abstract. The assumption that women's abstract designs have no meaning is directly related to the idea that traditional women artists are not creative. This is while women's choice of image and pattern reflects their traditions, their own inventiveness, and concerns of their society.⁷²⁹

Weaving gives women weavers a creative space where, according to Ms. Naderi, they can weave their dreams and hopes.⁷³⁰ In fact, a carpet holds within itself some of the secrets of the innermost feelings of the weaver who make the carpet their medium of expression. More importantly, unlike so many other activities that women perform which are not seen, the carpet is tangible proof of their art and their hard work for months. Ms. Karami says once you begin weaving, you can see the new carpet forming centimeter by centimeter under your finger and you feel a sense of accomplishment. She says weavers have artistic spirit and not every job requires artistic spirit. She feels that weaving is creating a scene on a blank, white canvas, creating scenery from nothing. She says weavers give life to abstract designs through their fingertips.⁷³¹ Ms. Taheri,

⁷²⁸ Miriam Schapiro regarding her work in 1977 wrote, "I wanted to validate the traditional activities of women, to connect myself to the unknown women artists who had made quilts, who had done the invisible 'women's work' of civilization. I wanted to acknowledge them, to honor them." See Miriam Schapiro, "Notes from a Conversation on Art, Feminism, and Work" in Sara Ruddick and Pamela Daniels, eds, *Working It Out: 23 Women Writers, Artists, Scientists, and Scholars Talk About Their Lives and Work*, (New York: Pantheon, 1977) 296–312.

⁷²⁹ Andre Malraux, *The Voices of Silence*, cited in Valerie Hollister and Elizabeth Weatherford, "By the Lakeside There Is an Echo: Towards a History of Women's Traditional Art" (1978) 4:1 *Heresies Magazine* 119 at 121.

⁷³⁰ Interview No. 14. Interview by Ghazaleh Jerban, 14 October 2017, Kashan.

⁷³¹ Interview No. 9. Interview by Ghazaleh Jerban, 12 October 2017, Kashan.

who loves weaving pictorial carpets with hunting scenes, says when she weaves, it is like she is creating a garden and giving life to birds, gazelles and flowers.⁷³² Ms. Yekta believes weaving is a profession of love, and that if you look at the design plate with love, it will speak to your soul. According to Ms. Yekta, a master weaver fully puts her heart and mind into each carpet she weaves, and this makes her work exceptional.⁷³³ In fact, this beautiful art is not just the making of carpets but also the intertwining of the weaver's soul, love, traditions, and beliefs in every knot that is tied on their carpet.⁷³⁴ Ms. Ghadami says that the happiest and most skilled weavers are those who enjoy what they do. This enjoyment is a mixture of social and individual emotions: feelings of belonging, feelings of distinction and recognition, notions of virtue, and the satisfaction of creating tangible outcomes.⁷³⁵

Attending the carpet weaving workshops where women can exercise their TK and practice creativity leads to their increased self-esteem and self-reliance. For women weavers, weaving is deeply rooted in their spirituality and identity. Among the participants, there were women who mainly attended the workshop for its positive spiritual and mental impacts, especially during the time that the holy shrines' carpets were being woven at the workshops. According to Ms. Ghadami, during that time, there was a high number of volunteers who were interested in working on an honorary basis without receiving money in the hope of receiving spiritual reward from God. Among them, Ms. Ghadami says, was a lawyer whose child was ill. Some women consider weaving a work of piety, in that it may bring reward in the other world.⁷³⁶ Even weavers whose primary incentive is economic gain, see the money they received for weaving the holy shrine's

⁷³² Interview No. 5. Interview by Ghazaleh Jerban, 11 October 2017, Kashan.

⁷³³ Interview No. 10. Interview by Ghazaleh Jerban, 13 October 2017, Kashan.

⁷³⁴ See Carol Bier, *Woven from the Soul, Spun from the Heart: Textile Arts of Safavid and Qajar Iran, 16th-19th Centuries* (Washington D.C. Textile Museum, 1987) at 8–10. The title of the book is borrowed from the poetry from the 11th century by Farokhi Sistani, an Iranian poet.

⁷³⁵ Interview No. 2. Interview by Ghazaleh Jerban, 10 October 2017, Kashan.

⁷³⁶ Interview No. 2. Interview by Ghazaleh Jerban, 10 October 2017, Kashan.

carpets differently and believe that their work and wages were infused with “*barakat*”, a divine and blessing force bringing abundance and prosperity. This sense of worthiness and virtue is also connected to the idea of being in the service of God. Each weft passed is believed to bring benefactions (*hasanat*) to the weavers, their family, and to the wider community. Weavers’ ideology is expressed in their weaving practices. At the workshops, I observed that the weavers start and finish their work in the name of God. At the workshop entrance, there is a sign advising to enter the workshop with clean body and mind, which is called *wuḍū* (the Islamic procedure for cleansing parts of the body, a type of ritual purification).⁷³⁷ As discussed earlier, Iranian handwoven carpets should not be seen just as a commodity; rather, they are an inseparable part of weavers’ cultural identity. Seeing carpets in isolation without paying attention to their context overlooks the integral position they have in weavers’ life.

4.7.2 Carpet Weaving: Empowering or Disempowering?

Carpet weaving is one of the most tedious professions, which requires long hours of static work and can be a high-risk occupation for developing musculoskeletal disorders as repetitive movements and contact stress are common.⁷³⁸ Incorrect postures and no backrest or support in

⁷³⁷ More specifically, some weavers purposefully weave irregularities into their creations as a reminder that humans cannot duplicate the perfection of Allah. This practice is avoided in commercial and collective workshops as the products are market-focused. Unlike nomadic and cottage carpets, town workshops are more market-oriented. Mirza-amini, “Examining Various,” *supra* note 583 at 91. However, too much attention to economic aspects may lead to a loss of artistic aspect. Although the current trend is to produce carpets for sale, it should be borne in mind that the specifics of each regions’ carpets should be safeguarded by resisting any harmonizing pressure imposed by the market. Even in the Safavid period, when weavers in the royal workshops were commissioned to produce carpets, the kings were concerned about conserving authenticity of each region’s specifics by avoiding imposing weaving standards. According to one source, the king issued an order that each region should keep weaving in their own style. Jouleh, *A Research*, *supra* note 596 at 17. Herbert Coxon in his book, *Oriental Carpets*, *supra* note 629 at 56–57 writes: “the present Shah, Nasr Eddin, [of the Qajar dynasty] has forbidden the importation of foreign wools and dyes, and ordered that all carpets manufactured in his dominions must be made in the old recognized Persian patterns, free from European designs.”

⁷³⁸ See generally Jalil Nazari et al, “Working Conditions in Carpet Weaving Workshops and Musculoskeletal Complaints among Workers in Tabriz – Iran” (2012) 2:2 Health Promot Perspect 265.

weavers' seats, in addition to repetitive movements, result in abnormalities and deformities of the spine, arms, fingers,⁷³⁹ legs, and pelvis.⁷⁴⁰



Figure 26
Two weavers showing their hands and the impact of weaving on their fingers
Toranjomehrab workshop, 2017
Photo credit Ghazaleh Jerban

Some feminists have argued that the practice of carpet weaving is exploitative and reinforces a gender ideology that proclaims that women should be at home.⁷⁴¹ Paradoxically, however, the interviews revealed that carpet weaving affords women a certain autonomy. The participants' everyday life experiences of weaving in Kashan goes against what Minoo Moallem calls "the sensationalist discourse of humanism."⁷⁴² The depiction of women weavers' exploitation is part and parcel of various writings on carpet weavers from the late nineteenth century to the present.⁷⁴³

⁷³⁹ In order to avoid finger deformities, some weavers use a hook to pick the warps instead of using their fingertips. Using a hook is more common among the younger generation as they are more careful about their appearance and health.

⁷⁴⁰ Alireza Choobineh, Houshang Shahnava and Mohammadali Lahmi, "Major Health Risk Factors in Iranian Hand-Woven Carpet Industry" (2004) 10:1 International Journal of Occupational Safety and Ergonomics 65.

⁷⁴¹ See e.g. Zohreh Ghavamshahidi, "Bibi Khanum: Carpet Weavers and Gender Ideology in Iran" in Eileen Boris and Elisabeth Prügl, eds, *Homeworkers in Global Perspective: Invisible No More* (New York: Routledge, 1996) 111–128.

⁷⁴² Moallem, *Persian Carpets*, *supra* note 4 at 95.

⁷⁴³ Moallem, *Persian Carpets*, *supra* note 4 at 91. According to Moallem, many feminist or gender-based writings on carpet weavers focus on the exploitation of women through global capitalism, classic patriarchy representing pre-modern and religious patriarchy, and modern secular patriarchy. See e.g. Ghavamshahidi, "Bibi Khanum," *supra* note 741.

While such feminist writings have contributed enormously to an understanding of the exploitative conditions within which women in the Global South are located, this literature has paid less attention to the ways in which women can use weaving as cultural capital,⁷⁴⁴ enabling them to negotiate, resist, and improve their situation. This discourse of victimization and powerlessness according to Moallem creates “space for a rescue narrative that continues to be used to empower Western imperialist and missionary feminism of both religious and secular backgrounds, justifying old and new forms of colonialism.”⁷⁴⁵ In keeping with the visual depictions of women weavers as victims,⁷⁴⁶ many feminist writings on carpet weavers focus on the exploitative systems within which women weavers are located and therefore leave no space for the agency of the weavers, even though women weavers are part of one of the oldest and most effective web-like (communal) systems of working. Third World feminism recognizes the importance of not reproducing the stereotype of the monolithic woman as the quintessential victim. Women’s roles within, and experiences with respect to, TK system and TK-based production are varied. The oversimplifications and emphasis on victimhood of women weavers as seen in various writings on carpet weavers⁷⁴⁷ have substantial effects on women’s lives.⁷⁴⁸ Such an approach fails to

⁷⁴⁴ In the field of sociology, cultural capital comprises the social assets of a person that promote social mobility in a stratified society. Examples of cultural capital would include knowledge, skills, and education. Pierre Bourdieu, “The Forms of Capital” in John Richardson, ed, *Handbook of Theory of Research for the Sociology of Education* (New York: Greenwood Press, 1986) 241–260.

⁷⁴⁵ Moallem, *Persian Carpets*, *supra* note 4 at 91 and see also 87-95 where she argues that depicting women carpet weavers as powerless and victims was beneficial for British and US imperialism as such pictures lead to what she calls affective consumptions. According to her, the mobilization of affects and emotions serves a “do-good consumerism” more than challenging the social inequality and exploitative conditions that women weavers experience.

⁷⁴⁶ See e.g. Ghavamshahidi, “Bibi Khanum,” *supra* note 741.

⁷⁴⁷ Moallem, *Persian Carpets*, *supra* note 4 at 91.

⁷⁴⁸ Ratna Kapur, “Revisioning the Role of Law in Women’s Human Rights Struggles” in Saladin Meckled-García & Basak Çali, eds, *The Legalization of Human Rights: Multidisciplinary Perspectives on Human Rights and Human Rights Law* (London: Routledge, 2006) 93–107 at 98–99.

understand the complexities of women's lived experience and the spectrum of agency and subordination that they are subject to in their daily lives.

The “moralist and humanist framework”⁷⁴⁹ of the existing feminist writings on women weavers has led to creation of a decontextualized knowledge. Detached and disconnected from the context of carpet weavers' lives and also from the transformation of the carpet industry and its political economy, such a picture undermines the possibility and potential for women weavers and networks of solidarity to improve their situation. In these forms of representation, both women weavers' experiences and their agency are ignored. Women weavers are mostly seen as filling a function in the chain of production and their rich tradition of collaboration and cooperation remains silenced and suppressed. It is important, however, to note that weaving itself is an act of resistance, as it strengthens foundational cultural ways of knowing and being, including ceremonies, social networks, self-sufficiency, traditional training, intergenerational learning, and the human-nature symbiotic relationship.⁷⁵⁰ Weaving is a way for weavers to take control of and have a say in their family through both financial remuneration and cultural respect for their work. Generally speaking, weavers who show initiative, who can weave complex designs and compositions, and who are able to supervise the making of a carpet from beginning to end, are seen as accomplished and strong women in the community. Even when machine-woven carpets were introduced, such weavers refused to relinquish the power they had over controlling their work and continued to use traditional techniques that were in harmony with their culture and nature. While often seen as illiterate and lacking any cultural capital,⁷⁵¹ women weavers, being mindful of their environment and avoiding any waste, have used the endogenous traditional technology of production and

⁷⁴⁹ Moallem, *Persian Carpets*, *supra* note 4 at 19.

⁷⁵⁰ For the relationship between weaving and sustainability see Molly Bigknife Antonio, *Sitting to My Loom: Weaving Sustainability Through Navajo Kincentric Wisdom* (PhD Thesis, Prescott College, 2019) [unpublished].

⁷⁵¹ Moallem, *Persian Carpets*, *supra* note 4 at 143.

natural renewable materials with much less harm and sometimes no harm to the environment compared to modern industrial methods and material. For instance, even the yarn residue falling off the loom is collected by women for making cushions and pillows, since according to the women weavers' religious and cultural beliefs and teachings, natural resources are gifts that God has bestowed upon humans; therefore, any waste of these resources should be avoided.



Figure 27
Recycle box in Tornajmehrab workshop where fibre residues are collected
Photo credit Ghazaleh Jerban

In the midst of modern economic and social pressures to abandon the practice, weaving can still be seen as an empowering form of resistance. In fact, weaving can be seen as one of many strategies for women weavers to exercise control over their lives. Weaving is a strategy that has been employed to solve the contradiction between gender ideology,⁷⁵² which sees men as breadwinners and women as housewives, and the need for women to gain financial independence and generate income. Carpet weaving connects the private sphere with the public sphere and the home with the market. If recognized, valued, and properly compensated, carpet weaving allows

⁷⁵² As Lourdes Beneria and Martha Roldan explain, gender ideology includes the ranking of traits and activities in a way that grants males superior value and thus more access to resources that generate continued male domination and female subordination. For more details, see Lourdes Beneria and Martha Roldan, *The Crossroads of Class and Gender: Industrial Homework, Subcontracting, and Household Dynamics in Mexico City* (Chicago: The University of Chicago Press, 1987) at 12.

women an opportunity to participate in local, national, and global economy. The handwoven carpet industry has a high potential for job creation compared to other economic projects where huge amounts of money are invested to create only few jobs.⁷⁵³ With a small amount of investment to set up a carpet loom, various jobs can be created leading to a final product that has a very high value added and can be exported. Moreover, the industry can run throughout the year, as, unlike the agriculture sector, the jobs are not seasonal.

Weaving income decreases women's financial dependence on their husbands and provides them with some level of decision-making power regarding household expenditures and personal expenses such as travel. Ms. Ghadami says that she pays out of her own pocket for the religious trips that she likes to take. Since her husband does not pay for her trips, the chances of him disagreeing with them are very low. She asserts that since women in the younger generation refuse to work as weavers (because they see weaving as a low prestige job), they do not benefit from the positive impact that weaving may have on their life. She believes that most of the conflicts between young couples and the consequent high rate of divorce⁷⁵⁴ among them arise from the fact that women are generally financially dependant on their husbands. In her view as an elderly person, carpet-weaving income, although modest, provides women with a level of financial independence that is necessary for every strong and proud woman.⁷⁵⁵

Moreover, the resultant visibility of women's work in the form of a tangible carpet is empowering, as not only it satisfies the desire to create something permanent, but is also a

⁷⁵³ According to one study, the cost of creating jobs in the carpet sector is one tenth of the cost of creating jobs in other industries. For more detail, see Farzaneh Chavoshbashi, "Iranian Carpet Economics: Examining the Position of Carpet in National Economy and Its Role in Employment and National Production" (2013) 1:2 Art Research Journal 53 [original in Farsi].

⁷⁵⁴ According to the latest available official statistics, the divorce-to-marriage ratio was 29% in the fiscal year ending in March 2017. In a total of 609,000 marriages during this period, the 175,000 divorces were the highest number ever recorded in the country. < <https://www.sabteahval.ir/Default.aspx?tabid=4821>>.

⁷⁵⁵ Interview No. 2. Interview by Ghazaleh Jerban, 10 October 2017, Kashan.

testimony of the weavers' knowledge and economic contribution to families and society in large.⁷⁵⁶ Ms. Hashemi also believes that working as a weaver creates a sense of productivity and self-worth that she, as a proud independent woman, appreciates.⁷⁵⁷ The financial independence of weavers from their husbands enables them to survive in cases where they divorce or lose their husband. In fact, the economic and social vulnerability of families headed by women decreases significantly when the woman is a weaver as weaving provides both a source of income and a network of colleagues where women offer each other support and intimacy during tough times in their lives. Working at the collective weaving workshops in a relaxed women-only community provides women weavers with a space to get out of the private and sometimes isolating sphere of the house and socialize with their colleagues while weaving and generating outcome. Ms. Yekta, a 35-year-old widow who recently lost her husband, says that her colleagues' emotional support and the meditative nature of weaving, which relieves the mind from anxiety and stress, helped her to overcome her PTSD and depression after the death of her husband.⁷⁵⁸

4.8 Inadequacy of Conventional IPRs to Protect Women's Skill in Carpet Weaving

As discussed earlier, Iranian handmade carpet production entails techniques that are several centuries old and have been passed down from one generation of weavers to the next. The process of design and weaving involves different skills, and it may take months to complete each carpet. Every carpet is a unique piece of handmade artistic work. In this section, I examine the effectiveness and sufficiency of current IP mechanisms to protect Iranian carpet industry as a sector with high participation by women. Certain features of Iranian carpets that require protection

⁷⁵⁶ Interview No. 2. Interview by Ghazaleh Jerban, 10 October 2017, Kashan.

⁷⁵⁷ Interview No. 3. Interview by Ghazaleh Jerban, 10 October 2017, Kashan.

⁷⁵⁸ Interview No. 10. Interview by Ghazaleh Jerban, 13 October 2017, Kashan.

include motifs, design, plan, material, styles, specific types of weaving and weaving processes employed by women, and TCEs associated with weaving. It should be borne in mind, however, that in an attempt to use the existing IPRs system to protect Iranian handwoven carpets, carpet weaving should not be reduced to a subset of technical knowledge, dissociated from the embodied experience of the weaver and the collaborative networks of weavers, designers, etc.

The design and the plan of Iranian carpets are embedded in traditional Iranian art and architecture. Since carpet designs and plans are artistic creations, it is not a surprise that copyright is the first among the conventional IPRs that comes to mind for protecting Persian carpets. However, to be eligible for copyright protections, some prerequisites should be fulfilled. The originality requirement of the copyright cannot be satisfied for the pre-existing traditional designs and plans as they belong to the past, and most of the time their authors are unknown. In the case of new carpet designs and plans based on the existing themes, depending on the level of creativity the new designs have, they can be considered as original and therefore copyrightable.⁷⁵⁹ In Iran, new carpet designs can be registered under the Copyright Law (*Act for Protection of Authors, Composers and Artists Rights*) provided that their originality is examined and approved by Iran's National Carpet Centre.⁷⁶⁰ The application of copyright law to pre-existing carpet designs and plans, however, has some fundamental limitations. First, whereas copyright requires an identifiable author, the notion of authorship is a problematic concept in many traditional societies.⁷⁶¹ Secondly, copyright has a time limit. For folkloric expressions embedded in handwoven carpets that are important elements of a weaver's cultural identity, it would be more appropriate to have permanent

⁷⁵⁹ Janke, "Case Studies," *supra* note 644.

⁷⁶⁰ Thirty years after the death of author. *Act for Protection of Authors*, *supra* note 543, Article 12.

⁷⁶¹ See e.g. *Milpurrruru & Ords v Indifurn Pty Ltd & Ords* 1994 FCA (Federal Court of Australia) 1544 Von Doussa J. *Milpurrruru* case disentitles representatives of the Aboriginal group of which an artist is a member from either asserting communal ownership or from claiming in respect of communal harm. The decision in *Milpurrruru* is illustrative of the importance for comprehensive sui generis legislation to protect TK and TCE.

protection. Third, copyright normally requires works to be fixed, and some of the folklore associated with carpet production, such as songs, rituals, ceremonies, are not fixed, but are passed on orally from generation to generation. These issues make it clear that protection under copyright law is not the answer to the question of how to protect Persian carpets as they are community-owned heritage with significant economic and cultural value.

Protecting Iranian carpets' designs and plans through an industrial design mechanism has also similar shortcomings as copyright.⁷⁶² Under Iranian design law, only the article would be registrable, not the actual art involved in the weaving as this would be considered to be a method of manufacture. The law also requires the design to be new, and it offers protection to individuals and not a collective work of a community that is developed throughout generations. The carpet's ability to express, among other things, the possibility of community and collaboration is in contrast with the IP regime's ideal of an individual author. Moreover, the duration of design protection is maximum 15 years,⁷⁶³ shorter than what is provided under Iranian copyright law, which is 30 years after the death of the author.⁷⁶⁴

As another IP tool, trademark functions mainly in the context of business transactions. Every carpet producer and merchant can use trademarks for marketing their carpet, which prevents competitors from using the same trademark for their carpets. However, it does not provide protection against producing a similar carpet under a different trademark. Collective marks can also be used to distinguish carpets produced by one producer against the other. Collective marks

⁷⁶² For a discussion on the use of design law for protection of TK and TCE, see Margo A. Bagley, "Illegal Designs? Enhancing Cultural and Genetic Resource Protection through Design Law", (2017) CIGI Paper No. 155, <<https://www.cigionline.org/publications/illegal-designs-enhancing-cultural-and-genetic-resource-protection-through-design-law>>.

⁷⁶³ *Patents, Industrial Designs and Trademarks Registration Act*, *supra* note 539, Article 28(d).

⁷⁶⁴ Thirty years after the death of author. *Act for Protection of Authors*, *supra* note 543, Article 12.

can be used by members of a specific group that owns them.⁷⁶⁵ Once the collective mark is registered, it can be affixed as a label on the reverse side of the carpet, in terms that have sufficient conformity with standards and principles of registered application. On the other hand, certification marks, which are not yet recognized in the Iranian IP laws,⁷⁶⁶ are usually given for compliance with defined standards, but are not confined to any membership. As such, they may be used by anyone who can certify that the products involved meet certain established standards. Therefore, the owner of a certification mark can only prevent unauthorized use of the mark by goods that fail to comply with the requisite qualitative standards. In other words, if a competitor in China produces a carpet that meets the requisite qualitative standards of a certification mark (that does not have a geographical origin requirement) for a subgroup of Iranian handwoven carpets, s/he can use the mark even though the carpet has a different geographical origin and is not an Iranian carpet. The immediate impact of such copying is the creation of a gap between the carpet and the traditions from which it originates. This, ultimately, apart from economic factors in the world market, can undermine the existing assumptions regarding origin of the product, which itself is considered a very crucial asset.

Among conventional IPRs, geographical indication (GI) is another potential tool to protect Persian carpets. The aim of GI is to protect a distinctive product that has accumulated goodwill in

⁷⁶⁵ *Patents, Industrial Designs and Trademarks Registration Act*, *supra* note 539, Articles 30(b) and 28(d).

⁷⁶⁶ There has been a Bill at the parliament which recognizes Certification Marks. The bill has been in Parliament since 2017. Islamic Republic of Iran, *Bill For Protection of Industrial Property*, 2017, s. 100, <https://rc.majlis.ir/fa/legal_draft/show/981079>. For more about certification marks in Iranian IP laws, see Mansour Amini and Mohammad H. Khodadadi, "Certification Mark and its Kinds in Comparison to Other Trade Marks" (2019) 15:1 Private Law Journal 1, [original in Farsi]. Certification marks can protect the geographic origin of production and are not necessarily limited to the character or quality aspects of a product. Geographic origin protected by certification marks is distinct from geographical indication (GI) protections governed by Articles 22-24 of TRIPS. For more details, see Bitá Amani, "A Penchant for Persian Rugs Over Palatable Products: The Use of Geographic Appellations as Trademarks" Part I (2000) 14:2 Intellectual Property Journal 185 and Bitá Amani, "A Penchant for Persian Rugs Over Palatable Products: The Use of Geographic Appellations as Trademarks" Part II (2000) 14:2 Intellectual Property Journal 313.

a certain region over a period of time. In Iran, there exist more than 30,000 places where carpets are woven in a professional manner by the inhabitants of particular areas.⁷⁶⁷ The environmental aspects of each particular region has its own effects on the carpet in terms of kind of material, the design traditionally used in that region, the dyes prepared from the local, Indigenous plants of the region, and special wool from sheep raised in the area. To this add the human factor, which is women weavers' methods and skills that are used in each particular region. For this reason, various kinds of Iranian carpets are identified by the geographical name of the very region where they are woven because these characteristics are different from region to region. The major centres of carpet weaving in Iran include Mashhad, Tabriz, Esfahan, Turkmen, Naeen, Kashan, Kerman, and Torbat Heidariyeh. Accordingly, a carpet's fame is particularly attributed to its geographical region and the attribution to these regions is itself a valuable capital. Yet, carpet designs are stolen, copied, counterfeited and imitated. TK-based artefacts such as carpets are an important commercial product; therefore, countries register their TK-based products at a global level as GI. TK, however, should require that certain prerequisites be fulfilled in order to be eligible to be protected under GI. First, it must be identified as a good. Second, the 'knowledge' in the good must be associated with a certain geographical area. Third, it must specifically enjoy a reputation. Iranian handmade carpets have all such prerequisites for GI protection.⁷⁶⁸

The best type of protection of GI is provided by the TRIPS Agreement, both because of the number of countries that have acceded to the Agreement (above 150), and the wide prosecution

⁷⁶⁷ Pardis Moslemzadeh Tehrani and Nazura Abdul Manap, "Urgency and Benefits of Protecting Iranian Carpets using Geographical Indications" (2013) 18 Journal of Intellectual Property Rights 72 at 73. See also Amani, "A Penchant for Persian Rugs" *supra* note 766 where she extensively examines the potential of using trademarks and GIs for protection of Persian carpets.

⁷⁶⁸ *Agreement on Trade-Related Aspects of Intellectual Property Rights*, *supra* note 352, Article 22 defines GI as "Geographical indications are, for the purposes of this Agreement, indications which identify a good as originating in the territory of a Member, or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin."

offered under the Agreement for the breaching of geographical indications. However, such a protection under the TRIPS Agreement would not be available for Iranian products unless Iran joins the WTO. Given that Iran is not a member of TRIPS, the Lisbon Agreement for the Protection of Appellations of Origin and their International Registration⁷⁶⁹ has been used by Iran in order to protect GI in carpets at the international level. Under the Lisbon Agreement, the member states undertake to, within their territory and according to the provisions of the said instruments, protect Appellations of Origin belonging to other members.⁷⁷⁰ According to the Agreement, appellations of origin mean the geographical name of a country, region, or locality, “which serves to designate a product originating therein, the quality and characteristics of which are due exclusively or essentially to the geographical environment, including natural and human factors.”⁷⁷¹ In order to protect a product under the Lisbon Agreement, first the appellation is required to be protected in its country of origin and within its own borders and then registered in the WIPO’s International Register.⁷⁷² Iran has been party to the Lisbon Agreement since 2006. According to this Agreement, Iranian carpets can be protected on the basis of appellation of origin, reputation, quality and characteristics. Under the Lisbon agreement, Geographical Indications, as opposed to Collective Marks, do not require renewal of the registration and they shall be protected for an unlimited period of time after their registration and upon complying with the requirements as indicated in the application for registration. So far Iran has registered 27 under the Lisbon agreement for its handwoven carpets.⁷⁷³ However, the number of members to the Lisbon Agreement is very limited

⁷⁶⁹ *Lisbon Agreement for the Protection of Appellations of Origin and their International Registration*, 31 October 1958, 923 UNTS 205.

⁷⁷⁰ *Lisbon Agreement*, *supra* note 769 Article 1(2).

⁷⁷¹ *Lisbon Agreement*, *supra* note 769, Article 2(1).

⁷⁷² *Act for Protection of Geographical Indications*, *supra* note 540 provides domestic protection.

⁷⁷³ GI registrations under the Lisbon agreement are published in the official Bulletin and can be searched through the Lisbon Express Database available at <https://www.wipo.int/ipdl/en/search/lisbon/search-struct.jsp>

and only 30 countries have joined it, as of the time of writing.⁷⁷⁴ Notably rival countries such as China, Turkey, Pakistan, India and Nepal that are the main competitors of Iranian carpets in international markets are not members to these Agreements so Iran cannot take legal action against unauthorized use of GI belonging to Iranian carpets by these countries.⁷⁷⁵ For example although Sarough and Kerman carpets are registered under the Lisbon Agreements, China has used the name “China Sarough” for its unauthentic copies and India applies the label “Indo-Kirman” to carpets woven in India in a floral design derived from Kerman carpets.

⁷⁷⁴ For a list of members to Lisbon Agreements, see https://www.wipo.int/treaties/en/ShowResults.jsp?lang=en&treaty_id=10.

⁷⁷⁵ The best type of protection of GI is provided by the TRIPs Agreement, both because of the number of countries that have acceded to the Agreement (above 150), and the wide prosecution offered under the Agreement for the breaching of geographical indications. However, such a protection under the TRIPs Agreement would not be available for Iranian products unless Iran joins the WTO.

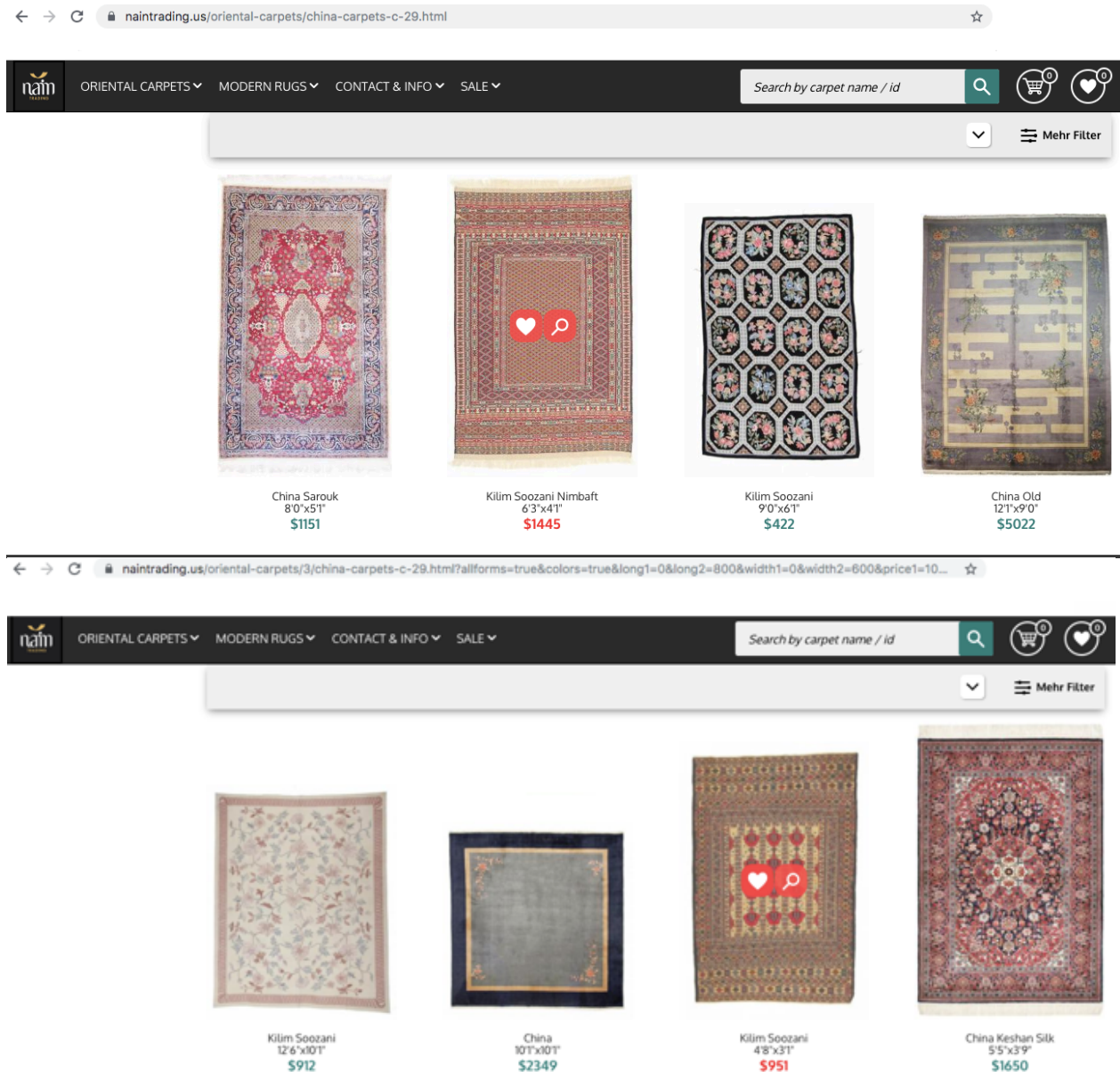


Figure 28
Screenshots of a website selling China Sarouk (Sarough) and China Keshan (Kashan) Carpets
Photo credit, screenshots taken by Ghazaleh Jerban from her web search

Moreover, GI protection can never cover all aspects of Iranian hand-woven carpets as they are more than a commodity. One should not allow the international fascination with Iranian handwoven carpets as a commodity to conceal the collaborative work involved in carpet weaving and its cultural context. Seeing carpets in isolation and separating them from their context of production overlooks the rich culture of collaborative, artistic, and technical knowledge of women

weavers, factors that should be taken into account when additional TK and TCE protection mechanisms are being designed. A TK and TCE instrument should provide its beneficiaries with both economic and moral rights. In the case of carpets for example, as discussed in the next sections, such recognition can lead to more visibility of women weavers, which in turn strengthens their agency.

4.9 TK and TCE Misappropriation and its Impact on Women: The Case of Persian Carpets

This section examines how the lack of an international TK and TCE instrument protecting both economic aspects and cultural value of TK and TCE enables various forms of cross-border misappropriation of Persian Carpets and how it impacts women weavers. More specifically, I examine two forms of misappropriation, namely (a) the production of inauthentic copies and (b) the use of Persian carpets in other industries apart from the textile sector.

4.9.1 Cultural Appropriation in Other Industries

Producing inauthentic copies is the primary form of Persian carpet misappropriation; however, misappropriation is not limited to producing counterfeit copies. Carpet as a traditional cultural manifestation is a source of inspiration and creativity for cultural industries, such as the entertainment, fashion, publishing, crafts and designs industries. For example, Persian carpet motifs and designs continue to influence fashion designers. Paisley (*botteh-jēghēh*),⁷⁷⁶ which is a famous design in Persian carpets, is widely used by the Western fashion industry. It has been extensively used by labels such as Liam Gallagher's Pretty Green and Etro.⁷⁷⁷ Hermes' 2013

⁷⁷⁶ It is commonly used together with flowers as part of the symbol for the garden of paradise. Some researchers have suggested that it represents a stylized version of such diverse objects as a pine cone, a cypress tree, a leaf, a fetus, and Zoroastrian flame. For more details, see Reza T. Ahmadi, "Symbolism in Persian Rugs" (1997) 3:1 *Manuscripta Orientalia* 62 at 63.

⁷⁷⁷ Joobin Bekhrad "The Timeless Appeal of the Persian Rug", *BBC* (6 December 2017), <<http://www.bbc.com/culture/story/20171206-the-timeless-appeal-of-the-persian-rug>>.

“Tabriz collection”, named after the Iranian city, was inspired by Persian carpets and particularly Tabriz carpets.⁷⁷⁸



Figure 29
From Hermes' 2013 Tabriz collection
Photo source Pinterest.com

⁷⁷⁸ Bekhrad “The Timeless,” *supra* note 777.

Givenchy and Alexander McQueen have also used Persian carpets in their collections.⁷⁷⁹ Marlou Breuls, a Dutch designer, won the People’s Choice Award at the 2016 Mercedes-Benz Fashion Week in Amsterdam for an outfit largely composed of an actual Persian carpet.⁷⁸⁰



Figure 30
Head to toe Persian carpet outfit
Photo credit Alexander McQueen’s Design



Figure 31
A Persian carpet dress
Photo credit Marlou Breuls’ Design

Putting such uses in the context of copyright law, arguably they can fall under the definition of derivative work.⁷⁸¹ In other words, while a copyright holder’s exclusive rights normally include a right to authorize or prevent the adaptation of the protected work, in general this does not prevent

⁷⁷⁹ Bekhrad “The Timeless,” *supra* note 777.

⁷⁸⁰ Bekhrad “The Timeless,” *supra* note 777.

⁷⁸¹ *Berne Convention for the Protection of Literary and Artistic Works*, *supra* note 353, Article 2(3). William J. Braithwaite defines derivative work as “the contribution of further creative effort to an existing intellectual product to produce a new and different intellectual product.” William J. Braithwaite, “Derivative Work in Canadian Copyright Law” (1982) 20:2 *Osgood Hall Law Journal* 191 at 192.

creators from being inspired by other works or from borrowing from them. A new interpretation, arrangement, adaptation, or collection of already existing materials can result in a new distinct expression which is sufficiently original.⁷⁸² However, it should be borne in mind that the degree to which derivative works are permitted and protected differs in various jurisdictions.⁷⁸³ Although derivative work is not defined in Iran's existing copyright Act,⁷⁸⁴ the Act provides protection to works inspired and derived from TK and TCE of ILCs provided that the new work is original.⁷⁸⁵ More specifically the copyright protection is extended to “original articles of applied handicraft and industrial art, carpet and rug designs”⁷⁸⁶ and “original works based on folklore and national heritage of culture and arts.”⁷⁸⁷ The Act does not require any permission, consent or benefit-sharing with the holder communities.

On the other hand, while carpet designs, motifs and patterns are products of the human mind that have been passed down through the generations and fall under the definition of TCEs, due to the lack of strong protection mechanism for TCEs in the current international IP system, most TCEs are in the public domain and thus remain vulnerable to “cultural appropriation.” According to Vézina, cultural appropriation can be defined as the taking of a cultural element from a community and repurposing it in a different context without consent, attribution or compensation

⁷⁸² WIPO, “Intellectual Property and Traditional Cultural Expressions/Folklore”, Booklet no.1 <https://www.wipo.int/edocs/pubdocs/en/tk/913/wipo_pub_913.pdf>.

⁷⁸³ For example in Canada, a derivative work can be original and yet infringe the adaptation right of the source's author. See e.g. *Théberge v Galerie d'Art du Petit Champlain inc.*, 2002 SCC 34 at par 73, wherein the Supreme Court of Canada confirmed that s. 3(1) of the *Copyright Act* does “confer on artists and authors the exclusive right to control the preparation of derivative works.”. For more details, see “Copyright Comparison Series - Part 1: Derivative Works in Canada and the U.S.” *Carson Law*, (16 March 2019), <<https://www.carsonlaw.ca/news/2019/5/15/copyright-comparison-series-part-1-derivative-works>>.

⁷⁸⁴ Section 2(3) of Islamic Republic of Iran, *The Comprehensive Bill for Protection of Intellectual Property*, which was introduced in 2015, lists derivative works as copyrightable work. The Bill is still under review at the Parliament, <https://rc.majlis.ir/fa/legal_draft/show/981096>.

⁷⁸⁵ *Act for Protection of Authors*, *supra* note 543, Article 2.

⁷⁸⁶ *Act for Protection of Authors*, *supra* note 543, Article 2(9).

⁷⁸⁷ *Act for Protection of Authors*, *supra* note 543, Article 2(9).

of the TCE holders.⁷⁸⁸ Many businesses today, small, medium and large, in developed and developing countries, create wealth using the forms and materials of TK and TCE. As illustrated through the examples in figures 25–28, borrowing of stylistic elements from other cultures is a common practice in the fashion industry, which makes it very susceptible to cultural appropriation. Given the lack of strong legal mechanism to protect TCEs, the way in which the fashion industry operates is such that designers who freely integrate elements from other cultures into their own creations often do not ask for permission.⁷⁸⁹ For example, in the case of Iranian carpets designs used in figures 25–28, no permission was sought by the fashion designers to copy the carpet designs. Moreover, many carpet designs and motifs have religious origins and using them in an insensitive manner can be offensive. For example, in Islamic cultures, a carpet design with Quranic verses cannot be used on socks or shoes that cover the feet.⁷⁹⁰ TCEs that are insensitively appropriated without paying proper attention to the cultural beliefs of the source communities can harm the cultural integrity of their holders.

⁷⁸⁸ Brigitte Vézina, “Curbing Cultural Appropriation in the Fashion Industry” (2019) 213 CIGI Papers 1 at 6.

⁷⁸⁹ See e.g. cases like Mixe Huipil, Urban Outfitters and the Navajo Name. Naomi Larsson, “Inspiration or Plagiarism? Mexicans Seek Reparations for French Designer’s Look-alike Blouse”, *The Guardian* (17 June 2015) <<https://www.theguardian.com/global-development-professionals-network/2015/jun/17/mexican-mixe-blouse-isabel-marant>>; Theresa Avila, “Indigenous Women are Fighting Back after a Famous Fashion Designer Stole their Culture”, *Mic* (19 June 2015) <<https://www.mic.com/articles/121008/this-designer-s-mexican-dress-is-a-lesson-in-cultural-appropriation>>; Noel Lyn Smith, “Navajo Nation, Urban Outfitters reach settlement”, *Farmington Daily Times* (17 November 2016), <<https://www.daily-times.com/story/news/local/navajo-nation/2016/11/17/navajo-nation-urban-outfitters-reach-settlement/94029162/>>.

⁷⁹⁰ Not every motif or symbol is considered sacred, but some carpet designs entail verses from the holy book of Quran which should not be touched without Wudu (a type of ritual purification). Touching Quranic verses with the lowest part of the body, i.e., foot is offensive in Islamic culture.



Figure 32
Carpet design used on socks
Photo source Pinterest.com

Although in the current IP system ‘borrowing from’ and inspiration are permitted, copying is not.⁷⁹¹ As can be seen in some instances, the Persian carpets’ designs and plans are entirely copied without any change. Hermes’ Tabriz collection, uses the name “Tabriz” and appears to give credit to the original source of the design. However, at the same time, the use of the name Tabriz might be a misappropriation of the city name. Country names (and by extension city names) are valuable intangible assets, which can be used for economic and cultural benefit. Therefore, the use of such names by entities that have no connection with the country (or in this case city) is

⁷⁹¹ WIPO, “Intellectual Property and Traditional Cultural Expressions/Folklore”, *supra* note 782.

problematic.⁷⁹² Giving credit is often missing where Iranian carpets designs are used. Neither has there been any compensation by way of sharing of the benefits with women weavers or design holding communities, mainly because no copyright or other forms of IPRs is established for them in the first place. As a result, outsiders appropriating Persian carpets without proper compensation to the source communities are materially profiting at the expense of women weavers or design holding communities who cannot participate in the profits made on the sale of the products incorporating their TK and TCEs.⁷⁹³ Moreover, if in the process of cultural appropriation the TCE is registered for trademark, industrial design, or copyright by a third party, the actual holders of the TCE cannot use their own cultural product in commerce as they may infringe on the trademark, industrial design, or copyright that is falsely obtained.⁷⁹⁴

4.9.2 Inauthentic Copies

Although the interview questions were not designed to examine the participants' point of view on the issue of legal protection of Persian carpets, nevertheless, during the interviews a number of the participants talked about the issue of Persian carpets' misappropriation by countries such as India and China.⁷⁹⁵ Persian carpets are an important source of income for women weavers, sometimes the only one; when other countries produce inauthentic copies, it deprives the weavers of the sales of their own authentic carpets. Imitations deny the weavers of authentic carpets the

⁷⁹² For more details about the use of country names, see Wend Wendland, "The Protection of Country Names and its Contribution to Development: A Brief Introduction to the Intellectual Property Issues," *IP-Unit University of Cape Town* (blog), <<http://ip-unit.org/2019/multilateral-matters-5-the-protection-of-country-names-and-its-contribution-to-development-a-brief-introduction-to-the-intellectual-property-issues/>>.

⁷⁹³ See e.g. William J. Hapiuk, "Of Kitsch and Kachinas: A Critical Analysis of the 'Indians Arts and Crafts Act of 1990'" (2001) 53:4 *Stanford Law Rev* 1009 at 1017.

⁷⁹⁴ This is also the case for unoriginal copies in a scenario where the Persian carpet designs are registered by Western authors. See, for example, *Tufenkian Import/export Ventures, Inc. v Einstein Moomjy, Inc.* 338 F.3d 127 (2003) in the USA, which is a copyright infringement case involving two textile designs. In November 1999, Tufenkian initiated the lawsuit, claiming copyright infringement on a design that Tufenkian had registered while it was initially based on Iranian Heris designs.

⁷⁹⁵ Interviews No. 2, 5, 6, 7, 8, 10, 11, 15. Interview by Ghazaleh Jerban, 10–15 October 2017, Kashan.

chance to get recognized and to benefit from their work, as under the current system the foreign imitators do not need to provide any recognition or benefit sharing. Under the differentiated or tiered approach⁷⁹⁶ to protection of TK, four different categories of TK exist: sacred, secret, narrowly diffused, and widely diffused TK. Although there may be varying degree of each category implicated in the carpet making, the fieldwork and in-person interviews show that for the most parts the knowledge of carpet making is in the category of widely diffused TK. Throughout history, countries were able to easily access and transfer the Persian carpet production knowledge, and today the secret of the Persian weaving has spread all over the world. For example, according to the historic records, the art of carpet weaving was introduced in India (1556-1605) by kings who brought in Persian weavers together with skilled designers mainly for producing carpets for their palaces.⁷⁹⁷ Moreover, pursuant to the 1979 Revolution, and later US embargo on Iran, many carpet entrepreneurs relocated their workshops to other parts of the world, including India, Pakistan, and China, where they could access a cheap labor force without experiencing the restrictions on importing and exporting that were imposed on carpets from Iran.⁷⁹⁸ This has resulted in the spread of the carpet production knowledge, and Iranian carpets' uniqueness is damaged.⁷⁹⁹ More

⁷⁹⁶ Chidi Oguamanam, "Towards a Tiered or Differentiated Approach to Protection of Traditional Knowledge (TK) and Traditional Cultural Expressions (TCEs) in Relation to the Intellectual Property System," (2019) 23 *The African Journal of Information and Communication* 1.

⁷⁹⁷ Abhijna Museum, "History and Collection of Carpets in India" (January 9, 2014), <<http://www.abhijna-museum.com/tag/carpet/>>.

⁷⁹⁸ Moallem, *Persian Carpets*, *supra* note 4 at 2–3, 133. Moallem has interviewed several such carpet traders who have transferred their production mainly to India and Pakistan, with some in Turkey due to the cost of labour in Iran. More specifically, one of them takes the most popular carpet designs among his clients to the South of China to be made, and then sells his products in Australia. In one of Moallem's interviews, a Turkish trader says that he has no problem importing carpets from Iran to Turkey, and once they are in Turkey they are easily exported to the United States or Europe.

⁷⁹⁹ See Youssef M. Ibrahim, "The World; The Magic Has Left the Persian Carpet", *New York Times* (12 February 1995), <<https://www.nytimes.com/1995/02/12/weekinreview/the-world-the-magic-has-left-the-persian-carpet.html>>.

importantly, due to the heavy sanctions⁸⁰⁰ on Iran limiting the country's exports, there has been a space for imitating countries to increase their share of global markets for handwoven carpets. Not only is Iran barred from exporting carpets directly to the United States, the sanctions also impose strict export restrictions on the country. There are strict financial prohibitions affecting the banking system of the country that limit financial transactions with other countries. This means, even if Persian carpets find their way to other countries, receiving the money for the deal is a significant challenge due to the ongoing economic sanctions. For instance, Iran's access to the Society Worldwide Interbank Financial Communications (SWIFT), which is a financial messaging service facilitating cross-border payments, is cut off. When a country's banks are cut off from SWIFT, it cannot pay for imports and cannot receive payment for exports.⁸⁰¹ Although Iran still ranks first in the global handwoven market, its carpet exportation has faced threats from other countries.⁸⁰² The latest study, conducted by the Islamic Parliament Research Center of Iran, shows that Iran's share of this global market has decreased from 41.24% in 2003 to 31.22% in 2013, while India, for

⁸⁰⁰ Since the 1979 revolution, Iranian carpets have been subjected to on-again, off-again U.S. sanctions. President Clinton lifted the embargo in 2000 before leaving office, in consideration of the often poor, rural weavers. President Obama re-imposed it in 2010 after another flaring of tensions. After the Joint Comprehensive Plan of Action (JCPOA) (known as the nuclear deal) was completed, the United States lifted long-term sanctions on carpets. U.S. President, Executive Order, "Revocation of Executive Orders 13574, 13590, 13622, and 13645 With Respect to Iran, Amendment of Executive Order 13628 With Respect to Iran and Provision of Implementation Authorities for Aspects of Certain Statutory Sanctions Outside the Scope of U.S. Commitments Under the Joint Comprehensive Plan of Action of July 14, 2015, Executive Order 13716 of January 16, 2016." *Federal Register* 81, no. 13 (21 January 2016), 3693. <https://www.treasury.gov/resource-center/sanctions/Programs/Documents/jcpoa_eo.pdf>. However, with the Trump administration's withdrawal from the deal, sanctions came back stronger. Re-imposition of the U.S. sanctions against Iran decreased the exports in the first seven months of the fiscal year ending in March 2019 by 20% compared with the corresponding period of the previous year. Eghtesad Online, "Decline in Exports of Iranian Hand-Woven Carpets" *Eghtesad Online* (4 December 2018) <<https://www.en.eghtesadonline.com/Section-economy-4/27552-decline-in-exports-of-iranian-hand-woven-carpets>>.

⁸⁰¹ For more details, see Aljazeera, "What SWIFT Is and Why It Matters in the US-Iran Spat" *Aljazeera* (5 November 2018) <<https://www.aljazeera.com/news/2018/11/swift-matters-iran-spat-181105172906627.html>>.

⁸⁰² With around 30%, Iran still has the highest share in the international carpet market. However, this figure used to be around 60% in the past. The slack due to falling Iranian production is taken up by other nations, especially China, India, and Pakistan. See Zahra Karimi, "International Trade and Employment in Labour-Intensive Sectors in Iran: The Case of Carpet-Weavers", (2008) 13:22 *Iranian Economic Review* 41 at 50.

example, has increased its share from 11.83% in 2003 to 26.36% in 2013.⁸⁰³ Iran's official export statistics from 1936 show that today's rival countries like India and Turkey were once among importers of Persian carpets.⁸⁰⁴ Today, India⁸⁰⁵ offers 65% of its carpets with Persian designs.⁸⁰⁶

The downswing of the Iranian carpet market, due the cheap labour in the rival countries, exacerbated by the sanctions⁸⁰⁷ on Iran, has had a huge impact on the carpet industry to the extent that, according to the participants, most of Kashan's weaving workshops had to close.⁸⁰⁸ Weavers have to do other jobs, such as janitorial work, to make ends meet.⁸⁰⁹ Iran's carpet industry provides a good illustration of how cross-border TK misappropriation due to the lack of international TK

⁸⁰³ Islamic Parliament Research Center of Iran, "Examining the State of Iranian Handwoven Carpet with a Focus on Rural Handwoven Carpet" (April 2018), [original in Farsi] <<https://rc.majlis.ir/fa/report/show/1053628>>.

⁸⁰⁴ Statistics of Iran's carpet export in 1936, cited in Moallem, *Persian Carpets*, *supra* note 4 at 105.

⁸⁰⁵ The official export statistics from 1936 show that today's rival countries like India and Turkey were once among importers of Persian carpets. Moallem, *Persian Carpets*, *supra* note 4 at 105.

⁸⁰⁶ Eiland Murry (1998), *New Directions for Iranian Carpets* (Calmann & King Ltd., London), cited in Zahra Karimi, "The Effects of International Trade on Gender Inequality in Iran— The Case of Women Carpet Weavers," in Roksana Bahramitash and Hadi Salehi Esfahani (eds.), *Veiled Unemployment: Islamism and the Political Economy of Women's Employment in Iran* (Syracuse, NY: Syracuse University Press, 2011) 166–190 at 179.

⁸⁰⁷ Almost 85% of Persian carpets were exported to the US before the Iranian revolution of 1979. Moallem, *Persian Carpets*, *supra* note 4 at 82. Losing such a big market has greatly harmed the country's carpet exports. With international financial transactions still a problem, even the tourists who come to Iran cannot pay for the carpets, unless they bring plenty of cash due to the credit card restrictions. As Moallem in *Persian Carpets*, *supra* note 4 at 134, writes:

The restriction imposed by the United States on Persian carpets has had several consequences: it has facilitated the production of lower-quality carpets outside Iran. It has led to the creation of new circulating centers in Istanbul, Dubai, and Abu Dhabi, where carpets could be brought from Iran and sold and it has made Persian carpets more expensive, given the multiple mediations involved in this process, without benefiting the weavers in Iran. Another effect is that Persian carpets are passed off as Turkish, Indian, or Afghani so they can enter the US market.

Arguably, a Persian carpet sold as Turkish, Indian, or Afghani is a case of the tort of passing off, which aims to protect the goodwill of a trader from misrepresentation. For more details about passing off in the case of Persian carpets, see Amani, "A Penchant for Persian Rugs" *supra* note 766, where she unpacks the meaning of "Persian" as a sign (much like debates over "Champagne") in relation to carpets.

⁸⁰⁸ Interviews No. 6, 7, 8, 11, 15. Interview by Ghazaleh Jerban, 10–15 October 2017, Kashan.

⁸⁰⁹ In a number of writings on the US embargo, the consideration for poor, rural loom workers is emphasized. For examples, see Steve Inskeep, "The Carpet Weaver of Shiraz" *NPR* (February 13 2016) <<https://www.npr.org/sections/parallels/2016/02/13/466538150/the-carpet-weaver-of-shiraz>>. See also Eric Pummer, "President Clinton Lifted the Embargo in 2000 Before Leaving the Office, in Consideration of the Often Poor, Rural Loom Workers Who Produce Them" *The Daily Dose*, (10 December 2013) and Thomas Erdbrink, "The Persian Rug May Not Be Long for This World," *The New York Times* (26 May 2016).

protection mechanism can adversely impact women. In the absence of protection mechanisms, rival countries have entered the market and decreased the share of Iranian carpet export as a labor-intensive product.⁸¹⁰ The harsh international competition has reduced the carpet price and weavers' real wages.⁸¹¹ In fact, the costly effects of competition are faced by women weavers who depend on carpet-making for living. In other words, intensified competition among developing countries for capturing the markets of labor-intensive exports such as handwoven carpets (where the female workforce is concentrated), in the absence of sufficient protection for Persian carpets, has led to lower wages. Consequently, women have left the industry as weaving is not economically justifiable anymore. The average earning of carpet weavers is much lower than the formal minimum wage, and most women are not interested in carpet weaving any more.⁸¹² Countries with the lowest production costs, mainly China and India, have been the winners in the global competition and their low wages are essential causes of their success in the export of hand-woven carpets. If such circumstances persist, Persian carpets cannot compete with Chinese and Indian carpet prices, and Iran will continue to lose its share to unoriginal copies from rival countries unless legal protection prohibits unoriginal copies.⁸¹³ In other words, the persistence of such situation results in a permanent recession in Iranian handwoven carpet industry in the long-run, which in turn leads to a labour flight in Iran from the carpet industry to other businesses. As a

⁸¹⁰ During 1994–2006, the share of carpets in non-oil exports has declined from 44.2% to 3.1%. For more details, see Karimi, “International Trade,” *supra* note 802 at 49.

⁸¹¹ Increasing supply coupled with more or less stable demand has pushed down the international price for carpets. According to Arman and Mohammadi, the average price for one square meter of woolen, hand-woven carpet decreased from USD 300 in 1981 to about USD 90 in 2005. Alireza Arman and Maryam Mohammadi, “The Study of Factors Affecting Iranian Hand-Woven Carpet Exports” (2005) 3 *Economic Studies Quarterly*, Chamran University.

⁸¹² A survey in 1986 showed that the average monthly wage of carpet weavers was more or less equal to legal minimum wage. Karimi, “International Trade,” *supra* note 802 at 61.

⁸¹³ According to the official reports the country has experienced a 10% loss of global market share in a 10-year period from 2003 to 2013. Islamic Parliament Research Center of Iran “Examining the State,” *supra* note 803. See also Karimi, “International Trade,” *supra* note 802 at 51.

result, the practice of carpet weaving as an important aspect of Iranian culture will continue to erode. This impacts women weaver's economic independence and undermines women's agency and creativity.⁸¹⁴

Ms. Akbari says her sister, a highly skilled weaver, had to quit weaving since her income was not sufficient. She is now a superintendent at a company.⁸¹⁵ Ms. Hashemi concurs and says, with weavings' low wages, weavers consider switching to more profitable jobs. She expresses her worries that with weavers switching to other jobs, this ancient art, which is rooted in Iranian culture, will soon be forgotten.⁸¹⁶ More importantly, the amount of the carpet produced each year will continue to decrease, as is reported in carpet-producing provinces such as Isfahan.⁸¹⁷ According to the Vice President of the Iran Union of Handwoven Carpet Producers, 10 years ago the number of carpet weavers in the country was about 2.5 million.⁸¹⁸ However, this figure is decreased to 1.2 million in the latest official statistics.⁸¹⁹ A recent study has documented the decrease in the number of weavers in Fars Province, and among the factors causing the loss of women's interest in carpet weaving, the economic factor (including the low wage, lack of initial capital, and lack of governmental financial support) ranks first.⁸²⁰ Revitalizing the market through legal protection and promotion of exports can lead to a wage increase, and, as a consequence,

⁸¹⁴ Lotfali Agheli, Unes Salmani, Mir Abdullah Hosseini, "Factors Affecting Market Share of Iranian Hand-Woven Carpet in Singapore" (2017) 7:1 International Journal of Economics and Financial Issues 500.

⁸¹⁵ Interview No. 8. Interview by Ghazaleh Jerban, 12 October 2017, Kashan.

⁸¹⁶ Interview No. 3. Interview by Ghazaleh Jerban, 10 October 2017, Kashan. See also Moslemzadeh Tehrani and Abdul Manap, "Urgency and Benefits," *supra* note 767 at 72.

⁸¹⁷ According to the Chief of Handwoven Carpet Producers Union of Isfahan, in 2018 there was a 30% decrease in the amount of the handwoven carpet produced compared to 2017. "Handwoven Carpet Production Decrease by 30%" (2 July 2018) *Tasnim News* <<https://tn.ai/1766031>>.

⁸¹⁸ Hojat Sourì, "Conditions for Receiving Finance Offered by Government for Carpet Weavers" *Bazar-e-Kar*. <<http://news.bazarekar.ir/01/Fa/DynamicPages/Page.aspx?nwsid=3803>>.

⁸¹⁹ "Standardizing Women Weavers," *supra* note 553.

⁸²⁰ Rahimpour, Ghodrati and Chitsazian, "Factors Influencing," *supra* note 684 at 126. The cultural and social factors rank second and third, including lack of training, low prestige of carpet weaving in professions' hierarchy, and not recognizing and valuing women's work.

carpet weaving will be a more appealing employment option for women. Legal protection of carpets can inhibit illegal competition and therefore increase the marketability and value of Iranian carpets, which in turn stimulates carpet production and increased employment of women weavers with higher wages.⁸²¹ According to Ms. Hashemi, if the wages are increased, women will become interested in weaving, and this keeps the profession alive, as in the view of the weavers, the main problem with carpet weaving is its very low and discouraging wage.⁸²² Ms. Karami compares a weaver's work with a makeup artist's work, with the latter receiving 10 million Rials for a one-night makeover, which is twice the weaver's monthly income. According to Ms. Karami, the beauty of a carpet remains for decades, while the makeup is washed away after a couple of hours. She says that every single knot of a carpet is made by hand, and it takes months or even years to complete a carpet, which is not only beautiful but practical and often extremely durable.⁸²³ And yet, weavers have never received the recognition and wage they deserve and that situation is made worse with declining wages.

4.10 Conclusion

Predominantly performed by women, carpet weaving is one of the oldest forms of creative labor entailing both TK and TCEs that form part of weavers' cultural identity. Despite their bold presence in the carpet production however, the significance of women weavers' TK and their contribution to the sector have remained largely invisible. In an attempt to make visible the gendered practices and knowledge of women weavers, this chapter presented an analysis of the fieldwork results that came out of the in-person interviews with local women weavers in Kashan carpet weaving workshops. Various aspects of women's carpet weaving, such as its significance

⁸²¹ Shojaei, "Iran's Handwoven Carpet," *supra* note 577.

⁸²² Interview No. 3. Interview by Ghazaleh Jerban, 10 October 2017, Kashan.

⁸²³ Interview No. 9. Interview by Ghazaleh Jerban, 12 October 2017, Kashan.

as a site of cultural expression and the intergenerational transmission of weaving knowledge, are examined. The chapter explored why the knowledge of weaving is a gendered knowledge and how the contribution of women weavers is often seen as part of their domestic roles. and therefore as such remains unrecognized. Revealing the inadequacy of the existing IP mechanisms to protect women weavers' TK and TCEs, the chapter examined the various forms of IP misappropriation that occurs toward Persian hand-woven carpets. The impact of such misappropriations on women weavers are examined, followed by calling attention to the necessity of protection of TK and TCE incorporated in Persian carpets in a gender-responsive manner.

Although there are various factors contributing to the situation of under-recognition and undervaluation of women's TK in the handwoven carpet production sector in Iran, a gender-responsive TK protection mechanism can play an important role in improving women's situation in this sector. Such a mechanism can bring significant benefits to women weavers as the main producers of these artefacts provided that legal protection schemes are designed in a manner that recognize and fairly compensate their contribution. It is argued that carpet weaving connects the private sphere with the public sphere and the home with the market. If women weavers' TK and participation are recognized, valued, and properly compensated, carpet weaving allows women weavers an opportunity to participate in the local, national, and global economy and can play a major role in women's empowerment. In fact, recognizing and valuing women's TK is a crucial step of facilitating effective participation of women in governance of what is their cultural heritage. Seeing women weavers as active agents and recognizing their TK and compensating their TK-based activities and production through gender-responsive legal rights can lead to their empowerment, which can balance the power structure in the family and community. Such an

approach is in line with Third World Feminist views that oppose the false image of seeing the local women as unproductive actors and victims with little agency.

CHAPTER 5: SAFFRON, TK, AND WOMEN

5.1 Introduction

Every year, while most other vegetation is gone, the bright purple flowers of saffron create an outstanding landscape in dry regions in Iran. Saffron is a domesticated autumn-flowering perennial plant. During the harvest season, aerial views of saffron growing regions are stunning. The flower only blooms for about two weeks every year beginning in late October/early November.⁸²⁴ Women head to the fields, before sunrise, when flowers have still not opened up and start skilfully picking the flowers. Saffron has a long history in Iranian agriculture, particularly in central and southern Khorasan, and its production is based on the TK of local communities. Their traditional methods of growing and processing are why the aroma, colour and flavour can be captured at the highest level possible.

Nearly 90% of the world's saffron supply comes from Iran.⁸²⁵ As arguably the most expensive agricultural and medicinal crop worldwide with a special position among Iranian export products,⁸²⁶ saffron also has particular cultural and historical significance for the country. Moreover, local women have an active presence in different stages of saffron production from growing, harvesting, pistil removal, drying and storing, to final use. Despite the lack of gender-disaggregated data showing women's contribution and specific roles in saffron production, my visiting the saffron farms during the cultivation and harvesting season showed that local women's

⁸²⁴ According to the participants, harvest season in Bidvey usually starts from October 15th and continues until November 10th. Interviews No. 1, 3–14. Interview by Ghazaleh Jerban, 20–24 October 2017, Bidvey. See also Mohammad Kafi et al, eds, *Saffron (Crocus sativus): Production and Processing* (NH, USA: Science Publishers, 2006) at 170.

⁸²⁵ FAO's website "Qanat-based Saffron Farming System in Gonabad" <<http://www.fao.org/giahs/giahsaroundtheworld/designated-sites/asia-and-the-pacific/qanat-based-saffron-farming-system-in-gonabad/en/>>.

⁸²⁶ Hamed Rafie et al, "Analyzing Iran's Saffron Export with Comparative Advantage and Trading Map Approach" (2018) 5th National Annual Saffron Symposium, University of Torbat-e-Heidariyeh at 1, [original in Farsi].

participation is significant in saffron production. In order to capture their participation and TK, I resided in Bidvey, a village with about 500 families in Khorasan-e-Razavi Province in Iran.⁸²⁷ The village is located close to the border with Afghanistan. I interviewed the local women of Bidvey to explore their specific engagement in saffron production. Most Bidvey families rely on saffron production for their livelihood and plan their lives around the saffron production calendar.

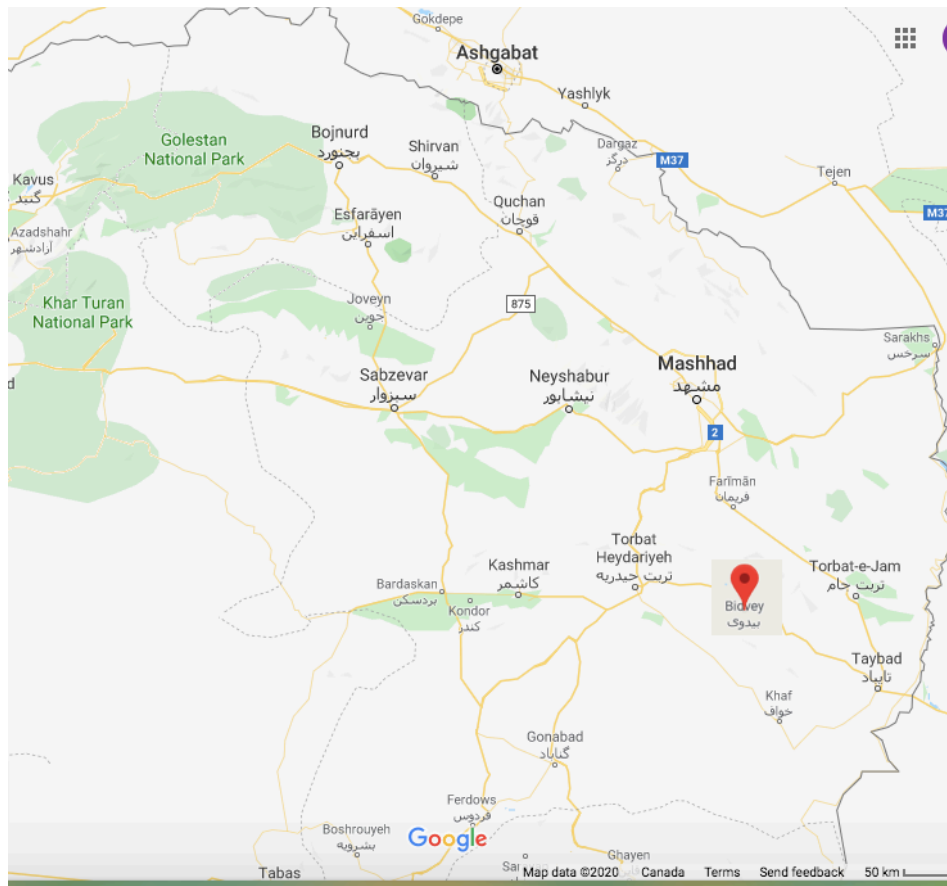


Figure 33 Bidvey on the Map
Photo source Google map

Saffron production in Bidvey does not involve industrial methods or modern technology as local people still use traditional methods of production. As such, it is based on family farming on small farms, and it is heavily dependent on the TK of producers. By relying on knowledge, skills, and

⁸²⁷ Bidvey is in Soleyman Rural District, Soleyman District, Zaveh County. According to the 2016 census of Iran, its population was 1,781, in 500 families. Statistical Center of Iran, “Census of the Islamic Republic of Iran” (2016) <<https://www.amar.org.ir/english/Population-and-Housing-Censuses>>.

experiences acquired from their ancestors, the saffron producers of Iran have made the country the largest producer of this commodity in the world.

As a high-quality product mostly relying on traditional agricultural methods with a long history among small-scale farmers with high contribution by women, saffron is a good example of how TK and gender intersect. Local women are heavily engaged in production, harvesting, and post-harvest handling of saffron by providing skilled labour in family farms and households. The interview results revealed the extent of TK-based activities of women. Local women carry out the bulk of the value-adding activities as part of their domestic chores (it is framed as part of their household duties for which they are not necessarily paid), while the trading and marketing of the finished product are carried out mostly by men, who are also the main financial beneficiaries of the process. The lack of gender-disaggregated data documenting women's contribution in various sectors of the economy, in addition to the current definition of "work"⁸²⁸ which excludes most of local women's TK-based activities (since they take place outside of the realm of the official market), have resulted in not seeing the importance and volume of their work. Drawing on qualitative interviews in Bidvey, the significant role of women and their TK in saffron production is documented. This evidence of the engagement of women in saffron production challenges the perception of women's non-involvement in productive work. As Mohanty argues, the average Third World woman, as defined in the women and development literature, has very specific attributes; she is ignorant, irrational, poor, uneducated, traditional, passive, and sexually

⁸²⁸ According to Adam Smith, labour or work can be categorized into productive v. unproductive. Productive work is "a type of labour that adds to the value of the subject upon which it is bestowed; there is another which has no such effect. The former, as it produces a value, may be called productive; the latter, unproductive labour." Adam Smith, *The Wealth of Nations*, vol. 2, Andrew Skinner et al edition (1974) at 429–430. Under this definition, women's TK-based activities are definitely productive work; but, as Gibb points out, since much of women's TK-based activities takes place outside the realm of the market, they are not captured in the official statistics and consequently not calculated into a country's GDP. Gibb, "Gender Dimensions," *supra* note 18.

oppressed.⁸²⁹ Seeing local women as unproductive actors projects a false image that leaves them with little agency. On the other hand, recognizing and compensating their TK-based activities and production by legal rights can lead to women's greater empowerment, which will balance the power structure in the family and community. In the absence of a TK mechanism for a more equitable system of governance, women's TK-based contributions continue to be used without proper recognition and reward.

5.2 Saffron: Red Gold

Saffron is a spice derived from the flower of *crocus sativus*, commonly known as the saffron flower.⁸³⁰ It is a sterile plant that is propagated by means of bulbs (or corms).⁸³¹ The word "saffron" is derived from the Arabic word "zafaran", which translates to "yellow."⁸³² In Iran, saffron was called "Karkom"⁸³³ during the Achaemenid dynasty (550 BC - 330 BC) until the Arab conquest.⁸³⁴ An inscription in one of Achaemenid king's palaces showed that they used about 1 kg of saffron every day, for making saffron bread, in scented body oil for kings, and as a dye for the shoes and clothes of kings.⁸³⁵ Historical records detailing the use of saffron date to ancient Persia where it was used as a medicinal plant, as a dye, in perfume, and as a spice and colorant for culinary purposes.⁸³⁶ During the Middle Ages, saffron's use was extended to Europe due to the Crusaders,

⁸²⁹ Mohanty, "Under Western Eyes," *supra* note 171 at 56, 72. For more details about the false image depicting rural women as passive members of the community, see Azar Gholizadeh, "Examining Causes of the Invisibility of Rural Women's Role in Development in Developing Countries" (2000) 27 *Journal of Agricultural Economics and Development* 171 at 179, [original in Farsi].

⁸³⁰ Torab Amirghasemi and Abolfazl Iranshahi, *Saffron, Red Gold of Iran* (Tehran: Ayendegan, 2008), [original in Farsi].

⁸³¹ José-Antonio Fernández, "Genetic Resources of Saffron and Allies" (2007) 739 *ISHS Acta Horticulturae* 167 at 167.

⁸³² Fikrat I. Abdullaev, "Biological Properties and Medicinal Use of Saffron" (2007) 739 *ISHS Acta Horticulturae* 44 at 44.

⁸³³ Also pronounced "Kurkum" or "Karkam". Mohammad Hasan Abrishami, *Saffron: From Early Days to Today: An Encyclopedia of its Production, Trade, and Use* (Tehran: Amirkabir, 2010) at 7–9, [original in Farsi].

⁸³⁴ Abrishami, *Saffron: From Early Days*, *supra* note 833 at 30.

⁸³⁵ Abrishami, *Saffron: From Early Days*, *supra* note 833 at 6.

⁸³⁶ For a detailed examination, see Abrishami, *Saffron: From Early Days*, *supra* note 833 at 239–500.

and taken to Switzerland, France, Italy, and reaching Great Britain in the 14th century.⁸³⁷ Saffron was first exported to China in the 13th century as a healthy food, and again in the 16th century as a medicine.⁸³⁸ It reached Japan at the beginning of the 17th century.⁸³⁹ Today, saffron is the most expensive spice and has been compared to gold for its value by weight.

Saffron has three exceptional quality attributes, i.e., aroma, flavour and yellow dye, a set of characteristics bringing about its uniqueness for the pharmaceutical, food, and textile industries.⁸⁴⁰ Saffron also possesses a set of agronomic and eco-physiological characteristics that makes it unique: it is a perennial crop meaning that, once bulbs are planted, they will produce for more than seven years without the need for replanting.⁸⁴¹ Saffron's cultivation and harvest time is different than other crops, and it does not compete for labour with other crops, such as cotton, rice, and wheat. It has a relatively low water use; the peak demand for water by this plant is at the time of an excess and abundance of water, which coincides with the fall season. During the summer, where water shortage is a limiting factor for the growth of many crops, saffron is in its dormant stage with no water requirement. Moreover, the planting of saffron contributes to reduced erosion and soil nutrient loss; and finally, there is a low requirement for agricultural machinery for planting due to its reliance on traditional methods of production.

⁸³⁷ Fernández, "Genetic Resources," *supra* note 831 at 172–73.

⁸³⁸ Fernández, "Genetic Resources," *supra* note 831 at 172–73.

⁸³⁹ Fernández, "Genetic Resources," *supra* note 831 at 172–73.

⁸⁴⁰ Agricultural Planning, Economic and Rural Development Research Institute (APERDERI), "A Proposal for Designation as a GIAHS: Qanat-Based Saffron Farming System in Gonabad" (2018) submitted by Islamic Republic of Iran Ministry of Agricultural Jihad to FAO at 71.

⁸⁴¹ Agricultural Planning, Economic and Rural Development Research Institute (APERDERI), "A Proposal," *supra* note 840 at 16.

In 2016, Iran was the world's leading saffron producer with 336 tons of saffron,⁸⁴² followed in order by India, Greece, Afghanistan, Morocco, Spain, Italy, China and Azerbaijan.⁸⁴³ The area under cultivation of saffron in Iran in 2016 was 105 thousand hectares, which is about 20 times larger than the cultivated area in India, the second producer with 22 tons of saffron with about 5,000 and 2,000 hectares.⁸⁴⁴ Of the total 336 tons of saffron production in Iran in 2016, about 257.6 tons were produced in Khorasan-e-Razavi province.⁸⁴⁵ According to Iran's Ministry of Agriculture data, 95% of the saffron in the country is produced in Khorasan,⁸⁴⁶ 3% in Fars and the remaining 2% in the other parts.⁸⁴⁷

Country	Cultivated Area (ha)	Yield (kg/ha)	Production (ton)	Share in World Production (%)
Iran	105270	3.3	336	88.8
India	5707	3.9	22	5.8
Greece	1800	4	7	1.9
Afghanistan	2811	2.1	6	1.58
Morocco	200	3.2	2.6	0.68
Spain	165	14	2.3	0.6
Italy	500	2	1	0.26
China	500	2	1	0.26
Azerbaijan	35	6.6	0.23	0.06

Figure 34
Table showing cultivated area, yield and production of saffron worldwide in 2016
Source: Agricultural Planning, Economic and Rural Development Research Institute

⁸⁴² Agricultural Planning, Economic and Rural Development Research Institute (APERDERI), "A Proposal," *supra* note 840 at 11.

⁸⁴³ Agricultural Planning, Economic and Rural Development Research Institute (APERDERI), "A Proposal," *supra* note 840 at 11.

⁸⁴⁴ "With 88%, Iran Took the First Place in the World's Saffron Production", *The Young Journalists Club* (3 November 2018), [original in Farsi] <<https://www.yjc.ir/00SC1U>>.

⁸⁴⁵ Agricultural Planning, Economic and Rural Development Research Institute (APERDERI), "A Proposal," *supra* note 840 at 11.

⁸⁴⁶ Khorasan region is comprised of three provinces, namely Northern Khorasan, Khorasan-e-Razavi, Southern Khorasan. The greater Khorasan region was divided into three smaller provinces in 2004.

⁸⁴⁷ Agricultural Planning, Economic and Rural Development Research Institute (APERDERI), "A Proposal," *supra* note 840 at 18.

Unfortunately, having the lead in saffron production has not given Iran an advantage in saffron trade. According to one official with the Ministry of Agriculture, annual global saffron trade currently stands at \$8.2 billion, with Iran's share at only \$286 million per year, mainly because only a small percentage of the Iranian saffron is packaged and sold by the country itself and the rest is exported in bulk to other countries where it is packaged and sold under foreign brands.⁸⁴⁸ Spain, Australia, South Africa, Germany, the UAE, Italy, Bahrain, the UK, the US, Belgium, Bangladesh, Pakistan, Taiwan, Turkey, the Czech Republic, South Korea and China are among the main export destinations of Iranian saffron.⁸⁴⁹ According to the statistics, Spain is the top saffron importer in the world, followed by Hong Kong and the USA.⁸⁵⁰ Ninety-five per cent of Spain's imports are sourced from Iran.⁸⁵¹ In fact, Spain re-exports Iranian saffron with its own production and therefore the trade statistics give an inflated impression of the size of the Spanish industry.⁸⁵² High-quality packaged saffron retails for as much as US\$11,000 per kilogram or higher in Western markets,⁸⁵³ while the bulk price of one kilogram of saffron in 2017 (at the time of interview) was about US\$1500.⁸⁵⁴

⁸⁴⁸ "Officials Dispute Ban on Saffron Bulb Exports", *The Financial Tribune* (23 September 2017), <<https://financialtribune.com/node/72932>>.

⁸⁴⁹ Official statistics acquired from the website of Iran Chamber of Commerce, Industries, Mines and Agriculture, <http://www.tccim.ir/ImpExpStats_TariffCustomCountry.aspx?slcImpExp=Export&slcCountry=&sYear=1398&mode=doit>. For more details, see section 5.6.2 of the thesis.

⁸⁵⁰ Saffron global import and export data acquired from The Observatory of Economic Complexity, <<https://oec.world/en/profile/hs92/091020/>>.

⁸⁵¹ "Understanding Gender in Agricultural Value Chains: The Cases of Grapes, Raisins, Almonds and Saffron in Afghanistan" (2011) Agriculture and Rural Development Unit, Sustainable Development Department South Asia Region, The World Bank, Report No. 62323-AF at 71.

⁸⁵² Farhood Golmohammadi, "Saffron and its Farming, Economic Importance, Export, Medicinal Characteristics and Various Uses in South Khorasan Province - East of Iran" (2014) 3:5 *Intl J Farm & Alli Sci* 566 at 588.

⁸⁵³ Afghanistan Public Policy Research Organization, "Value Chain Governance and Gender: Saffron Production in Afghanistan" (2010) at 13.

⁸⁵⁴ At the time of the interviews (October 2017), the currency exchange rate for every US\$1 was equal to IRR4000. At the time of writing (February 2020), the exchange rate for every US\$1 equals IRR13000. For details about the Iranian exchange rate system and how the economic sanctions impact the system, see footnotes 700 and 701. See also, Mohammad Hashem Aslami, "Afghanistan Saffron: Advantage in Production, Challenge in Export" (2018) 5th National Annual Saffron Symposium, University of Torbat-e-Heidariyeh 1 at 2 [original in Farsi].

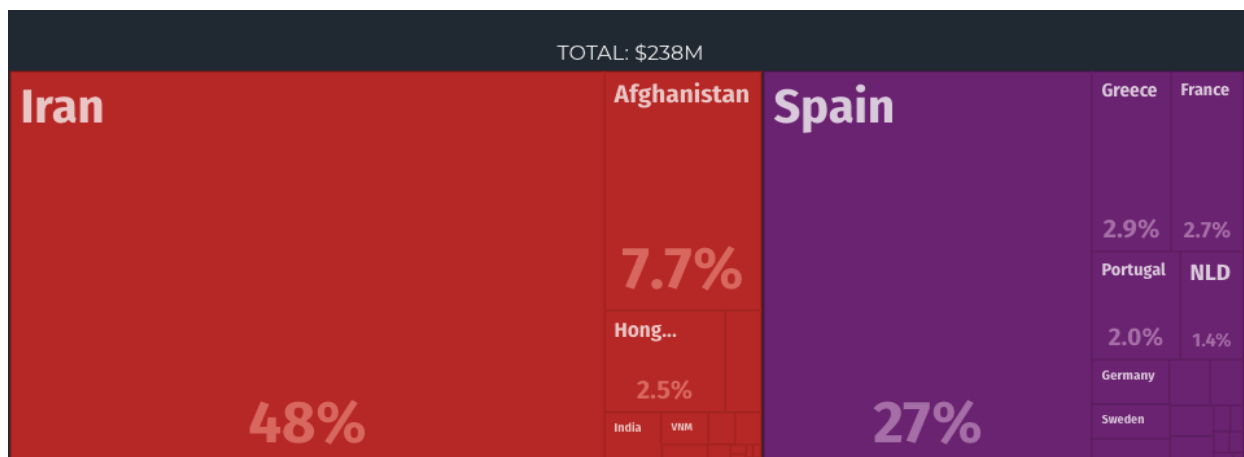


Figure 35 Saffron Global Export share, 2017
Source The Observatory of Economic Complexity, OEC website
<https://oec.world/en/profile/hs92/saffron?redirect=true>

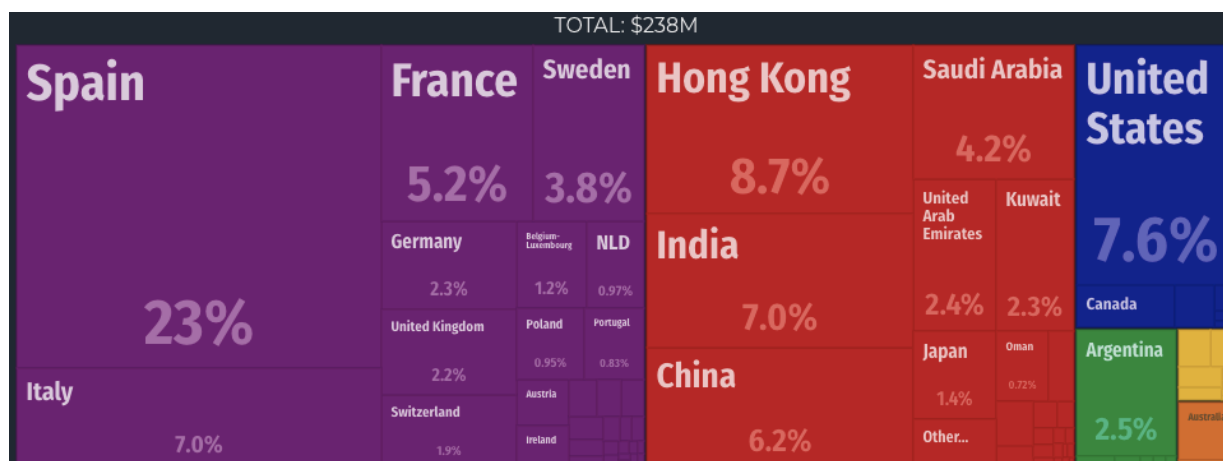


Figure 36 Saffron Global Import share, 2017
Source The Observatory of Economic Complexity, OEC website
<https://oec.world/en/profile/hs92/saffron?redirect=true>

The high quality of Iranian saffron is due to a combination of ecological and human factors.⁸⁵⁵ Production of saffron in Iran, which is mostly done through traditional methods, is in the FAO's list of Globally Important Agricultural Heritage System (GIAHS). According to the FAO, the GIAHS are "outstanding landscapes of aesthetic beauty that combine agricultural biodiversity,

⁸⁵⁵ See FAO, "Qanat-based," *supra* note 825.

resilient ecosystems and a valuable cultural heritage.”⁸⁵⁶ These ancestral agricultural systems constitute the foundation for contemporary and future agricultural innovations and technologies.

5.3 Women and Saffron Production

As discussed earlier, saffron has unique characteristics making its production method more complicated compared to other crops. Saffron production is labour-intensive and is mainly based on producers’ TK.⁸⁵⁷ There are studies that examine the importance of TK in saffron production, but they follow the so-called “gender neutral” approach and do not mention women’s role in the production.⁸⁵⁸ Throughout saffron’s global journeys, women have long been a significant, but often overlooked, source of knowledge. A large amount of the work to produce saffron is done by women who help in land preparation, planting, harvesting the flowers, extracting stigmas from the flowers, drying, batching, and packing. While men are responsible for physically heavier duties, women carry out the tedious and time-consuming parts of the process.⁸⁵⁹ Women have far less involvement, however, in marketing and trading the final product they produce.⁸⁶⁰

5.3.1 Women as Saffron Farm Owners versus Saffron Labourers

Generally, women of the village can be divided into three categories in dealing with saffron: (1) those who own farms growing saffron and then experience economic benefits; (2) those who do not grow saffron themselves but buy flowers after they are harvested and enter the stage of processing and earn economic profits; and (3) those who provide skilled labour to producers in various stages from growing, harvesting, processing, and receiving wages. Although

⁸⁵⁶ See the page of Globally Important Agricultural Heritage System on FAO’s website, <http://www.fao.org/giahs/en/>.

⁸⁵⁷ Kafi et al, *Saffron (Crocus sativus)*, *supra* note 824 at 2.

⁸⁵⁸ See e.g. Mohammad Ebrahimpour, “Examining Traditional Knowledge of Saffron Framers in Southern Khorasan” (2011) 1058 Barzegar 8, [original in Farsi]. See also Hamidreza Fallahi et al, “Evaluating Traditional Knowledge and Modern Knowledge of Saffron Production: The Case of Sarayan” (2015) 1:3 Saffron Research Journal 31, [original in Farsi].

⁸⁵⁹ Interviews No. 3, 4, 7, 8, 12, 14. Interview by Ghazaleh Jerban, 20–24 October 2017, Bidvey.

⁸⁶⁰ Interviews No. 3, 4, 5, 6, 7, 8, 12, 14. Interview by Ghazaleh Jerban, 20–24 October 2017, Bidvey.

saffron farms in Bidvey were mainly owned by men, there were women-owned saffron farms in the village too. While in many cases, these appeared to be women from the wealthy class, this was not always the case. Among the participants, there were women who owned saffron farms through land inheritance, marriage, or contractual arrangements. Generally, one of the key constraints for women's participation as independent saffron producers is land ownership. According to Iranian laws, women have the legal right to own land, but often land is jointly owned with brothers and sisters (through inheritance); rarely is it solely owned by a woman. Inheritance law is based on sharia⁸⁶¹ and derives from the Civil Code according to which a daughter is entitled to half of a son's share of land and widows are entitled to one-eighth (one-fourth if there are no children) of the estate.⁸⁶² Although this law protects women's right to land, its inherently unequal division of land adversely affects women. Over time, this has resulted in men's possession of most of the land in the family. However, land ownership can have significant positive consequences for women, including greater decision-making power within the household (as a result of control over the income gained from the land), security for older women (who can use land as a bargaining tool to obtain greater care from relatives), and access to financial services (when institutions require title-based collateral).⁸⁶³ Access to credit from financial institutions often depends on the ability to demonstrate ownership of traditional forms of collateral property such as land, machinery, and

⁸⁶¹ *Sharia* is Islamic law extracted from the *Qur'an* and *Sunna* (sayings and deeds of the Prophet).

⁸⁶² See Chapter 3, section 3.3 on Iranian domestic laws. Islamic Republic of Iran, *Civil Code* (1929), Articles 946–948 used to place restrictions on the wife's inheritance from the husband by saying the husband inherits all the property of the deceased wife, but the wife of a deceased husband inherits only movable property. In 2009 the Islamic Republic of Iran, *Act to Amend Civil Code* (2009) amended Articles 946–948 and, according to the amended Articles, land has been added to the property a woman may inherit from a deceased husband, something which was banned before. However there still remains some restrictions on the wife's inheritance of real estate (land) because the law states that the woman inherits the value of the real estate, not the actual real estate. The law provides that if the other heirs refuse to pay the wife the price of the real estate, then the wife can acquire her share from the real estate itself. For more details about the history of this evolution, see Chapter 3 of the thesis section 3.3.

⁸⁶³ See e.g. Susan Markham, "The Four Things You Need to Know about Women's Land Rights" (2015) International Food Policy Research Institute <<https://www.ifpri.org/blog/four-things-you-need-know-about-womens-land-rights>>.

housing. Women generally lack title to land and other property and thus have less opportunity to access financial services.

Among the participants, only a few women had land registered solely in their name. A few had land, but the title was not registered in their name. Fereshteh Khanoum was a 38-year-old single woman who had received a piece of land from her father. Her family had cultivated saffron in the past, and she knows the entire process. During various phases of production, she recruits male employees for heavy physical processes.⁸⁶⁴ Aghdas Khanoum, another saffron producer, inherited some land from her father, and decided to set up a saffron growing operation on her own, selling her jewellery and buying saffron bulbs.⁸⁶⁵ Pari Khanoum was a 50-year-old widow who shared land with her four brothers-in-law.⁸⁶⁶ Zahra Khanoum was also a widow who had taken a piece of land on lease to grow saffron.⁸⁶⁷ This made it possible for her, as a widow, to secure a level of economic independence. Although the majority of women in the village did not own a farm, they were still actively involved in saffron production by providing skilled labour to either their family or other farm owners. These women were mostly from those households that did not have a farm of their own, and therefore they undertook the work to harvest and process others' flowers. Such work is generally piece rate and low-paid.

These various accounts of the direct involvement of women in saffron production, whether on an independent basis as saffron farm owners or through providing skilled labour to other farm owners, undermines the following assumptions: First, that women have no knowledge of farming, and second, that even if they do have such knowledge, it does not differ from that of the men.

⁸⁶⁴ Interview No. 4. Interview by Ghazaleh Jerban, 21 October 2017, Bidvey.

⁸⁶⁵ Interview No. 9. Interview by Ghazaleh Jerban, 23 October 2017, Bidvey.

⁸⁶⁶ Interview No. 6. Interview by Ghazaleh Jerban, 22 October 2017, Bidvey.

⁸⁶⁷ Interview No. 3. Interview by Ghazaleh Jerban, 20 October 2017, Bidvey.

Women who work in saffron production have knowledge that is distinct from that of men and do not simply assist men.⁸⁶⁸ The following part examines women's knowledge and skills in various phases of saffron production.

5.3.2 Women Throughout Saffron Production Phases

The interview results showed that women are involved in and hold TK related to various stages of production, from determining the production area, the time of planting, the methods and intervals of cultivation, choosing the right bulb, shaping the texture of soil, measuring the depth of the planting hole, timing irrigation, weeding methods, harvesting time, and processing. More importantly, it became clear that saffron is more than a commercial commodity, and that it is an integral part of the family structure where women usually manage and coordinate the family by scheduling the work hours, assigning tasks to young members of the family, and preparing food and serving the workers during planting, harvest, and processing. This part examines various stages of saffron production to shed light on the participation of women in each phase.

Preparation of the Land: The village women's knowledge of this stage was extensive. According to most of the participants, saffron grows better in fertile loamy soils with moderate texture. In the traditional system, the ground is plowed in the spring and again after 10 to 15 days.⁸⁶⁹ This work is largely done by men due to the heavy physical nature of the task. Once plowed, fertilizer (completely dry and decayed organic fertilizer free of weeds) is applied to the land. Making fertilizers out of cattle manure and household organic waste is mostly done by women as part of their livestock management duties.⁸⁷⁰ In the village, livestock are well integrated

⁸⁶⁸ The finding is similar to other studies' outcomes; see e.g. P.R. Andresen "Gender and Indigenous Knowledge: Experiences in Nigeria and the USA" (2001) 9:1 Indigenous Knowledge and Development Monitor.

⁸⁶⁹ Interviews No. 1, 3, 4, 7, 10, 11, 12, 14. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

⁸⁷⁰ Interviews No. 1, 3, 5, 8, 10, 12, 13. Interview by Ghazaleh Jerban, 23 October 2017, Bidvey.

to complete the production chain and increase agricultural productivity. Aghdas Khanoum says in the past, rubble from ruined houses and buildings, known as “shoureh”, was used in saffron farms because of its rich mineral content.⁸⁷¹ Saffron bulbs are productive for seven to nine years, at which time yield begins to decline. Farmers then remove the bulbs from the ground and plant them elsewhere. According to Narges Khanoum and other participants, saffron should not be cultivated continuously on the same land and a proper fallow period should be practiced, or other crops such as cereal or pulses should be grown in rotation in order to compensate for the soil’s lost nutrients.⁸⁷²

Cleaning and Selection of Saffron Bulbs: As mentioned earlier, the saffron flowers are reproduced through bulbs. Each year, the original bulb grows and produces as many as ten baby bulbs (or cormlets). The participants called them “mother bulb” and “daughter bulbs.” The new bulbs must be dug up, separated, and then transplanted to new land. Prior to planting, bulbs need to be sifted to separate out the damaged bulbs, cleaned, and then planted following specific guidelines. Since bulbs only reproduce saffron, selection of a proper bulb is crucial for production. Eshrat Khanum says, since bulbs are dormant from April to June, digging up the mother bulb usually happens in June.⁸⁷³ Women play a significant role in cleaning, sorting, and identifying healthy saffron bulbs.⁸⁷⁴ Their knowledge of proper bulb characteristics is passed to them from their mothers.⁸⁷⁵ The age of bulb, its size, and physical attributes are among the features that women consider when cleaning and sorting the bulbs for planting purposes.⁸⁷⁶ Once large and healthy bulbs are selected, women carefully remove the outer bulb cover, which makes the bulbs ready for replanting in the new field.

⁸⁷¹ Interviews No. 9. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

⁸⁷² Interviews No. 1, 3, 5, 8, 10, 14. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

⁸⁷³ Interview No. 10. Interview by Ghazaleh Jerban, 23 October 2017, Bidvey.

⁸⁷⁴ Interviews No. 3, 4, 5, 6, 8, 10, 11, 12, 13. Interview by Ghazaleh Jerban, 23 October 2017, Bidvey.

⁸⁷⁵ Interviews No. 3, 4, 5, 6, 8, 10, 11, 12, 13. Interview by Ghazaleh Jerban, 23 October 2017, Bidvey.

⁸⁷⁶ Interviews No. 3, 4, 5, 6, 8, 10, 11, 12, 13. Interview by Ghazaleh Jerban, 23 October 2017, Bidvey.



Figure 37
Women separating and sorting saffron bulbs
Photo credit Ghazaleh Jerban

Saffron Planting: Once the land is prepared and saffron bulbs are sorted, planting begins. The time of planting depends on the weather and is determined based on local people's knowledge. Planting takes place painstakingly by hand and in groups of two under direct supervision of the most experienced member of the team. At the beginning of the planting operation, elders and experienced members give necessary training to the younger members.⁸⁷⁷ For example, planting density has a significant effect on the productivity of the crop. Goli Khanoum says that, if the density is managed well at the time of planting, then the bulbs will produce flowers over more seasons, up to 7 years.⁸⁷⁸ The planting operation begins after prayers and distributing candies.⁸⁷⁹ Among the participants, some believe that they have to enter the field with bare feet to produce the least pressure on the ground and the saffron bulbs.⁸⁸⁰ Planting bulbs is done by both men and women with each carrying out different tasks. During this stage, men usually dig holes, and women

⁸⁷⁷ Interviews No. 1, 3–14. Interview by Ghazaleh Jerban, 23 October 2017, Bidvey.

⁸⁷⁸ Interview No. 11. Interview by Ghazaleh Jerban, 23 October 2017, Bidvey.

⁸⁷⁹ Interviews No. 1–15. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

⁸⁸⁰ Interviews No. 5, 6, 9, 10, 12. Interview by Ghazaleh Jerban, 21–23 October 2017, Bidvey.

place the bulb in the hole in a manner such that bulbs stay right-side up so that the process of sprouting is easier for the plant. The work usually done by women is lower paid than that typically done by men. Kobra Khanoum, whose husband is one of the biggest landholders in the village, said that during the planting phase men who dig holes received IRR40,000 per day, while women who plant the bulbs receive IRR30,000 per day.⁸⁸¹

Irrigation and Caring: Throughout its growing process, saffron needs to be irrigated only three times,⁸⁸² which is a great advantage in a geographic area suffering from a general scarcity of water, and particularly for the many smallholding farmers. The first irrigation is after planting, the second is before harvesting, and the third is after harvest.⁸⁸³ According to Eshrat Khanoum, the second irrigation timing is tricky as doing it early can stop the plant's growth, yet delaying it will freeze the plant and kill it.⁸⁸⁴ The third irrigation, which happens after harvest, is called "Zachow" among the people of the village.⁸⁸⁵ In their local language, "zach" means a woman who has just given birth and "ow" means water.⁸⁸⁶ Explaining the reason behind the naming, Batool Khanoum says the land that has produced a flower is like a woman who has given birth; it has lost its strength and needs recovery.⁸⁸⁷ Zachow, therefore, is an irrigation with the purpose of strengthening the land.

The caring period also includes weeding and fighting pests. The weeding is performed manually and mostly by women as it is needed. For an unskilled person, it is not easy to distinguish saffron's green leaves from various types of weeds. According to Zari Khanoum, local women

⁸⁸¹ Interviews No. 1, 2, 3, 6, 9, 10, 12. Interview by Ghazaleh Jerban, 21–23 October 2017, Bidvey.

⁸⁸² Interviews No. 1, 3–14. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

⁸⁸³ Interviews No. 1, 3–14. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

⁸⁸⁴ Interview No. 10. Interview by Ghazaleh Jerban, 23 October 2017, Bidvey.

⁸⁸⁵ Interviews No. 1, 3, 4, 5, 6, 7, 9, 12. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

⁸⁸⁶ Interviews No. 1, 3, 4, 5, 6, 7, 9, 12. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

⁸⁸⁷ Interview No. 1. Interview by Ghazaleh Jerban, 20 October 2017, Bidvey.

have been exposed to various types of plants in the village since their childhood and identifying weeds does not take any effort at all for them.⁸⁸⁸ The most important pests of saffron in Bidvey are mice, rabbits, mites and white worms, and they all attack saffron bulbs when they are growing. In the traditional cultivation method, only natural repellents like pepper or mentha extract are used.⁸⁸⁹ Other methods include mechanical operations, the destruction of nests around the farms, or the use of smoke to drive the rats away from the farms.⁸⁹⁰ According to Aghdas Khanum, a burner is used to create smoke, and combustible materials such as vegetable oil or engine oil are used to incinerate the burner. The smoke is then led into the hole made by the rats, the rats escape from the area, and thus the saffron bulbs are protected. The operation of “Randeh-zani”, which is the breaking of the soil crust, is another part of the caring stage. Randeh-zani is scratching the surface of the land with the aim of helping the flower emerge from the soil. The surface of the land can become very hard due to exposure to the hot sunlight and other factors for months, so the saffron flowers cannot push through this solid layer without the help of the farmers. For this purpose, equipment such as a pitchfork “changak” and pickaxe “dās” are used. The participants believed that at the caring stage, the hardest thing to do is randeh-zani, because the women have to do it alone, while male members of the family are in town for work and usually come back for the harvest season.⁸⁹¹

⁸⁸⁸ Interview No. 13. Interview by Ghazaleh Jerban, 24 October 2017, Bidvey.

⁸⁸⁹ Interviews No. 5, 7, 8, 9, 10, 13, 14. Interview by Ghazaleh Jerban, 21–24 October 2017, Bidvey.

⁸⁹⁰ Interviews No. 5, 7, 8, 9, 10, 13, 14. Interview by Ghazaleh Jerban, 21–24 October 2017, Bidvey.

⁸⁹¹ Interviews No. 1, 3, 5, 6, 7, 8, 9, 10, 13, 14. Interview by Ghazaleh Jerban, 20–24 October 2017, Bidvey.



Figure 38
Traditional tools called Dās and Changak
Photo credit Ghazaleh Jerban

Saffron Cultivation: Harvest season is usually in October and November, with the exact time varying based on the weather conditions of each region. The first day of harvest begins with rituals. The local women start their work by burning wild rue (esphand); they form a group and curse the devil and then begin with Salawat⁸⁹² and Bismellah.⁸⁹³ During the work, one of the women usually sings and others sing a line after her.⁸⁹⁴

⁸⁹² Salawat is a special Arabic phrase, which contains the salutation upon the prophet of Islam.

⁸⁹³ Bismellah, the short form of “Bi-smi llāhi r-raḥmāni r-raḥīm”, is a phrase in Arabic meaning “in the name of God, the Most Gracious, the Most Merciful.” It is the first word in the Quran, and, in the Islamic culture, people are encouraged to start their life affairs with this phrase.

⁸⁹⁴ One of the songs that was read by a group of the participants was:

Name of God... Bismellah
Problems solver...Bismellah
Kindness and purity...Bismellah
Beginning of work... Bismellah
End of work... Bismellah
When worshipping... Bismellah
Our words... Bismellah

The timing of harvesting the flower from the field is the main factor affecting the quality and quantity of saffron.⁸⁹⁵ The bulbs must be sown by hand, a very labour-intensive process yielding only a 1% return.⁸⁹⁶ In other words, for every 1,000 grams of the flower, only 10 grams of saffron is actually obtained.⁸⁹⁷ Picking flowers is done on a daily basis because flowers are short-lived. If left for a longer period, the flowers will be damaged, and consequently the quality of the final product will drop. As mentioned earlier, the flowering period of a field lasts for about 20 days, starting gradually and reaching a peak from the seventh to the tenth days. To collect saffron flowers from 2,000 square meters of land, up to 15 workers are needed per day, but this number could increase when flowering is at its peak.⁸⁹⁸ For the first three to four days, the plant has a small number of flowers, but after the fifth to tenth days, the number of flowers has increased by up to ten times that of the first two to three days.⁸⁹⁹ This increases the number of workers required to collect the flowers as quickly as possible. In the third year of production, 20–25 people are needed per day; in the fourth, up to 30–40 may be required per day.⁹⁰⁰ The demand for labour for saffron was consistently contrasted by the interview subjects with other crops such as wheat or barley, which require about three people for harvesting of 2,000 square meters of land.⁹⁰¹

To enhance the quality of the final product, the flowers must be picked at dawn as the flowers open once they are exposed to sunlight.⁹⁰² Collecting saffron flower is done mostly by women. Each woman can collect 3 to 5 kg of flowers in about three hours every day during the

⁸⁹⁵ Abbas Hemmati Kakhki, “Processing, Chemical Composition and the Standards of Saffron” in Kafi, Mohammad et al. eds, *Saffron (Crocus sativus): Production and Processing* (NH, USA: Science Publishers, 2006) 169–220 at 173–74.

⁸⁹⁶ Golmahammadi, “Saffron and its Farming,” *supra* note 852 at 583.

⁸⁹⁷ Golmahammadi, “Saffron and its Farming,” *supra* note 852 at 583.

⁸⁹⁸ Interviews No. 1, 3, 4, 5, 10, 11, 12, 14. Interview by Ghazaleh Jerban, 20–24 October 2017, Bidvey.

⁸⁹⁹ Interviews No. 1, 3, 4, 5, 10, 11, 12, 14. Interview by Ghazaleh Jerban, 20–24 October 2017, Bidvey.

⁹⁰⁰ Interviews No. 1, 3, 4, 5, 6, 7, 10, 11, 12, 14. Interview by Ghazaleh Jerban, 20–24 October 2017, Bidvey.

⁹⁰¹ Interviews No. 1, 3, 4, 5, 7, 8, 9, 10, 11, 12, 14. Interview by Ghazaleh Jerban, 20–24 October 2017, Bidvey.

⁹⁰² Interviews No. 1–15. Interview by Ghazaleh Jerban, October 20–26, 2017, Bidvey.

collection time.⁹⁰³ According to Eshrat Khanoum and other participants, picking flowers before sunrise is easier as they are still in the bud, which protects the flowers' aroma and taste.⁹⁰⁴ Moreover, it reduces the chance of damage to the flower during picking and transportation.⁹⁰⁵



Figure 39
An opened flower which is hard to pick. The stigmas are exposed to light and air.
Photo credit Ghazaleh Jerban

Picking saffron is a delicate job and needs to be done correctly; otherwise the precious parts of the flower are damaged. The correct technique is to take the top of the flower and pick it out quickly and with a particular amount of pressure. Most of my attempts to repeat the technique failed as I cut the flowers almost without any style, leaving the stigmas vulnerable. The more I tried to focus

⁹⁰³ Interviews No. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14. Interview by Ghazaleh Jerban, 20–24 October 2017, Bidvey.

⁹⁰⁴ Interview No. 1–15 by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

⁹⁰⁵ Interview No. 1–15 by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

the less was my luck. This is while the local women could easily pick a handful of flowers in only one minute.



Figure 40
My Attempt v. skilled pickers' proficiency
Photo credit Ghazaleh Jerban

After collecting, depending on the volume of the harvest, two approaches are taken by the owner of the harvest. Some women sell part of the harvest in the local market and take the rest home to clean. In other words, picked saffron flowers may be sold directly to traders without processing but at a relatively very low price.⁹⁰⁶ Others pack the harvest in about two, three, or five kilogram packages, and distribute them among the neighbours who did not grow saffron themselves to carry out the separation process and then earn their wages. Women are paid IRR6000 per kilogram for processing the flowers of saffron flowers.⁹⁰⁷ Taking flowers to the doors of the neighbours' houses and bargaining for the acceptance of multiple kilograms of saffron flowers to be processed is usually done by women in each family.

⁹⁰⁶ Saffron flowers were sold at about IRR50,000 per kilogram at the time of interviews.

⁹⁰⁷ Interviews No. 1, 2, 3, 5, 7, 8, 9, 10. Interview by Ghazaleh Jerban, 20–24 October 2017, Bidvey.



Figure 41
The middleman's station at the village where local people sold unprocessed flowers to him
Photo credit Ghazaleh Jerban

Given the high economic value of saffron flowers and the lack of security measures around the farms, I asked the participants whether flowers are stolen from the farms. They expressed little worries as the shame of theft in the community is very high, and there is an atmosphere of trust among members of the community to the extent that farms did not even have fences around them.⁹⁰⁸

Separating stigmas: Separation of stigmas, which is a very delicate job, is done by hand soon after flowers are picked and carried home. The quality of saffron rapidly declines after harvest. Maryam Khanoum made this clear by saying that when the women collect flowers from the field, they have just seven to eight hours for separating saffron from the flowers; otherwise the saffron quality declines.⁹⁰⁹ If more than ten hours pass from harvesting the flowers and the saffron

⁹⁰⁸ Interviews No. 1, 5, 6, 10, 11, 12. Interview by Ghazaleh Jerban, 20–23 October 2017, Bidvey. In one of my visits, I saw a female carrying her child asking for a favour of the locals who were working on farms. According to Goli Khanoum, if the women working on the farms own the harvest, then it is at their discretion to give a bunch of flowers to the needy (who are usually illegal immigrants called “kōlī”). Sometimes, they may allow the needy to clear the farm and pick the remainder flowers (if any) for themselves.

⁹⁰⁹ Interview No. 8. Interview by Ghazaleh Jerban, 22 October 2017, Bidvey.

is not separated from the flowers, then saffron quality will be very low.⁹¹⁰ The labour required to process the flowers is more than what is required to harvest it.⁹¹¹ Up to 50–60 kg of saffron may be harvested per day from the fields.⁹¹² According to the participants, each women can process up to 3 kg of flowers per day, depending on the level of skill and experience.⁹¹³ The time-sensitive nature and scale of demand for processing the saffron raise challenges in mobilizing sufficient labour. The younger generation, who have moved to the cities, come back to the village for the harvesting season until the end of the harvest to work on saffron collection and processing. After finishing the work, they go directly back to the cities in which they live.⁹¹⁴

The red, thread-like filaments of saffron are actually dried stigmas from the saffron flower. Each flower contains only three stigmas and those must be separated from the rest of the flower by hand.



⁹¹⁰ Interviews No. 1, 3, 5, 8, 10, 11, 12. Interview by Ghazaleh Jerban, 22 October 2017, Bidvey.

⁹¹¹ Interviews No. 1–15. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

⁹¹² Interviews No. 4, 5, 7, 12, 13. Interview by Ghazaleh Jerban, 21–24 October 2017, Bidvey.

⁹¹³ Interviews No. 1–15. Interview by Ghazaleh Jerban, 21–24 October 2017, Bidvey.

⁹¹⁴ Interviews No. 1, 2, 3, 4, 8, 11, 12, 13, 15. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

Figure 42
Inside of a saffron flower
Photo credit Ghazaleh Jerban

Extracting the stigmas is neither easy nor fast. Removing the stigmas from the flowers is done exclusively by women. The process usually takes place in homes by groups of women. It takes a woman about 40 hours to separate enough stigmas to produce half a kilogram of saffron, and a football field's worth of flowers.⁹¹⁵ To produce 1 kg of dry stigmas, around 90 kg of fresh saffron flower are required, which is equal to 170,000–200,000 flowers.⁹¹⁶



Figure 43
Groups of the village women processing saffron flowers together
Photo credit Ghazaleh Jerban

Depending on the type of product that women want to produce, they choose various methods of processing. The wholesale price of saffron ranges from around \$1000 to \$5000 per kilogram, depending on processing method, among other factors.⁹¹⁷ This is why not all saffron is of the same

⁹¹⁵ “Iran Hub of World’s Most Expensive Spice”, *The Financial Tribune* (5 July 2017), <<https://financialtribune.com/articles/economy-domestic-economy/67773/iran-hub-of-world-s-most-expensive-spice>>.

⁹¹⁶ Of course, taking into account factors such as the effect of different regional conditions, properties of the soil, and the time of harvesting, the above numbers can vary. See Abbas Hemmati Khaki, “Processing, Chemical Composition and the Standards of Saffron” in Kafi et al, *Saffron (Crocus sativus)*, *supra* note 824 at 173. See also, Tony Hill, *The Contemporary Encyclopedia of Herbs and Spices* (Wiley, 2004) at 273.

⁹¹⁷ “What is the Real Price of Saffron in 2019?”, (7 May 2019), *Saffronice*, <<https://saffronice.com/blogs/learn-about-saffron/what-is-the-real-price-of-saffron-in-2019>>.

quality and strength. Strength is related to several factors, including the method used for separating the stigma, as this determines the amount of style picked along with the red stigma. In other words, women's TK in picking and processing saffron has a direct impact on the quality and price of the final product. The way saffron stigmas are picked determines its value. Given the delicacy of the flower, a high level of skill is required to avoid any damage during the picking process. Different types of saffron (from highest to lowest) in Iran include 1) Sargol: this is considered the top quality, which consists only of the crown of red stigmas saffron. Sargol literally translates as "top of the flower." 2) Negin: although Persian Sargol is considered the premium saffron, there is another type of Sargol Saffron called Negin, where three stigma threads are attached together and form a cluster. Since production of Negin saffron is extremely delicate and requires precision and skill, it is the most expensive type of saffron and supplies are very limited. 3) Pushal: This has red stigmas, along with a small amount of yellow style. 4) Bunch or Dokhtar-pich: This has red stigmas with long yellow styles that are wrapped together and look like a tiny bundle like a miniature wheatsheaf. It is called dokhtar-pich which means "wrapped by girls." The naming apparently comes from the fact that in the past girls used to do this task.⁹¹⁸ 5) Konj: This has only yellow style, which has some aroma of saffron but with very little, if any, colouring potential.

⁹¹⁸ Interviews No. 1, 2, 3, 4, 5, 7, 8, 10, 11, 12. Interview by Ghazaleh Jerban, 22 October 2017, Bidvey.

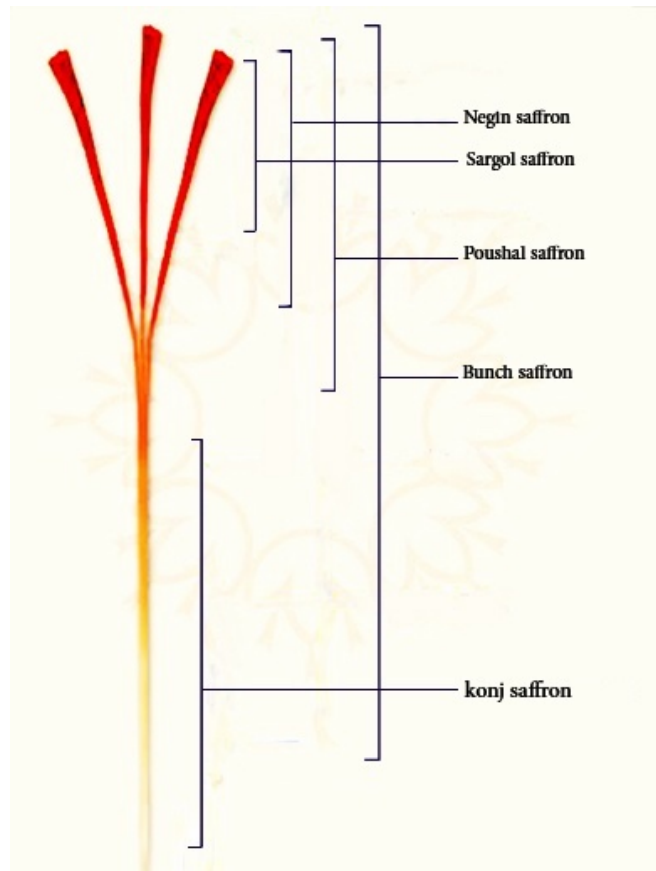


Figure 44
Various grades of saffron based on separation method
Source Quora.com



Figure 45
Bunch or dokhtar-pich saffron
Photo credit unknown



Figure 46

Yellow style v. top of stigma

Photo credit Ghazaleh Jerban

During the harvest season, saffron flower parts, which are disposed of as waste, create purple piles of flower parts in corners of alleys and roads of the village. The saffron flower residue is used by women as a livestock feed in the autumn and winter.⁹¹⁹

Drying stigmas: Drying saffron is traditionally carried out in a room on a white fabric in the shade as sunlight or heat decreases its quality and value.



Figure 47

Stigmas lying on a white cloth to be dried

Photo credit Ghazaleh Jerban

⁹¹⁹ Reza Valizadeh "Utilization of Saffron Leaves as an Animal Feedstuff" (2000) 14:1 Agriculture Science and Technology 3. The study shows that 86% of saffron farmers use saffron leaves to feed livestock. They state that the mean optimal consumption and organic matter of saffron are respectively 600 grams per day for sheep and 272 grams for goats, which is economically important.

Aghdas Khanum says that, while electric dryers have recently been made to dry saffron, no one in the village has used them.⁹²⁰ She and other participants assert that the drying stage is very important as any mistake, such as exposing the stigma to heat, runs the risk of burning the valuable stigmas that are the result of hours of work.⁹²¹ Drying saffron with electric ovens shortens the processing time (it takes two to four hours); however, Goli Khanoum believes it reduces saffron quality.⁹²² She notes that it takes two hours to dry saffron under direct sunlight whereas it takes 7–10 hours in the shade.⁹²³



Figure 48

On her way back to Tehran, Ghazaleh saw these electric dryers on the side of the road. The temperature of these ovens can be regulated from 50 C to 60 C and are equipped with particular trays on which stigmas are laid.

Photo credit Ghazaleh Jerban

⁹²⁰ Interview No. 9. Interview by Ghazaleh Jerban, 23 October 2017, Bidvey.

⁹²¹ Interview No. 3, 6, 7, 8, 9, 10, 12, 13, 15 Interview by Ghazaleh Jerban, 23 October 2017, Bidvey.

⁹²² Interview No. 11. Interview by Ghazaleh Jerban, 23 October 2017, Bidvey.

⁹²³ Interview No. 11. Interview by Ghazaleh Jerban, 23 October 2017, Bidvey.

Once dried, the saffron is ready to be used and sold. Unpackaged saffron sold in bulk yields lower returns to the sellers.

5.3.3 Gendered Knowledge of Saffron Production: Distinct and Complementary

Throughout the interviews, there were consistent statements that almost the entire harvesting and processing of saffron is accomplished by women and that the tasks at each phase are segmented by gender. While women are the main actors in the harvesting and post harvesting phases, the men's work in saffron production includes lifting and loading in various phases including land preparation, planting, fertilizing and irrigation. This sexual division of labour (SDL) throughout the generations has led to creation of gendered knowledge where women, based on their assigned responsibilities in the community, have developed different skills and knowledge than men.⁹²⁴ These skills and knowledge are distinct yet complementary, showing that knowledge systems of both women and men are needed to produce saffron. This means the local women and men have knowledge about different things in saffron production and also have different knowledge about the same things.

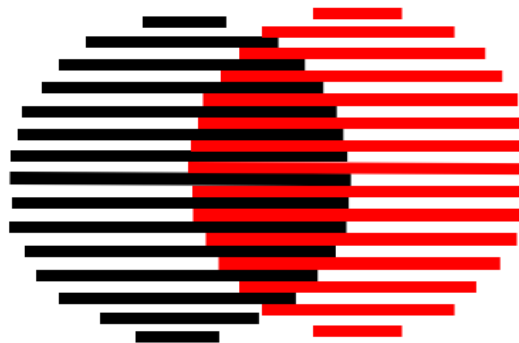


Figure 49
Diagram on men's and women's TK
Photo credit Meisam Mirahsan

⁹²⁴ For the gendered nature of TK, see e.g. Maria E. Fernandez, "Gender and Indigenous Knowledge" (1994) 2:3 Indigenous Knowledge & Development Monitor 6.

As discussed in the previous chapter, Judith Brown suggests that, in addition to the physiological and psychological reasons, there is a further explanation for the SDL: that is the compatibility of such labour with the demands of child care and domestic chores.⁹²⁵ According to Brown, the jobs assigned to women in the communities have the following characteristics: (1) they are not far from home, (2) the work is not dangerous to children, and (3) it can be performed in spite of interruptions and is easily resumed once interrupted.⁹²⁶ The same characteristics can be seen in the type of work that women provide during saffron production. Women's highest contribution in the saffron production is provided during the harvesting and processing stages, which occur in early morning when children are at school and infants are asleep with a family member (usually a younger sibling) staying home to take care of them in the absence of their mother. Processing happens during the day while women simultaneously pick stigmas in a group and attend to their other tasks.

It is uncertain why harvesting and post-harvesting processes are designated as "women's work." In other words, the genesis of the involvement of women in saffron production and how certain tasks have come to be seen as "women's work" is not clear. One factor may be, given the scale of the time-bound demand for labour and the imperative of timeliness, that there are simply not enough men around to provide the labour. Most of the village men are working in towns because of the lack of sufficient employment opportunities in the village. However, the shortage of male labour was not the reason given by the participants for saffron processing becoming women's work as their participation is not a recent phenomenon. Expressing the commonly stated view on why women are so heavily involved in saffron harvest and post-harvest activities, the

⁹²⁵ Brown, "Note on the Division," *supra* note 692 at 1075.

⁹²⁶ Brown, "Note on the Division," *supra* note 692 at 1075. For more detail, check section 4.6 at Chapter 4.

participants' standard response was that women are better at these tasks.⁹²⁷ They gave three main reasons: The first one was that women have the patience and skills for such a demanding job because they have learned it from an early age. The second reason, in the participants' view, was the low wage.⁹²⁸ Post-harvest processing is among the lowest paid work, in which men, who have other opportunities, would not be interested.⁹²⁹ The participants repeatedly stated this view of women being more skilled than men in processing, followed by the complaint that it is not the skill that appears to attract a premium wage.⁹³⁰ In fact, the profit margins that saffron traders obtain is built upon using skilled cheap labour by women. The final reason was that the hard work of women and their perfectionism, compared with men, has made women more desirable in the saffron market.⁹³¹ When I asked Maryam Khanoum why the job is done by women, her husband who was near, jumped into the conversation and said it is because men do not have the skills, patience, and the right tools (signaling to his coarse fingers) for such a delicate job.⁹³²



Figure 50
Maryam Khanoum's husband showing his coarse hands
Photo credit Ghazaleh Jerban

⁹²⁷ Interviews No. 1–15. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

⁹²⁸ Interviews No. 1–15. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

⁹²⁹ “Saffron Sector Thrives on Cheap Women Labor”, *The Financial Tribune* (27 December 2016), <https://financialtribune.com/articles/economy-domestic-economy/56343/saffron-sector-thrives-on-cheap-women-labor?utm_campaign=more-like-this>.

⁹³⁰ Interviews No. 1–15. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

⁹³¹ Interviews No. 1–5, 7, 9, 10–15. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

⁹³² Interview No. 8. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

⁹³² Interview No. 8. Interview by Ghazaleh Jerban, 22 October 2017, Bidvey.

The role of women decreases as we move up the value chain and as the work performed requires less physical energy and skills, and more investment capital, business relations, and culturally sanctioned freedom to move and maneuver in a market environment. According to Zahra Riyazi, one of the few women to be a founder of a saffron cooperative, only three women are active in the top level of the saffron production hierarchy.⁹³³ “Saffron trade is a male-dominated field. The sprawling industry defines roles for women up to the processing stage and not beyond.”⁹³⁴ Marketing bulbs, flowers, and finished product is usually undertaken by men since the local women’s mobility outside the village is restricted due to the poor roads and the lack of transport services that affect the entire population’s mobility in general. The local women, however, are particularly affected since limitations on traveling longer distances due to lack of a personal vehicle or cultural norms preclude them from easily accessing other villages and cities.⁹³⁵ Difficulties in travel and transport constrain women’s participation in the market, making it challenging for women to access financial services outside their immediate neighbourhoods and communities. According to Eshrat Khanoum, the women in the village who have their own saffron, usually travel to nearby towns in groups to conform to the social rules condemning women from traveling alone.⁹³⁶ Younger women are accompanied by elder women in their travel to sell their saffron and shop in the town. Sometimes, they buy gold and jewelry with the money, as, in Iranian culture, jewellery is seen as an investment that the family can count on during economic hardship.

⁹³³ “Saffron Sector Thrives,” *supra* note 929.

⁹³⁴ “Saffron Sector Thrives,” *supra* note 929.

⁹³⁵ When I wanted to travel from Bidvey to one of its neighbouring villages, I had to wait beside the road for a bus service, which, once a day, took people from Bidvey to the city. On my way back, I hitchhiked in the back of a pickup truck. I was accompanied by my mother and a senior lady, which made it a group consisting of an elder, making it socially acceptable to stand beside the road.

⁹³⁶ Interview No. 10. Interview by Ghazaleh Jerban, 23 October 2017, Bidvey.



Figure 51

Women sell their harvest to middlemen in the village
Photo credit Ghazaleh Jerban

5.4 Women's Contributions in Saffron Production Constitute TK and TCE

As discussed earlier, up to 90% of the methods used during saffron production are traditional.⁹³⁷ Given the existing definitions for TK and TCEs, each step of saffron production entails traditional practices that are well qualified as TK and TCEs. On one hand, the definition of TK as “the body of knowledge resulting from intellectual activity in a traditional context that includes the know-how, skills, innovations and practices embodied in traditional lifestyles of Indigenous and local communities, which are developed, sustained and passed between generations”,⁹³⁸ is inclusive of women's methods, know-how, and skills in production of saffron as a genetic resource (GR). GRs, as defined in the CBD, are parts of biological materials that (a) contain genetic information of value; and (b) are capable of reproducing or being reproduced.⁹³⁹ Examples include material of plant, animal, or microbial origin, such as medicinal plants, agricultural crops and animal breeds. Some TK is closely associated with GRs through the

⁹³⁷ See e.g. Alireza Koocheki, “Role of Indigenous Knowledge in Traditional Agriculture with Emphasis on Saffron” in Kafi, Mohammad et al. eds, *Saffron (Crocus sativus): Production and Processing* (NH, USA: Science Publishers, 2006) 155–168 at 155.

⁹³⁸ World Intellectual Property Organization, “Glossary of Key Terms,” *supra* note 1 at 40.

⁹³⁹ WIPO, “Intellectual Property and Genetic Resources, Traditional Knowledge and Traditional Cultural Expressions” (2015) 933 WIPO Publication at 18.

utilization and conservation of the resource, often over generations, as is the case with saffron and TK around saffron's conservation and production. On the other hand, the ceremonies and cultural expressions associated with saffron production fall within the definition of TCEs as "tangible and intangible forms in which traditional knowledge and cultures are expressed, communicated or manifested."⁹⁴⁰ Examples of TCE include traditional music, performances, narratives, names and symbols, designs and architectural forms.

Although traditional practices around saffron production fit the existing definitions for TK and TCE, for the women, their own knowledge of saffron was not "knowledge." Similar to the findings of Shubhra Gururani in her examination of Third World women's knowledge in the development context, due to the cultural context of respect and humility, women usually find it hard to label their knowing as "knowledge" or even consider their knowledge valuable.⁹⁴¹ Some of them were hesitant to accept an interview at first saying they know nothing.⁹⁴² Although later it became clear that their knowledge of saffron production was extensive, they did not have the confidence to share their opinions. When the women take up this position by ignoring themselves, it is also easy for researchers to ignore them. Therefore, this gendered knowledge may be regarded as less valuable, thus making women's work and knowledge even more invisible. Subsequently, the invisibility of their role, work, and knowledge extends to the realm of law and policymaking, resulting in biased outcomes. Increasing awareness among local women themselves and the public regarding the role of women and their TK in sectors such as saffron production will bring the knowledge and skills of women out of the dark corners of TK law and policy. This can happen through educational initiatives about saffron, like promoting regional and local festivals,

⁹⁴⁰ World Intellectual Property Organization, "Glossary of Key Terms," *supra* note 1 at 40 at 39.

⁹⁴¹ Gururani, "Construction of Third World," *supra* note 130.

⁹⁴² This is partially due to the local culture of modesty, which requires women not to make a big deal of themselves, and partially due to a lack of confidence and low self-esteem.

gatherings, contests including poetry, storytelling with regional dialects, and cooking contests. Moreover, the capacity of local women should be strengthened in the means and skills required for collective action, such as how to interact with government institutions, deal with the formal legal and regulatory mechanisms, and access funds and credit. The following parts examine traditional practices and cultural expressions involved in saffron production.

5.4.1 Traditional Practices and Saffron Production

A suitable climate is not the sole reason for the excellence of Iranian saffron. Another contributing factor is the rich heritage of TK of saffron producers, which has been conserved for generations. Saffron is still cultivated almost in the same manner as it has been for three millennia.⁹⁴³ For many years, there has not been a prominent change in the technology of saffron production in Iran, and this plant is still grown manually in a labour-intensive manner on the basis of the same traditional practices. The origin of saffron farms is traced to the ancient Median state of Alvand and the Zagros slopes 4,000 years ago.⁹⁴⁴ Historical documents show that Iranians have always been the largest producers of saffron since that time.⁹⁴⁵ The oldest reference to saffron in the ancient history of Iran is found in ancient scripts of Greece, which mentions the saffron-colored-clothing of Darius the Great.⁹⁴⁶ During the Achaemenid period, saffron was used as a fragrant and aromatic oil, which was an excellent flavour for the bread used in the kings' court.⁹⁴⁷ Saffron threads were ritually offered to divinities, and used in dyes, perfumes, medicines, and body

⁹⁴³ See e.g. Koocheki, "Role of Indigenous Knowledge," *supra* note 937 at 155.

⁹⁴⁴ Abrishami, *Saffron: From Early Days*, *supra* note 833 at 119–208. See also Mohammad Kafi, Abbas Hemmati Khaki and Alireza Karbasi, "Historical Background, Economy Acreage, Production, Yield and Uses" in Kafi, Mohammad et al. eds, *Saffron (Crocus sativus): Production and Processing* (NH, USA: Science Publishers, 2006) 1–12 at 2, [original in Farsi].

⁹⁴⁵ Agricultural Planning, Economic and Rural Development Research Institute (APERDERI), "A Proposal," *supra* note 840 at 14.

⁹⁴⁶ Agricultural Planning, Economic and Rural Development Research Institute (APERDERI), "A Proposal," *supra* note 840 at 16.

⁹⁴⁷ Kafi, Hemmati Khaki and Karbasi, "Historical Background," *supra* note 944 at 2. Abrishami, *Saffron: From Early Days*, *supra* note 833 at 239–417.

washes.⁹⁴⁸ The threads were scattered across beds and mixed into hot teas⁹⁴⁹ as a curative for sad moods.⁹⁵⁰

5.4.1.1 Traditional Method of Irrigation: Qanat

One of the main differences in the saffron production system in Iran, compared to other saffron producing countries, is the source of water that is used for production. The irrigation system in saffron-producing areas is mainly based on an aqueduct system, which is called “Qanat” or “Kariz.”⁹⁵¹ The history of the qanats on Iranian plateau goes back to the Aryan era.⁹⁵² Many qanats, especially in the eastern parts of Iran, date from the ancient eras.

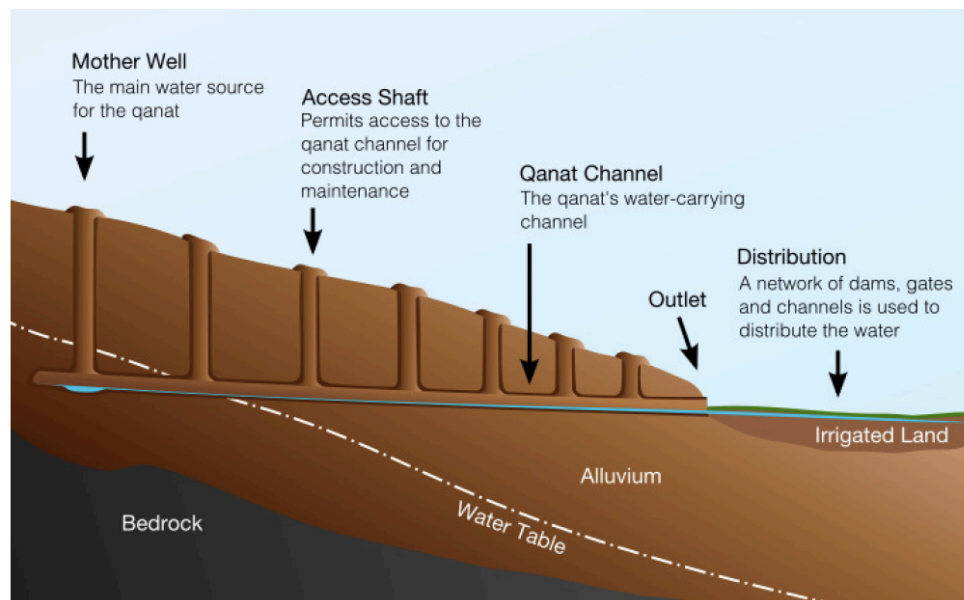


Figure 52
Structure of qanat. The system is powered by gravity without the need for any pump
Source Agricultural Planning, Economic and Rural Development Research Institute

⁹⁴⁸ Simin Hagh-Nazari and N. Keifi, “Saffron and Various Fraud Manners in its Production and Trades” (2007) 739 ISHS Acta Horticulturae 411 at 411.

⁹⁴⁹ I saw the practice first-hand when the village women smashed the stigmas in their saucers and mixed it with their teas for improving their moods.

⁹⁵⁰ Pat Willard, *Secrets of Saffron: The Vagabond Life of the World’s Most Seductive Spice* (Beacon Press, 2002) at 41.

⁹⁵¹ See generally Agricultural Planning, Economic and Rural Development Research Institute (APERDERI), “A Proposal,” *supra* note 840.

⁹⁵² Agricultural Planning, Economic and Rural Development Research Institute (APERDERI), “A Proposal,” *supra* note 840 at 5.

Even though several thousand years have passed since the innovation of the qanat, this method of water transfer and use is still common in some villages. Iran has the world's largest qanat; it is marked by UNESCO as a World Heritage Site.⁹⁵³ The age of Iranian qanats is from 200 to 2500 years.⁹⁵⁴ Even though several thousand years have passed since the innovation of qanat technology, this method is still common in some villages and residential areas, in agriculture and livestock production, and is even the main pillar of cultivation in dry areas such as Bidvey. Considering that the village has no perennial stream and the surface water in the area is limited to seasonal streams, underground sources are the main providers of water for agricultural and drinking purposes.

Qanat technology has been developed through centuries of trial and error, gradually evolving into an integrated well-established irrigation system, and has become not only a unique part of Iranian's agricultural system supplying water for over 60,000 villages all across the country,⁹⁵⁵ but, more importantly, the backbone of civilization in dry lands and a vital part of the society's culture up to the present time. When talking about differences between qanat and modern pump-operated deep wells, several participants referred to a local saying: "Qanats milk the earth while deep wells suck earth blood."⁹⁵⁶ The saying refers to the sustainability of the former and destructive nature of the latter.⁹⁵⁷ Qanats are built on a participatory water distribution and

⁹⁵³ It is called Ghasabe Qanat of Gonabad and was built between 700 and 500 BCE by the Achaemenid Empire in what is now Gonabad, Razavi Khorasan Province. The complex contains 427 water wells with a total length of about 33 thousand metres. The site was officially inscribed in the World Heritage List in 2016, collectively with several other qanats, as "The Persian Qanat". For more details, see <https://whc.unesco.org/en/list/1506/>.

⁹⁵⁴ The qanat of Jopar, near Kerman city, which is associated with the worship of Anahita (the water goddess), is estimated to have existed as far back as 1200 BC.

⁹⁵⁵ Agricultural Planning, Economic and Rural Development Research Institute (APERDERI), "A Proposal," *supra* note 840 at 69.

⁹⁵⁶ Interview No. 5, 7, 10, 12. Interview by Ghazaleh Jerban, 21–23 October 2017, Bidvey.

⁹⁵⁷ Fuzhan Nasiri, Mohammad Saleh Mafakheri, "Qanat Water Supply Systems: A Revisit of Sustainability Perspectives" (2015) 4:13 Environmental Systems Research 1. Qanats collect water from distant and different layers of earth, and keep the underground water level at a reasonable balance, never depleting its source, which is unfortunately the case with deep pump-operated wells. The life span of pump-operated wells is less than 20 years while there is no time limitation for the life span of a qanat.

management system. From the beginning of the invention of the qanats, the determination of the time and the equitable distribution of water among the shareholders were based on customary laws carried out by water guards, or “Mirab.”⁹⁵⁸ In the past, Mirabs used a water clock to keep the time and allocate water to each farm.⁹⁵⁹ The participatory approach to a qanat water distribution and management system is an example of how carefully the local communities can design and operate land and water utilization systems incorporating all the economic, legal, ecological, social, and technical aspects in a way that the resiliency and the sustainability of the system are assured for centuries.

Over history, local communities have built up different cultural beliefs with respect to the qanats’ heritage.⁹⁶⁰ The services provided by qanats in various aspects are essential for the local communities, and qanats are intermingled with the life of the local communities so deeply that sometimes they are considered as a member of the community, even in the present day. A prominent example of such beliefs is “gendering qanat.”⁹⁶¹ The local people would refer to qanats as either male or female. Qanats with torrential and noisy currents would usually be believed to be ‘male’, and those with tranquil currents, ‘female’.⁹⁶² In some areas, the gender of the qanat was identified with an examination of the skin of the palm skin of the mughanni (digger)⁹⁶³ after digging the qanat. If the hands had become coarsened, bruised, and wrinkled, the qanat would be

⁹⁵⁸ Agricultural Planning, Economic and Rural Development Research Institute (APERDERI), “A Proposal,” *supra* note 840 at 69.

⁹⁵⁹ Agricultural Planning, Economic and Rural Development Research Institute (APERDERI), “A Proposal,” *supra* note 840 at 69–70.

⁹⁶⁰ Morteza Farhadi, “Ethnography of Traditional Knowledge and Technologies: Bread of the Night” (2014) 1:2 Iranian Journal of Indigenous Science 1 at 17, [original in Farsi].

⁹⁶¹ “Qanat Irrigated Agricultural Heritage Systems of Kashan, Isfahan Province Islamic Republic of Iran”, Proposal for a Globally Important Agricultural Heritage System (GIAHS), (2014) at 14.

⁹⁶² “Qanat Irrigated Agricultural Heritage,” *supra* note 961 at 14.

⁹⁶³ The number of skilled qanat drillers (mughanni) has decreased in the last few decades for several reasons, among which is the diminishing of the traditional apprenticeship system, while an efficient alternative has not yet been introduced. “Qanat Irrigated Agricultural Heritage,” *supra* note 961 at 25.

named as ‘male’. But if the hand skin was still soft, the qanat would be believed to be ‘female’.⁹⁶⁴ Once the gender of the qanat was identified, the community would start finding a suitable ‘bride’ or ‘groom’ for the qanat to make a ‘marriage’. The ‘wedding ceremony’ of the qanat was a full-fledged one, like the wedding of a young couple.⁹⁶⁵

Another example is “mourning for the death of qanat.” In some areas, when a qanat dries up, it is as if the community has lost one of its members. In a recent case, when the 1,000-year-old qanat in a village in Kashan dried up in 2009, the local people erected mourning banners announcing to public attention the demise of their qanat.⁹⁶⁶ Natural resources such as water and land are generally treated with respect by local communities, especially among the older generations. In their view, water and land are sources of abundance and should be treated with respect. Bibi Rahmat, an elderly lady in the village who does not have a saffron farm of her own and lives on her income of providing saffron labour and selling her horticultural product, believes the earth should be treated with the utmost respect as we put the seed in the ground and it generously gives us harvest.⁹⁶⁷

5.4.1.2 Traditional Medical Uses

Apart from its culinary and cosmetics uses, saffron has been utilized as a traditional remedy to promote health and fight disease since ancient times.⁹⁶⁸ Due to its analgesic and sedative properties, traditional medicine practitioners have used saffron for the treatment of numerous illnesses such as asthma, skin diseases, eye diseases, urinary tract infections, jaundice, early

⁹⁶⁴ “Qanat Irrigated Agricultural Heritage,” *supra* note 961 at 14.

⁹⁶⁵ “Qanat Irrigated Agricultural Heritage,” *supra* note 961 at 14.

⁹⁶⁶ “Qanat Irrigated Agricultural Heritage,” *supra* note 961 at 14.

⁹⁶⁷ Interview No. 12. Interview by Ghazaleh Jerban, 23 October 2017, Bidvey. Bibi is a title used for elderly females with wisdom who have a respected position in the family and community.

⁹⁶⁸ See e.g. Hossein Hosseinzadeh and Marjan Nassiri-Asl, “Avicenna’s (Ibn Sina) the Canon of Medicine and Saffron (*Crocus sativus* L.): A Review”, (2013) 27:4 *Phytother Res* 475.

menstruation, flatulence, stomach pain, and anemia.⁹⁶⁹ The anti-depressant properties of saffron were among the first medical uses of the crop that most of the participants mentioned.⁹⁷⁰ This function, along with many others, is documented in various traditional medical sources.⁹⁷¹ More specifically, Razi,⁹⁷² in his monograph *Al-Hawi*, which is a medical encyclopedia,⁹⁷³ has examined therapeutic uses of saffron, among which he lists its antidepressant effect. In one of his books, Mohammad Hassan Abrishami, the author of the *Saffron Encyclopedia*,⁹⁷⁴ points to carpet-weaving women who use saffron-died yarn for their carpet, and says that, after a day of weaving, they exit the workshop with a smile on their face as they have been in contact with saffron throughout the day.⁹⁷⁵ While talking about the medical uses of saffron, almost all of the participants also warned against the excessive use of saffron and its side effects, such as the risk of miscarriage and maternal death when taking a high dose of the spice during pregnancy.⁹⁷⁶

5.4.2 Cultural Expressions and Saffron Production

The local women call saffron “the crop of the poor”, as it is planted in poor rural areas that usually suffer from lack of industrial production capacities. Saffron does not need much input of technology and can easily create economic opportunities for ordinary and poor people. They

⁹⁶⁹ See Alireza Koocheki and Mohammad Khajeh-Hosseini, eds, *Saffron: Science, Technology and Health* (Woodhead Publishing, 2020) at 8.

⁹⁷⁰ Interview No. 1, 4, 5, 8, 10, 12, 14, 15. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

⁹⁷¹ See e.g. Hosseinzadeh and Nassiri-Asl, “Avicenna’s,” *supra* note 968. In order to write his Canon of Medicine, Avicenna used Razi’s *Al-Hawi* as a reference.

⁹⁷² Abu Bakr Mohammad ibn Zakariya Razi, known as Rhazes (865–925 AD), is a famous Iranian physician, chemist and philosopher. Razi’s most important and main complete book is “*al-Hawi fi al-Tibb*” known as “*al-Hawi*” *supra* note 25. His work in medicine, chemistry, and philosophy gained world renown to the extent that George Sarton, the founder of the history of science, named him “The Greatest Physician of Eastern World and the Medieval Ages”. His discoveries of Alcohol and Sulphuric Acid brought him the world title of “The Father of Chemistry.”

⁹⁷³ *Al-Hawi* has 25 volumes and Razi spent 15 years on this book. Faraj ibn Salem (Farragut) translated this book into Latin in 1279. “*Al-Hawi*” was reissued five times in Europe between 1488 and 1542.

⁹⁷⁴ Abrishami, *Saffron: From Early Days*, *supra* note 833.

⁹⁷⁵ Abrishami, *Saffron: From Early Days*, *supra* note 833 at 434–40.

⁹⁷⁶ Interviews No. 1, 3–15. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey. See also Abrishami, *Saffron: From Early Days*, *supra* note 833 at 471–72.

believe that saffron is a gift bestowed by God to people living in desert and dry areas where, with very low water input, they can produce such a high-value crop. Saffron's limited need for water or complex equipment, and the availability of a skilled workforce due to traditional training, in combination with its high added value and its important role in the local economy and livelihood of locals, has promoted the position of saffron in communities to more than a crop; rather, it is an important part of their cultural identity. For example, local people have a thanksgiving ceremony for saffron harvesting every year. After a month of hard work on saffron farms, they celebrate one full day in the village for the sake of this blessing, when women cook special dishes and distribute them in the village.⁹⁷⁷ Saffron has a high symbolic value for Iranians. As such, it has found its way in literature, songs, rituals, and ceremonies. The Iranian poets, such as Ferdowsi,⁹⁷⁸ Nasir Khusraw, Salman Savoji, and Nizami Ganjavi, have either written poems about saffron or used it in their works.⁹⁷⁹ Saffron is also used in various Persian proverbs. The phrase "being saffron," attributing saffron as an adjective to someone, in the Persian language indicates genuineness and authenticity.⁹⁸⁰ According to traditional Iranian beliefs (Zoroastrian) saffron belongs to "Maraspond" the goddess of water who is in charge of managing life affairs.⁹⁸¹ Moreover, there are several meanings assigned to saffron in traditional resources for dream interpretation.⁹⁸²

⁹⁷⁷ Interviews No. 3, 4, 6, 8, 10, 12. Interview by Ghazaleh Jerban, 20–23 October 2017, Bidvey.

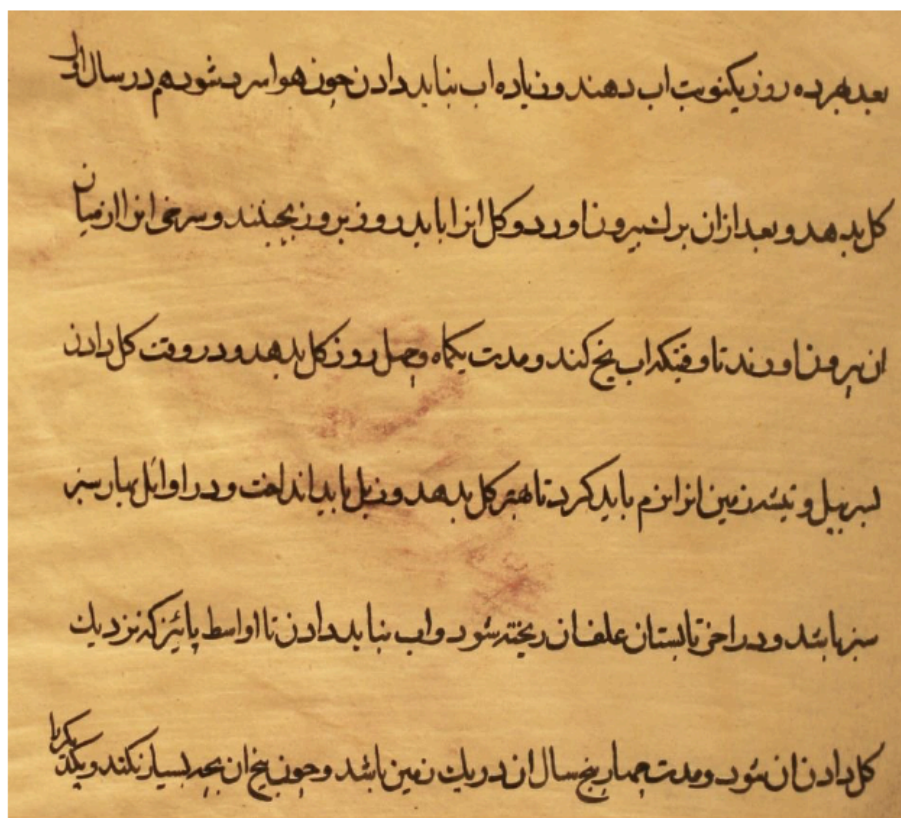
⁹⁷⁸ Saffron has found its way into Ferdowsi Epic poems. On one occasion, Ferdowsi writes that when Siavosh's son was born, his mother put the son's hand in saffron water and pasted it on a piece of paper and then sent the paper to Siavash to let him know that their son was born. For more details about saffron in Persian literature, see Abrishami, *Saffron: From Early Days*, *supra* note 833 at 492–98. See also Mohammad Jafari Ghanavati and Salman Saket "Saffron and Folklore" in Koocheki and Khajeh-Hosseini, *Saffron: Science*, *supra* note 969 at 8.

⁹⁷⁹ Agricultural Planning, Economic and Rural Development Research Institute (APERDERI), "A Proposal," *supra* note 840 at 71.

⁹⁸⁰ Abbas Ghanbari Odayvi and Maryam Ghanbari Odayvi, "Saffron in Folklore and Oral Literature of Iranians" (2018) 5th National Annual Saffron Symposium, University of Torbat-e-Heidariyeh at 1.

⁹⁸¹ Omid Masoudifar, "Saffron in the Mirror of Indigenous Knowledge: Ancient Written Heritage of Iran" (2017) 4:6 Iranian Journal of Indigenous Science 213 at 232, [original in Farsi].

⁹⁸² Ghanbari Odayvi and Ghanbari Odayvi, "Saffron in Folklore," *supra* note 980 at 3.



شکل ۱- صفحه‌ای از مبحث زعفران در نسخه خطی آثار و احیا

Figure 53

The traditional methods of saffron production and its uses have been the subject of various historical texts with literary value.⁹⁸³

An old transcript on saffron.

Photo credit: Omid Masoudifar⁹⁸⁴

The relationship of local women with saffron farms is not just economic but also symbolic, suffused with cultural meanings and nuances, and woven into their songs, stories, and legends. For instance, women have used saffron extensively in their folkloric songs and lullabies.⁹⁸⁵ Moreover, like carpet weavers, saffron producers recite work songs during their collective work. They have

⁹⁸³ For a list of historical texts on saffron, see Masoudifar, “Saffron in the Mirror,” *supra* note 981.

⁹⁸⁴ Masoudifar, “Saffron in the Mirror,” *supra* note 981 at 220.

⁹⁸⁵ For example, a Lori folkloric song says “the value of a kiss from lover equals to the value of saffron”, which means it is highly sought after. In one of the lullabies, for example, the mother complains to her baby who is now a young boy and has traveled to town saying “Why do not you write me from your town? Is paper hard to find or is ink saffron?” (meaning ink is expensive). Ghanbari Odayvi and Ghanbari Odayvi, “Saffron in Folklore,” *supra* note 980 at 1, [original in Farsi]. For more details, see Abrishami, *Saffron: From Early Days*, *supra* note 833 at 495–496.

different songs for each stage of the process, from planting to harvesting and picking the stigmas. Such songs have different functions and create an atmosphere of collaborative efforts and teamwork.⁹⁸⁶ Unfortunately, only a few of my participants who were older knew some of these songs, and most of them only remembered a few lines from their childhood when their mothers used to recite them during work.⁹⁸⁷ Identifying, recording, and documenting women's cultural activities including old proverbs, songs, stories, legends, and games should be part of a gender-responsive TK instrument in order to prevent further erosion of women's cultural treasure. According to Bibi Rahmat, singing a song while working gives women rhythm and helps them to synchronize their moves, and entertains the children who are observing their mothers and subconsciously learning about their culture.⁹⁸⁸

Saffron is also an important part of ceremonies and festivals in Iranian culture. It is an essential ingredient in various dishes⁹⁸⁹ that are served during feasts, festivals, and religious ceremonies.⁹⁹⁰ Iranians have had a lot of interest in gold and saffron from ancient times. Distributing gold (zarrin) and silver (simin) coins, along with saffron, was part of celebrations, festivals, and special occasions, such as weddings and Eids, aimed at increasing the majestic establishment of these kinds of rituals for the bride and groom or prominent figures.⁹⁹¹ Saffron is still a common gift exchanged among Iranians; in some cases, it is included in women's dowry.

⁹⁸⁶ Morteza Farhadi, "Work Songs: Forgotten Work Songs of Masters and Apprentices" (2001) 7:11-12 *Social Science Quarterly* 111 at 124. See also Jafari Ghanavati and Saket "Saffron and Folklore," *supra* note 978 at 4.

⁹⁸⁷ In the village, there was a poet who had written a series of songs about saffron. Unfortunately, during my stay, he was not available, and I could not meet him.

⁹⁸⁸ Interview No. 12. Interview by Ghazaleh Jerban, 23 October 2017, Bidvey.

⁹⁸⁹ For saffron in Iranian food culture see Abrishami, *Saffron: From Early Days*, *supra* note 833 at 241–334. See also Jafari Ghanavati and Saket "Saffron and Folklore," *supra* note 978 at p 5.

⁹⁹⁰ For more about saffron in Islamic culture, see Mansour Motamedi, Fayyaz Gharaei and Salman Saket, "Saffron and Religion" in Koocheki, Alireza & Mohammad Khajeh-Hosseini, eds, *Saffron: Science, Technology and Health* (Woodhead Publishing, 2020) 15–23 at 20, [original in Farsi]. See also Jafari Ghanavati and Saket, "Saffron and Folklore," *supra* note 978 at 5.

⁹⁹¹ Agricultural Planning, Economic and Rural Development Research Institute (APERDERI), "A Proposal," *supra* note 840 at 17.

Saffron is not only precious but also a spiritual item. At some rituals in the past, saffron was smoked alone or with musk and amber.⁹⁹² It was also used to scent the body of dead people, to write prayers and rulers' orders, and also to paint books.⁹⁹³ Traditionally, saffron is used to write prayers and Quranic verses on paper, and then the paper is washed with rosewater. This water is called "Nashreh" or Ma-ol-nashreh" and is consumed for health purposes.⁹⁹⁴ More specifically, there is a ritual called "Ab Do'a" (prayer water), with saffron at its centre.⁹⁹⁵ Hours before Nowruz,⁹⁹⁶ women in the family prepare saffron to make a yellow ink. They then use the ink to write seven verses of the Quran, all beginning with the word "salām" (greetings), on a floral porcelain plate. The plate is then submerged in a bowl full of water, so the yellow colour dissolves. This water is placed by the "Haft-seen table set"⁹⁹⁷ that women arrange. Once the new year begins, women serve it to their family members as the first thing to drink in the new year. They believe it removes illness from the body and mind, and brings good fortune for the family in the coming year.

Among the saffron-related cultural practice in the village, the custom of "yāvari" among women is at the heart of collective production activities of their self-sustained and self-sufficient community.⁹⁹⁸ Women neighbours offer their help free of charge to their fellows during the peak work period. All women of the family and most of the female relatives and neighbors are likely to

⁹⁹² Abrishami, *Saffron: From Early Days*, *supra* note 833 at 374–382.

⁹⁹³ Abrishami, *Saffron: From Early Days*, *supra* note 833 at 362–374.

⁹⁹⁴ Masoudifar, "Saffron in the Mirror," *supra* note 981 at 231.

⁹⁹⁵ Abrishami, *Saffron: From Early Days*, *supra* note 833 at 362.

⁹⁹⁶ Nowruz, the Persian New Year, is an ancestral festivity marking the first day of spring and the renewal of nature. It was inscribed in 2009 on the Representative List of the Intangible Cultural Heritage of Humanity as a cultural tradition. For more details, see: <<https://ich.unesco.org/en/RL/nawrouz-novruz-nowrouz-nowrouz-nauryz-nooruz-nowruz-navruz-nevruz-nowruz-navruz-01161>>.

⁹⁹⁷ Haft-seen table set is an arrangement of seven symbolic items whose names start with a letter that is pronounced as "seen" in the Farsi Alphabet.

⁹⁹⁸ Interviews No. 4,6,7,8, 10, 11, 12, 15. Interview by Ghazaleh Jerban, 21–25 October 2017, Bidvey.

be needed to help at the peak of flower-harvesting season. The practice also has other names, such as “dast-be-dasti”, “ham-dasti”, or “gharzi-talabi” in different regions.⁹⁹⁹ Collective cooperative groups were more common among rural women in the past and are still seen in rural areas.¹⁰⁰⁰ This tradition of cooperation and help provides women with the opportunity to socialize and strengthen their network and exchange information. Such traditional institutions have economic, cultural, and educational functions.¹⁰⁰¹

5.4.3 Intergenerational Transmission of Saffron TK and TCE among Women

Saffron production methods have been developed throughout generations by local people through careful observation and through their experiences with the surrounding environment. The locals of Bidvey have been practising saffron planting, cultivation, and processing for generations by relying on a knowledge of planting, caring, and harvesting that they acquired from their ancestors. In addition to their significant contribution in saffron production, women are also responsible for passing the saffron production knowledge and skills to the next generation. According to the participants, saffron production methods have not changed much and are mainly passed through mother-to-child training.¹⁰⁰² Due to the transfer of TK from person to person, and from generation to generation, Iranian saffron producers have been able to retain its distinctive qualities. Mother-to-child training happens in an informal environment where women work together with children playing around them. It first starts with observation and then leads to hands-

⁹⁹⁹ Khadijeh Bouzarjomehri, “Indigenous Agricultural Knowledge and its Role in Rural Development” (2019) 4:3 Pajouhesh-e-Zanan 97 at 108 [original in Farsi].

¹⁰⁰⁰ See generally Morteza Farhadi, “Rural and Tribal Women’s Contribution in Free Collaborative Work and Traditional Cooperatives” (1996) Special Issue, *Journal Agricultural Economics and Development* 107, [original in Farsi].

¹⁰⁰¹ Morteza Farhadi, *Anthropology of Yarigari (Traditional Cooperation)* (Tehran: Saless, 2009) at 413 and 631, [original in Farsi].

¹⁰⁰² Interviews No 1–5. Interview by Ghazaleh Jerban, 21–25 October 2017, Bidvey.

on experience where mothers supervise the quality of the children's work and correct their mistakes as they are performing the tasks. Dialogues among the women themselves, in which they share their experiences regarding best practices, are the primary means of knowledge transfer. More specifically, after the harvest, women often form temporary multi-household stigma-picking circles. In these circles and also in the course of performing many of their regular domestic and agricultural tasks (like during journeys to and from fields or to local markets), women exchange information and personal experiences.



Figure 54
Multi-household stigma picking circles
Photo credit Ghazaleh Jerban

The Sexual Division of Labour¹⁰⁰³ and its subsequent gendered TK that was discussed earlier, influence the way in which TK is passed on to future generations. Young boys are engaged in male-dominated agricultural activities, such as land plowing and clearing fields, while young girls mostly work in the women-dominated parts of production. In fact, after a certain age, the

¹⁰⁰³ For more details, see section 4.6 in Chapter 4 of the thesis.

instruction of children within the household takes place almost exclusively along gender lines, as children begin to accompany their parents into the fields (boys with fathers, daughters with mothers). As they gain the necessary skills, children become increasingly involved in a number of gender-specific activities and work groups. Being exposed to saffron from an early age, young girls start to accompany their mothers to the farms and later to the women's circles where women gather together to separate stigmas. Mahtab, who was the 17-year-old daughter of Batool Khanum, was fully involved in the processing and drying activities. She has learned the processing techniques from her mother and is now responsible for monitoring the drying room.¹⁰⁰⁴ Mahtab's brother's fiancé, Leyla, was also 17-years-old. Her parents were originally from Bidvey, but are currently living in Tehran. Leyla and her fiancé, Ali, who works in Tehran, had come back to the village for the harvest season so that Ali could help and benefit from his family's saffron business. While I was visiting saffron farms, Leyla used to accompany her mother- and sister-in-law for saffron cultivation and later in processing; however, she wore gloves so that her hands were not discoloured.



Figure 55
Leyla wearing gloves to avoid discolouration of her hands
Photo credit Ghazaleh Jerban

¹⁰⁰⁴ Interview No. 2. Interview by Ghazaleh Jerban, 20 October 2017, Bidvey.

Her mother-in-law Batool Khanoum believed that the younger generation has less strength and patience, referring to her daughter-in-law, who complains of body spasms after only two days of accompanying them to the farm.¹⁰⁰⁵ According to Batool Khanoum, the younger generation sees the work as a low-prestige job demanding so much labour and time with very low income.¹⁰⁰⁶ Several participants expressed concerns over the lack of interest among the younger generation to continue the practice, as they instead prefer to move to cities in search of modern lifestyles.¹⁰⁰⁷ The younger generation moves to cities to build better lives. For them, the experience of their mothers shows that the hard work in the village does not pay off.¹⁰⁰⁸

5.5 Women's Partipation in Saffron Production: Invisible Work, Ignored Knowledge

From a Third World feminist point of view, it is important to have an understanding of a woman's place within the village of Bidvey before analyzing their knowledge and skills in the context of TK law and policy.¹⁰⁰⁹ In addition to agriculture labour, the local women are also responsible for (a) other non-saffron-related income-generating activities such as animal husbandry, (b) household tasks and child rearing, and (c) community work, such as caring for the elderly. The family's food production is one of the major responsibilities of the local women. Their breakfast meal comprises butter, cheese, bread, and jam that are all locally sourced and made from scratch by the women themselves. For example, using traditional methods and skills, local women create up to 12 different products from milk.¹⁰¹⁰

¹⁰⁰⁵ Interview No. 1. Interview by Ghazaleh Jerban, 20 October 2017, Bidvey.

¹⁰⁰⁶ Interview No. 1. Interview by Ghazaleh Jerban, 20 October 2017, Bidvey.

¹⁰⁰⁷ Interviews No. 1, 3, 9, 10, 13, 15. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

¹⁰⁰⁸ Interviews No. 1, 2, 9, 10, 13, 15. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

¹⁰⁰⁹ As discussed in section 2.1.1 in Chapter 2 of the thesis, on Third World feminism.

¹⁰¹⁰ Nashmil Afsharzadeh and Abdolhamid Papzan "Women's Indigenous Knowledge in Agricultural Sustainable Development" (2012) 9:4 *Women in Development and Politics* 115 at 122–23.



Figure 56
Breakfast meal in Bidvey, all five food items are made by women in the family
Photo credit Ghazaleh Jerban

In the course of interviews, the participants talked about their multiple and multi-dimensional roles, saying that managing their many roles in different realms, i.e., reproductive, productive, and community roles,¹⁰¹¹ leaves them with not time of their own.¹⁰¹² Goli Khanum, a 53 year-old participant, shared her daily schedule where, from the moment that she opens her eyes in the morning, she is busy managing her multiple duties until she goes to bed around 11 pm.¹⁰¹³ She wakes up before 5 am, and, after prayers, she milks the cow and sheep, cleans the barn, feeds the animals, cleans the kitchen, bakes bread, packs breakfast, and goes to the farm. She returns around 11 am and prepares lunch. After serving lunch, she starts picking the stigmas with the other women. Once finished she starts preparing dinner. After the dinner is served, and when men, elders

¹⁰¹¹ For more details about the triple role of women, see Zibani, “The Triple Burden,” *supra* note 90.

¹⁰¹² Interviews No. 1, 3–15. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey. See also Gholizadeh, “Examining Causes,” *supra* note 829 at 186. See footnote 707 on time poverty.

¹⁰¹³ Interview No. 11. Interview by Ghazaleh Jerban, 23 October 2017, Bidvey.

and children are resting, she boils milk to make yogurt, butter, and other products and goes to bed around 11 pm.

According to Kobra Khanoum, when men finish work at the farm, they have time for smoking or meeting and catching up with their fellows while women still work to manage their multiple roles.¹⁰¹⁴ However, the ratio of work performed versus the income accrued to men and women from the value-adding activities, including in saffron production, is surprising. While the general consensus among the participants was that women do most of the skilled work throughout the saffron production phases, the troubling fact was that women share significantly less of the economic value generated through their hard work. In fact, despite their hard work, women have a small share in what they produce, mainly because both their physical work and their knowledge remain unseen. More specifically, the hourly wage of IRR6000 for women, who work at least eight hours a day to harvest saffron flowers and separate stigmas, is not proportionate to their skilled and time-consuming work. However, despite the low wage, the majority of participants appreciate the opportunity to gain an income of their own. Mohtaram Khanoum believes that, although the income is modest, it gives her more freedom and control over household decisions and her mobility due to financial independence.¹⁰¹⁵ According to Aghdas Khanoum, women who are active in saffron production and have their own farm, are considered strong women in the community and enjoy a sense of respect.¹⁰¹⁶ Owning a saffron farm was more common among older women and they had better knowledge of saffron production due to their experience. The older women in the

¹⁰¹⁴ A study examining how Iranian men and women spend their day shows that women spend two thirds of their time to attend their various roles while men only spend one third of their time. See generally Sharareh Varzegar and Nasrin Aghajan Nouri, “Women’s Role in Development” (1996) Special Issue of Journal of Agricultural Economics and Development 239, [original in Farsi].

¹⁰¹⁵ Interview No. 15. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

¹⁰¹⁶ Interview No. 9. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

village enjoy a prestige that comes with their knowledge and wisdom, as other women in the village come to them seeking advice not only regarding saffron growing and processing but even in asking for guidance regarding their personal problems.¹⁰¹⁷

Although men are generally the heads of households, the phenomenon of outmigration of men to cities in search of better jobs has made many women in Bidvey de facto heads of households. According to Bibi Rahmat, one of the elders of the village, it is vital for women to remain in charge of harvesting and post-harvest processing as a source of income.¹⁰¹⁸ Due to the high rural outmigration rates,¹⁰¹⁹ most of the rural women growing and processing saffron may be the last in their generation who live in the village. Therefore, preserving the knowledge is of critical importance. She believes, if women abandon saffron production or move to cities, it deprives them of the ways in which they can gain income.¹⁰²⁰ In fact, outmigration of women from rural areas to cities following their husbands not only evacuates skilled TK-holders as valuable economic agents from the villages, but also degrades women's place in the family, as given their level of education and different skill-sets, rural women do not have the same productivity in cities. In the same vein, when talking about migrating to cities, several participants referred to a local proverb that says "A tree grows on its own roots, not on another's", which means that people should honour their own lifestyle and culture to grow.¹⁰²¹ Recognizing and protecting local women's TK in saffron production, which is part of their cultural identity, will empower them to grow on their own root. Moreover, a gender-responsive TK protection mechanism can provide women and younger

¹⁰¹⁷ During stigma picking, the presence of males is often restricted in women's circles. It provides a women-only environment in which the village women freely discuss events and activities that would otherwise be constrained by the presence of men.

¹⁰¹⁸ Interview No. 12. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

¹⁰¹⁹ "Outmigration: the Sad History of the Country's Villages", *The Islamic Republic News Agency (IRNA)* (12 January 2019), [original in Farsi] <www.irna.ir/news/83166929/>.

¹⁰²⁰ Interview No. 12. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

¹⁰²¹ Interview No. 1, 7, 9, 12. Interview by Ghazaleh Jerban, 20–25 October 2017, Bidvey.

generations with both economic and social incentives to continue saffron production. Studies show that saffron creates over 70,000 direct job opportunities throughout the year, and its promotion through gender-responsive TK protection can be an important factor against migration from rural areas.¹⁰²² As mentioned earlier, the younger generation, who have moved to the cities, come back to the village for the harvesting season to work on saffron collection and processing, mainly because of the economic profit.

In the context of international TK debates, the interests of Third World women and their governments may converge. In fact, promoting the profile of women's TK-based production through proper IP protection can decrease countries' dependence on oil exports.¹⁰²³ Creating jobs and bringing income to local women can also empower local women and prevent rural people's outmigration to cities. Moreover, a return to more sustainable production systems in a country like Iran, with a long history of ecological agriculture, could be one effective method to protect the fragile local environments. Traditional practices, such as application of organic fertilizers, non-chemical methods for pest and weed control, complete family labour for production and processing, and the socio-cultural environment surrounding the total process of saffron production, offer a prime case for sustainable development-oriented projects. Like other emergent advocacy groups that were linked to a nationalist movement, women's TK advocacy groups should take advantage of the states' self-affirmation to assert claims on behalf of women saffron producers as citizens whose cultural survival is necessary to the state and whose TK is valuable to larger national

¹⁰²² Socio-economic studies have shown that, on average, production of 1 ha of saffron in Iran (including all practices from sowing to harvest) is labour intensive and requires 270 person-days. Agricultural Planning, Economic and Rural Development Research Institute (APERDERI), "A Proposal," *supra* note 840 at 10. See also Kafi et al, *Saffron (Crocus sativus)*, *supra* note 824 at 3.

¹⁰²³ Ali Monazam Esmailpoor and Parviz Kardavani, "The Role of Agriculture in Rural Development with Emphasis on Saffron: The Case of Kashmar Balavlayt Village" (2010) 7:26 Land Geographical 31, [original in Farsi]. Esmailpoor and Kardavani prove the positive impact of saffron production on rural development, welfare, job creation, income growth, and lowering the rate of rural outmigration.

and global objectives. Gender-responsive TK protection law and policy can play an important role in reducing outmigration and providing sustainable livelihoods. A gender-unaware TK law and policy that ignores local women's role and contribution weakens their agency in their family, community, and other arenas.

5.6 Inadequacy of Conventional IPRs to Protect Women's TK and TCE in Saffron Production

TK-based saffron production has been a source of income for the low-income local women due to the long history of its cultivation in the region. The value added by saffron, which is a direct result of women's TK, creates an invaluable industry that should be protected by the IP system. Studies show that the lack of legal institutions to protect IPRs around saffron production is among the challenges that Iranian saffron producers face.¹⁰²⁴ In fact, due to their individualist bias towards the Eurocentric model of "author/inventor" (which is predominantly market-oriented, and unduly emphasizes the privatization of knowledge), conventional IPRs do not fully cover TK and TCE involved in saffron production.¹⁰²⁵ Moreover, as discussed in the Chapters 1 and 2, due to the gendered nature of international IP regime, women's TK and TCE is a knowledge category that is doubly devalued in the current IP regime due to being doubly gendered. In other words, women's TK and TCE in saffron production is devalued because of not being among the recognized conventional categories of IPRs, and also due to the gender of its holders. Not every Indigenous and local woman should have to adopt a modern lifestyle and patent a scientific innovation or write a book to benefit from the IP system; rather, the IP system should be developed beyond its gender biases and recognize and protect the forms of IP that these women already have.

¹⁰²⁴ See e.g. Abolfazl Masoumzadeh et al, "Implementation Plan for Branding Iran's Saffron" (2014) 1:2 Saffron Farming and Technology 39, [original in Farsi].

¹⁰²⁵ See Chapter 1 of the thesis for critiques of the existing IPRs.

From the saffron piracy in the 14th century¹⁰²⁶ up to modern days, saffron is still facing threats due to a lack of proper protection. In this section, I examine the various threats that Iranian saffron production, as a TK-based sector with high participation by women, faces.

5.6.1 Smuggling of Saffron as a Genetic Resource

Saffron is not a wild crop, and throughout its history, it was selectively bred by local people to produce longer stigmas. This breeding has resulted in a sterile plant that cannot reproduce without human assistance. As such, the saffron bulb is among Iran's ancient genetic resources. Unfortunately, in the last decade, saffron bulbs have been illegally exported to the neighbouring country of Afghanistan and also to China. According to one report, unofficial figures suggest that around 80 tons of saffron bulbs are illegally exported to Afghanistan from Iran every year.¹⁰²⁷ Although the government recently passed a law¹⁰²⁸ prohibiting the export of GRs, it seems that Afghanistan no longer needs to import saffron bulbs because it has already brought in enough, legally and illegally, between 2005 and 2013.¹⁰²⁹ Saffron was first introduced into Afghanistan in 1992 by an Afghan immigrant going back to his country.¹⁰³⁰ During the ten years he spent in Iran as a refugee, he learned how to cultivate saffron, and when he returned to Herat, he decided to smuggle about 400 kg of saffron over the border.¹⁰³¹ He then trained farmers in Pashton Zarghon,

¹⁰²⁶ Golmammadi, "Saffron and its Farming," *supra* note 852 at 578. "The 14th century Black Death caused demand for saffron-based medicaments to peak, and Europe imported large quantities of saffron via Venetian and Genoan ships from southern and Mediterranean lands such as Rhodes. The theft of one such shipment by noblemen sparked the fourteen-week long *Saffron War*."

¹⁰²⁷ "Officials Dispute Ban," *supra* note 848.

¹⁰²⁸ *Protection and Utilization of the Country's Genetic Resources Act*, *supra* note 538, Article 8(1).

¹⁰²⁹ "Officials Dispute Ban," *supra* note 848.

¹⁰³⁰ Giulia Minoia and Adam Pain, "Saffron: The Social Relations of Production", (2016) Secure Livelihoods Research Consortium Working Paper No. 48 at 18.

¹⁰³¹ Minoia and Pain, "Saffron: The Social Relations," *supra* note 1030 at 18.

including the trader and grower who became *Babai Saffron* (grandfather of saffron) and who had received a medal from Afghanistan President Karzai in 2009.¹⁰³²

Article 8 (1) of the most recent Iranian Act pertaining to protection of GRs criminalizes any exportation of genetic resources without the permission of relevant authorities. The Act makes no reference to the role of women in TK and conservation of genetic resources, let alone requiring recognition and compensation of their IP. It is worth mentioning that some studies show that saffron is subject to strong genetic erosion and is a crop in danger of extinction in many countries.¹⁰³³ As saffron farmers leave saffron growing, the lands that were once dedicated to saffron growing are being used for other crops or other purposes, and this has contributed to the genetic erosion of saffron in many areas.¹⁰³⁴ In order to ensure the future of saffron crop, it is necessary to preserve cultivation techniques and plant material, and also to develop the saffron market through the wide range of the crop's uses, particularly those related to human well-being.

5.6.2 Sold Under Foreign Brands

As discussed earlier, Iran is the largest producer of saffron with Spain being the leading importer of saffron. The value of Iran's saffron exports for the one-year period ending in March 2019 was about US\$365 million.¹⁰³⁵ However, the economic potential of this valuable crop for Iran's economy is yet to be fully realized. Unfortunately, Iran exports 85% of its saffron to European and non-European countries before it is processed or packaged.¹⁰³⁶ As a result, Iranian

¹⁰³² There have been various efforts in Afghanistan through national and international initiative to use saffron as an alternative to farming opium poppies. See Ron Synovitz, "Afghanistan: Saffron Could Help Wean Farmers Off Opium Poppies," *The Radio Free Europe* (2 June 2006), <<https://www.rferl.org/a/1068856.html>>.

¹⁰³³ Fernández, "Genetic Resources," *supra* note 831 at 170–173. According to Fernández, the saffron crop is in severe danger of extinction in Europe at the present time and "what used to be the "King of Spices" is facing threats to be forgotten in many areas of the world."

¹⁰³⁴ Fernández, "Genetic Resources," *supra* note 831 at 170–173.

¹⁰³⁵ Official statistics, "Iran Chamber of Commerce," *supra* note 849.

¹⁰³⁶ Golmhammadi, "Saffron and its Farming," *supra* note 852 at 579. See also, Agricultural Planning, Economic and Rural Development Research Institute (APERDERI), "A Proposal," *supra* note 840 at 10.

saffron is sold on international markets as having been produced in Spain, the United Arab Emirates, or other countries. Spain, the most falsely attributed saffron producer, now has a relatively small share in the world's saffron production with only about one ton of annual production. However, its saffron export is more than 100 tons per year, 2030 tons of which is sent to the United States alone.¹⁰³⁷ According to one report, barely one percent of saffron labeled as "Spanish" is actually grown in Spain.¹⁰³⁸ Many regional importers are also exporters (or re-exporters) of the Iranian saffron, usually under a different name and for as much as three times the profit margin.¹⁰³⁹ According to one study, Spain gains a 200–700% profit from packaging and re-exporting Iranian saffron.¹⁰⁴⁰ A study shows that if only 10% of Iran's saffron in 2017 was sold as branded and packaged (not sold in bulk) in 2017, it would have resulted in US\$47 million more income for the country.¹⁰⁴¹ The lack of packaging and branding makes it more difficult for saffron farmers in Iran to get a fair market price for their harvests. Most importantly, whereas an Iranian farmer typically gets just a few hundred dollars for each kilogram of high-quality unpackaged saffron, the same Iranian-grown saffron (repackaged in Spain or other countries) can sell up to US\$5,000 per kilogram in the West.¹⁰⁴² Iran's continuous attempts to join the WTO have persistently failed from the early 1990s well into the new millennium.¹⁰⁴³ Thus, Iran has drifted away from multilateral trading, and instead, toward establishing bilateral trade agreements with

¹⁰³⁷ Agricultural Planning, Economic and Rural Development Research Institute (APERDERI), "A Proposal," *supra* note 840 at 9.

¹⁰³⁸ Monks, "Iran's Homegrown Treasure," *supra* note 15.

¹⁰³⁹ Golmohammadi, "Saffron and its Farming," *supra* note 852 at 588.

¹⁰⁴⁰ Reza Rezaei and Roya Rezaei, "A Review of Iran's Current Saffron Export: Examining Challenges and Opportunities" (2018) 5th National Annual Saffron Symposium, University of Torbat-e-Heidariyeh 1 at 3, [original in Farsi].

¹⁰⁴¹ Salman Vaezifar and Alireza Karbasi, "Analyzing the Process of Saffron Export and Packaging" (2018) 5th National Annual Saffron Symposium, University of Torbat-e-Heidariyeh 1 at 4, [original in Farsi].

¹⁰⁴² See section 5.3.2 of Chapter 5 of the thesis discussing that the wholesale price of saffron ranges from around \$1000 to \$5000 per kilogram.

¹⁰⁴³ For an overview of Iran membership in the WTO, see Seyed Jalal Alavi, "Accession of Iran to the World Trade Organization: A Legal-Political Overview" (2010) 1:3 Iranian Review of Foreign Affairs 137.

several key nations, including Spain. Left outside of the WTO and TRIPs Agreement, Iran's main saffron importer has been Spain, which has claimed the exclusive rights to "Azafran de la Mancha" or Saffron of La Mancha under European Union (EU) geographic indication (GI) protection.¹⁰⁴⁴

Currently, the main beneficiaries of saffron production in Iran are the middle agents and larger traders who purchase the saffron in bulk from the growers at a fraction of the price paid by the retail customer. Part of the problem is due to the long-standing trade sanctions from much of the Western world in the aftermath of the 1970 Revolution.¹⁰⁴⁵ Studies show that women face more socio-economic hardships in the event of sanctions.¹⁰⁴⁶ Iranian women, especially impoverished local women who are working in the saffron sector, are hit harder by the devastating consequences of the US sanctions.¹⁰⁴⁷ For instance, with the devaluation of Iran's currency as a result of the harsh sanctions, their hourly wage has faced a steep decrease from US\$ 1.30 per hour at the time of the interviews to less than US\$ 0.50 at the time of writing.¹⁰⁴⁸ In addition, the sanctions have blocked access to the markets of Europe, the USA, and Canada. Iranian companies and banks have been locked out of the global financial system. The inability to transfer funds through SWIFT¹⁰⁴⁹ (meaning from one country to another) is the main problem affecting saffron exports, as a sector with high participation by women, which directly affects local women who rely on their income

¹⁰⁴⁴ See the EU Geographical Indications Register, <<https://ec.europa.eu/info/food-farming-fisheries/food-safety-and-quality/certification/quality-labels/geographical-indications-register/#>>.

¹⁰⁴⁵ For information on sanctions against Iran see footnotes 699, 700, and 800.

¹⁰⁴⁶ Anuradha M. Chenoy, "Gender and Human Rights Violations as structural part of UCMs" (2013) Seminar of Experts on Unilateral Coercive Measures. United Nations, Geneva: Human Rights Council, <<https://www.ohchr.org/Documents/Events/WCM/AnuradhaChenoy.pdf>>.

¹⁰⁴⁷ Research and evidence show that Iran's economic sanctions have serious consequences for vulnerable groups such as women and Indigenous and local people. See e.g. Fatemeh Kokabisaghi, "Assessment of the Effects of Economic Sanctions on Iranians' Right to Health by Using Human Rights Impact Assessment Tool: A Systematic Review" (2018) 7:5 International Journal of Health Policy and Management 374.

¹⁰⁴⁸ At the time of the interviews (October 2017), the currency exchange rate for every US\$1 was equal to IRR4000. At the time of writing (February 2020), the exchange rate for every US\$1 equals IRR13000.

¹⁰⁴⁹ SWIFT, or the Society for Worldwide Interbank Financial Telecommunication, provides a secure network that allows more than 10,000 financial institutions in 212 different countries to send and receive information about financial transactions to each other. Iran's access to SWIFT is suspended due to the sanctions. See Aljazeera, "What SWIFT Is," *supra* note 801.

from saffron production. The effects have been greater on women-headed households who rely on their saffron income.

As discussed in previous parts, saffron is not just a commodity to be protected through trademark, nor can the TK around its production or medical uses gain patent or industrial design or trade secret protection since they have been known for centuries in the ILCs. The remaining practical option among IP tools to protect saffron and TK around it seems to be GI. Saffron is ecologically suited to the arid growing conditions prevalent in eastern Iran. Saffron from different producer countries, picked and dried in different ways, gives rise to different end qualities.¹⁰⁵⁰ The various saffron production and processing methods among countries give rise to final products that are characteristically distinct.¹⁰⁵¹ Due to the long experience with its cultivation, and the transfer of methods of growing and harvesting from generation to generation, Iranian saffron has managed to retain its distinctive qualities compared with the crops produced in other regions of the world. Not having access to TRIPs, since Iran is not a member of the WTO, the available laws and agreements for Iran pertaining to geographic indication are Iran's *Act for Protection of Geographical Indications*,¹⁰⁵² and the multilateral *Lisbon Agreement for the Protection of*

¹⁰⁵⁰ GIs generate potential differential treatment for the two case studies: of Persian carpets and saffron. For more details about the notion of “terroir” and the use of GI in protection of food products, see Bitá Amani, “Intellectual Property & Novel Food” (2018) conference presentation at *The Terroir of Innovation: A Multi-disciplinary Conference on Cider and the Development of Geographical Indications in Canada*. <https://www.mcgill.ca/law/files/law/channels/attach/terroir_of_innovation-29-march-2018.pdf>. Differential treatment of GI protection for goods is reflected in Canada's GI regime under the *Trademarks Act*, for example. With recent amendments, GI protection has expanded beyond wine and spirits to agricultural and food products but would not be available for carpets. Canada, *Trademarks Act*, RCS 1985, 2014, c.20.

There are ISO standards for grading saffron grown in various countries. The standards are useful for analyzing the strength of the spice's flavour, aroma, and colour. The two parts of the standard, ISO 3632-1:2011 and ISO 3632-2:2010, specify test methods for the different categories of dried saffron.

¹⁰⁵¹ The followings factors are attributed to uniqueness of saffron of Khorasan: the level of humidity, ash content, percentage of insoluble ash, coloring effect, average length of stigma, and average length of styles. Agricultural Planning, Economic and Rural Development Research Institute (APERDERI), “A Proposal,” *supra* note 840 at 14.

¹⁰⁵² *Act for Protection of Geographical Indications*, *supra* note 540.

*Appellations of Origin and their International Registration.*¹⁰⁵³ The Lisbon System offers a means of obtaining protection for an appellation of origin in the 30 contracting parties to the Lisbon Agreement. To date, Iran has registered two appellations of origin under the Lisbon System, namely “Zaferan-e-Ghayenat-e-Iran” and “Zaferan-e-Khorasan-e-Iran.”¹⁰⁵⁴ The GI system is built upon distinct characteristics of products, and such characteristics can be attributable to both natural and human factors. The GI system as it currently stands and has been used thus far is a gender-unaware mechanism. However, a product’s distinctiveness, as is the case with saffron, can be the result of women’s contributions, and the mechanism thus should be used in a gender-responsive manner that recognizes and compensates the contributions of women. The two appellations of origin registered by Iran do not mention or list local women saffron producers as the beneficiaries of such GIs.

5.6.3 Patenting Based on Saffron TK

As discussed earlier, for a long time, saffron has been known by the ILCs of Iran for a variety of cosmetic and therapeutic functions. Studies show that saffron has had the largest number of applications among all medicinal plants, and, according to some studies, it has been used in the treatment of 90 medical indications.¹⁰⁵⁵ In the past decades, TK of the medicinal properties of saffron has attracted scientific interest toward this crop, and there have been various patents registered on the crop. A study comparing the usages of saffron in Razi’s *Al-Hawi* book with modern scientific studies found that the pharmacological data on saffron and its constituents in modern scientific research are similar to those found in Razi’s *Al-Hawi* monograph.¹⁰⁵⁶

¹⁰⁵³ *Lisbon Agreement*, *supra* note 769.

¹⁰⁵⁴ Lisbon Express Database, *supra* note 773.

¹⁰⁵⁵ Susan C. Ferrence and Gordon Bendersky, “Therapy with Saffron and the Goddess at Thera” (2004) 47:2 *Perspectives in Biology and Medicine* 199 at 211. See also Mousavi and Bathaie, “Historical Uses,” *supra* note 14.

¹⁰⁵⁶ Mollazadeh, Emami and Hosseinzadeh “Razi’s *Al-Hawi*,” *supra* note 17.

One of the best-known qualities of saffron, which was mentioned by all of the local women I interviewed, is its enlivening and antidepressant properties. Saffron is considered to be an excellent medicinal plant for treating depression in Iranian traditional medicine textbooks. More specifically, Razi writes in *Al-Hawi*, “Use of saffron would lead to a high feeling of pleasure which is so close to a psychotic state.”¹⁰⁵⁷ Modern medical research has recognized the beneficial impact of saffron stigma and petal extracts in the treatment of mild to moderate depression.¹⁰⁵⁸ In fact, a study retrieving patents from various patent databases found that maximum patenting activity occurred regarding the use of saffron in the treatment of neurological disorders, followed by multiple uses of saffron compounds in the treatment of metabolic disorders and its use in cosmeceuticals.¹⁰⁵⁹ A study examining the patents registered in the USPTO patent database, Patentscope, Espacenet, and Google Patent in the field of central nervous system (CNS), cardiovascular, urogenital, dermatological and inflammatory disorders, shows a growing trend in the number of saffron-related patents, with China, Japan, Germany, Spain and Canada registering most of the saffron-related patents.¹⁰⁶⁰ More specifically, a WIPO PCT application seeks patent protection for saffron extract and its use for the prevention of mood disorders related to depression.¹⁰⁶¹ The original patent was issued in Spain in 2017 with an expiration date in 2036. The saffron-related patent activity has occurred even though the antidepressant character of saffron

¹⁰⁵⁷ Cited in Mollazadeh, Emami and Hosseinzadeh “Razi’s *Al-Hawi*,” *supra* note 17 at 1157.

¹⁰⁵⁸ Saeed Samarghandiyan and Tahereh Farkhonde, “Saffron and Neurological Disorders” in Maryam Sarwat and Sajida Sumaiya, eds, *Saffron: The Age-Old Panacea in a New Light* (Academic Press, 2020), 103.

¹⁰⁵⁹ Mitali Dawalbhakta and Manasi Telang, “Patents on Therapeutic and Cosmetic Applications of Bioactives of *Crocus Sativus* L. and their Production through Synthetic Biology Methods: A Review” (2017) 11:1 *Recent Patents on Biotechnology* 3.

¹⁰⁶⁰ Abbas Hemmati Khaki, Ali Mohammad Shariati Moghadam and Sakineh Soukhtanlou, “Reviewing Saffron Patent in Iran and the World”, (2018) 5th National Annual Saffron Symposium, University of Torbat-e-Heidariyeh. See also Maryam Rameshrad, Bibi Marjan Razavi and Hossein Hosseinzadeh, “Saffron and its Derivatives, Crocin, Crocetin and Safranal: A Patent Review” (2018) 28:2 *Expert Opinion on Therapeutic Patents* 147.

¹⁰⁶¹ “Use of a New Saffron Extract for the Prevention of Mood Disorders Related to Depression”, ES Patent No 2573542B, PCT Application No PCT/ES2017/070237 (18 April 2016), <<https://patents.google.com/patent/ES2573542B1/en>>.

is well known among local communities growing saffron. Even further, as mentioned earlier, this TK is documented in Razi's Al-Hawi book, which, in this case, is published prior art that should have been reviewed by the patent examiners. More importantly, in patenting the saffron extract for its anti-depressant effect, there was no mention of the ILCs who have held the TK for generations, nor has there been any benefit-sharing agreement. Moreover, patenting a TK-based product such as saffron extract and producing it in labs through synthetic methods can deprive people of income, whose life is dependent on natural production of such a product based on their TK. These implications are similar to those occurring with other natural resources, such as TK-based products, such as turmeric and Neem.¹⁰⁶²

5.7 TK and TCE Misappropriation and its Impact on Women: The Case of Saffron

Given women's strong roles as producers and processors of saffron, the lack of proper IP protection for saffron, which harms the sector in general, is in fact hurting local women. Women's roles in saffron production are critical to their well-being, given the lack of other income-generating opportunities. Local women can easily lose their source of income and livelihood in the aftermath of TK misappropriations or protection mechanisms that are not inclusive of their needs and interests. In other words, the impact of a lack of TK protection and the consequent misappropriations, as discussed in the previous sections of this chapter, is gendered as saffron production primarily involves women and creates job opportunities mainly for women. Women have unquestionably been key players of saffron production and hold significant TK essential for

¹⁰⁶² For similar scenarios, see the details on turmeric and Neem in note 36, including Drahos, "Indigenous Knowledge." Also see Pádraig Carmody, *The New Scramble for Africa*, (Cambridge: Polity Press, 2011). Carmody examines how patenting Brazzein based on TK of Gabonese women, and producing it in a laboratory in large quantities at low cost by artificial material, led to a major drop in the price of Brazzein, and consequently many Gabonese women who used to harvest the fruit lost their source of income.

saffron production. From an employment perspective, socio-economic studies show that, on average, every 10,000 square meters of saffron requires 270 person-days for production.¹⁰⁶³ Other than providing employment, saffron also functions as a financial safety net from a livelihood perspective. Women do not sell saffron products all at once; they consider it as cash and keep it at home so they can easily convert it into money when needed. They take a few batches of saffron from storage and sell them when the family needs money. This is done under the management of women throughout the year. Therefore, many retail transactions in the village are managed by women. The participants said that they sell saffron to their female relatives who live in towns (when they visit the village), and their relatives take saffron to town where they sell it in their network.

Although there are various factors contributing to the situation of undervaluation of women's TK in the saffron production sector in Iran, a gender-responsive TK regime is still an important factor in improving these women's situation. A gender-responsive TK regime will not be a panacea for the various forms of gender inequality in Iran,¹⁰⁶⁴ but it can play an important role. Inclusion of women in TK law and policy in the context of saffron production – as just one example of numerous sectors in which women and TK are two pillars of production – is necessary due to the fact that local women depend upon their TK-based saffron production for their survival, especially given their marginalization from market economies and the inability of markets to capture the value of most of their activities, such as the wide range of activities that women do in

¹⁰⁶³ Agricultural Planning, Economic and Rural Development Research Institute (APERDERI), "A Proposal," *supra* note 840 at 10. See also Kafi et al, *Saffron (Crocus sativus)*, *supra* note 824 at 3.

¹⁰⁶⁴ For more info about various forms of gender inequality in Iran see e.g, Centre for Supporters of Human Rights and Minority Rights Group International, "Beyond the Veil: Discrimination Against Women in Iran", (2019) <<https://minorityrights.org/publications/beyond-the-veil-discrimination-against-women-in-iran-english-and-persian/>>. See also Iran's "National Review on Women's Status in the Islamic Republic of Iran", (2014) prepared by the Vice Presidency for Women & Family Affairs, Iran <https://sustainabledevelopment.un.org/content/documents/13097Islamic_Republic_of_Iran_review_Beijing20.pdf>.

animal husbandry, raw material processing, household management, and child and elderly care. Moreover, TK and TCE associated with saffron are an important source of identity for the local women. Their TK- and TCEs-based activities have spiritual meaning contributing to certain aspects of their well-being. These practices often have cosmological or religious dimensions that cannot be easily appreciated under the current approach to IPRs. Women's traditional practices in saffron production are, in fact, part of a broader setting comprising their beliefs, values, and skills, and is a result of centuries of trial and error. Therefore, their TK on saffron production, which is the outcome of centuries of interaction with their environment, should be recognized and protected. Documenting women's TK on saffron production is of critical importance given that most of the local women growing and processing saffron may be the last in their generation who live in the village.¹⁰⁶⁵ Documenting and collecting saffron TK should take place in a gender-responsive manner where women's contributions are recognized.

5.8 Women's Empowerment through Gender-Responsive Protection Mechanisms

Women have remained invisible even though they carry out a large portion of the work in saffron production. Despite their major contributions, they are not considered as skilled labour who hold TK essential for saffron production, and consequently, they will remain unseen in problem definition, analysis, decision-making, planning, and implementation of TK law and policies. If saffron or any other TK-based products or services are to be used as a means to empower women, laws and policies need to be put in place to create an enabling environment for women by protecting them from TK misappropriation. Mainstreaming gender in TK law and policy at the local, national, and international levels, increases the impact of TK protection

¹⁰⁶⁵ "Outmigration: The Sad History," *supra* note 1019.

instruments on the ground. Mainstreaming gender in TK law and policy aims at identifying and recognizing local women's needs, interests, capacity, and constraints in TK-protection mechanisms and programs. If TK-protection instruments remain gender-unaware, they will not be able to fulfill the objectives – such as safeguarding TK – for which they are designed, as they overlook the part of TK holders' population who are women. Mainstreaming gender in TK law and policy also offers an avenue for empowering women through recognizing their contributions and improving their position in family, community, and society at large. Rural women who hold and practice TK should not be seen as passive members of the community who have little to offer and benefit from TK law and policy. Rather, they are active agents in their community who keep the sector alive through their knowledge and skilled labour.

5.9 Conclusion

Saffron is a special crop whose production technology has not changed for many years. Saffron is still grown manually in a labour-intensive manner on the basis of traditional practices of the local communities. This crop has particular economic, cultural, and historical significance for both the local communities and the country. Despite the lack of gender-disaggregated data showing women's contribution and specific roles in saffron production, local women's participation is highly significant in saffron production. In an attempt to document local women's TK in saffron production and the extent of their engagement in saffron production, this chapter presented an analysis of the fieldwork results that came out of the in-person interviews with the local women of Bidvey village in Khorasan Province, Iran. Various traditional practices and cultural expressions in the context of saffron production are examined in the chapter showing the sexual division of labour that has led to formation of gendered knowledge in saffron production. The chapter also shed light on why and how the contribution of the local women in saffron

production is often seen as part of their domestic roles, and therefore as such remains unrecognized.

The chapter then revealed the inadequacy of the existing IP mechanisms to protect local women's TK and TCEs around saffron production. Various practices that threaten Iranian saffron production, including lack of proper protection of saffron as a genetic resource, the selling of the high quality Iranian saffron under foreign brands, and patenting based on saffron TK, is examined in the chapter. The impact of such threats on local women as major players in the saffron value chain is examined, followed by the need to call attention to the protection of TK and TCE incorporated in saffron production in a gender-responsive manner.

Unfortunately, although holding a huge potential for women's empowerment, the sector is bereft of any official policy addressing women's TK. This is so even though saffron's capacity for job creation, and its export value, especially in areas with limited industrialization, makes it a strategic product essential for food security, rural development, and reduction of outmigration to cities in Iran. In other words, on one hand, the numerous and widespread usages of saffron, the special properties of this valuable medicinal plant, its role in the livelihoods of local people, as well as its high value added, offer considerable scope for empowering the local women. With Chapters 3 and 4 providing detailed analysis of women's role in production of handwoven carpets and saffron as two TK-based sectors, the next chapter presents a gender impact assessment of the current gender unawareness trend in TK law and policy, followed by policy recommendations for addressing the problem.

CHAPTER 6: POLICY RECOMMENDATIONS

6.1 Introduction

This dissertation deals with the issue of “TK and women” and engages with questions of whether and how protection of TK should be regulated in a gender-responsive manner. As discussed in the previous chapter, Indigenous and local women have remained invisible as knowledge producers.¹⁰⁶⁶ Moreover, the case studies examining women’s TK in two different sectors (i.e., agriculture and textile) reveal one common theme: the invisibility of women’s TK that is taken for granted while it is the very basis of production. This invisibility is linked to the doubly gendered nature of Indigenous and local women’s TK both as a category of knowledge that does not fit the conventional IP rights moulds and as a knowledge that is held and practised by women,¹⁰⁶⁷ and the fact that most of their TK-based activities occur as domestic chores. For instance, much of the local women saffron growers’ TK-based production is considered as household activities, and, like the rest of such undertakings, remains unpaid and unrecognized.¹⁰⁶⁸ In other words, since women’s TK-based activities largely take place outside the realm of the official market and formal setting, it is often assumed that they do not have transaction value.¹⁰⁶⁹ This has serious consequences for Indigenous and local women. It means that the majority, if not all their TK-based activities, are not perceived to be work that has economic value in the market.

¹⁰⁶⁶ See sections 1.1.3.1 and 1.1.3.4 in Chapter 1 of the thesis.

¹⁰⁶⁷ As discussed in Chapter 1, “women’s TK” is a knowledge category that is doubly gendered (via both the gendered philosophical associations with traditional knowledge and the gender of its holders) and thus doubly devalued. In the first layer of feminization, men’s TK may also become feminized.

¹⁰⁶⁸ According to the United Nations’ Development Program (UNDP), women spend, on average, twice as much time on unpaid housework as men. See <<https://www.undp.org/content/undp/en/home/sustainable-development-goals/goal-10-reduced-inequalities.html>>.

¹⁰⁶⁹ As discussed in Chapter 1, feminists argue that the definition of what we know as “work” is gendered and consequently leads to marginalization of women’s contribution in society. For instance, see Margolis, *Mothers and Such*, *supra* note 74 at 262–263. See also, UNDP, “Valuing Care,” *supra* note 710; UN Women, “Facts and Figures,” *supra* note 710. Carpenter, “The Unpaid Work,” *supra* note 711.

Therefore, because Indigenous and local women's TK-based activities are seen as both "natural" and nonproductive, they are not valued either directly through paid remuneration, or indirectly through status and power. This happens even though both women's TK-based activities and products, such as handwoven carpets and saffron, are highly valued in the market.

Closer investigation via the case studies, shows that there are differences between local women and men in the handwoven carpet and saffron production sectors in terms of gender roles and gender division of labour that are influenced by social norms. In other words, the roles that are assigned to women carpet weavers and saffron growers are based on gendered social constructions that influence the distribution of opportunities, rights, and benefits. Women carpet weavers and saffron producers also have differences in access to resources and participation in decision making. For instance, while in general the local women tend to weave carpets and process saffron, often the men who tend to transport and sell these TK-based products, manage the income generated from them, and decide how they are used.

Guided by feminist legal methodology, and using two feminist methods, namely gender impact assessment and qualitative interviews, the thesis makes a case for mainstreaming gender in TK law and policy. Gender mainstreaming in TK law and policy involves the integration of a gender-equality perspective into the thematic approach used to date. In order to conduct a gender impact assessment, the current position of women TK-holders is determined through qualitative empirical research by collecting data from local women TK-holders who are among the target beneficiaries of TK law and policy. The two cases of carpet and saffron production served as examples of sectors in which women and their TK are two defining elements of activities, shedding light on the gender impact of the lack of TK protection or the resulting misappropriation. Examining the current situation of local women in handwoven carpet and saffron production

allows for the precise description of important issues regarding recognition and promotion of these women's roles in the TK system, compensation of their TK-based activities, and their participation and representation in governance of their TK. This in turn enables the impact of future developments in TK law and policy, if they continue to ignore gender aspects of the issue, to be estimated. Drawing on the case studies' results, the chapter presents policy recommendations on how to incorporate gender in TK law and policy.

6.2 Gender Makes A Difference: Gender Impact Assessment

There are different approaches to, and models for, carrying out a gender impact assessment. The one used in this research is based on the toolkit published by the European Institute for Gender Equality (EIGE).¹⁰⁷⁰ Following the EIGE toolkit, the gender impact assessment process in the context of this research can be organized around the following four steps. Step 1: Checking gender relevance: in this step, the gender relevance of TK policy is examined through describing the current situation of women. Determining the gender relevance is done by taking into account two criteria, or what some resources call, SMART, that is, a Simple Method to Assess the Relevance of policies To gender.¹⁰⁷¹ It consists of two questions: (1) Is the policy directed at one or more target groups? and (2) Are there differences between women and men in the field of the policy (with regard to rights, resources, positions, representation, values, and norms)?

¹⁰⁷⁰ The European Institute for Gender Equality (EIGE), *Gender Impact Assessment*, *supra* note 245.

¹⁰⁷¹ Council of Europe, "Gender Mainstreaming," *supra* note 87 at 62.

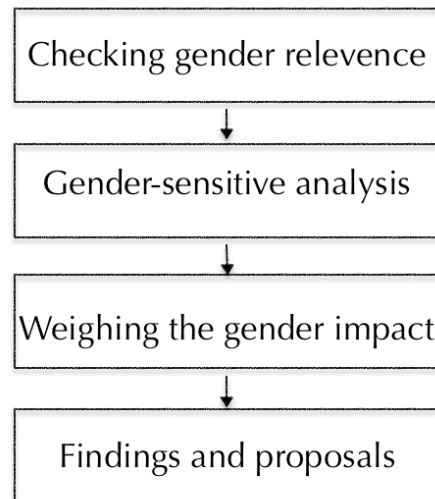


Figure 57
GIA steps based on EIGE toolkit
Source Ghazaleh Jerban adapted from European Institute for Gender Equality

Step 2: Gender-sensitive analysis: This step involves a process of analysis to determine the impact that the intervention could have on the effective equality of women and men. On one hand, the analysis examines the present situation of women in the field. On the other hand, it tries to elaborate how gender-unaware TK instruments can affect the existing situation. In performing this step, first, the situation of women in the field should be analyzed by collecting information and data. The existing inequalities in terms of access to resources (land, employment, money, power, mobility, time, etc.) on the basis of roles attributed to women and men (gender roles) are identified.

Step 3: Weighing the gender impact: In this phase, the contribution of TK instruments to gender equality is examined based on the criteria that are suggested by the toolkit: (1) Participation of women and men and (2) Access to and control of resources.¹⁰⁷² In Step 4, I provide my proposals.

6.2.1 Lessons Learned from Case Studies: Gender Relevance

In this section, I first present the insights that can be derived from the case studies examining the everyday practices of women in saffron farms and carpet workshops. Then, I

¹⁰⁷² The European Institute for Gender Equality (EIGE), *Gender Impact Assessment*, *supra* note 245 at 16.

continue by arguing for the necessity of gender impact assessment in the context of TK law and policy. Although according to the theoretical perspective of the research, “Third World Feminism”, gender-based disadvantages can vary in degree and form in different societies,¹⁰⁷³ there are similarities and patterns across societies¹⁰⁷⁴ on the issue of women and TK. These similarities and patterns can serve as a template for understanding how TK protection instruments can impact each gender differently. Therefore, although based on only two case studies, the lessons learned from the carpet and saffron cases can be helpful in the broader context of understanding the oppression/discrimination women face and the benefits of recognizing and protecting their TK.

The findings that emerged from the analysis of my fieldwork data show that, in Indigenous and local communities, as in most societies, roles, responsibilities, relationships, and practices are defined or assigned on the basis of gender. The division of labour based on gender particularizes the knowledge that Indigenous and local women form and share. In fact, it leads to formation of gendered knowledge,¹⁰⁷⁵ which means that there are differences in the knowledge that Indigenous and local men and women hold. While men and women in Indigenous and local communities live through a common history and share similar contextual challenges, there are differences in their lived realities, identities, and roles that create important differences in their perceptions and ways of knowing. Consequently, women and men not only have knowledge of different things, but also have a different knowledge of the same things. They also have different ways and means of learning, preserving, and transferring their knowledge.¹⁰⁷⁶ As a result, women and men have

¹⁰⁷³ See section 2.1.1 in Chapter 2 of the thesis.

¹⁰⁷⁴ Fatima Alvarez-Castillo and Dafna Felnholz, “Women in Developing Countries and Benefit Sharing” (2006) 6:3 *Developing World Bioethics* 113 at 116.

¹⁰⁷⁵ Howard, *Women and Plants*, *supra* note 6 at 16.

¹⁰⁷⁶ See e.g. Ilse Köhler-Rollefson, “Invisible Guardians: Women Manage Livestock Diversity” (2012) FAO Animal Production and Health Paper No. 174. See also Fernandez, “Gender and Indigenous Knowledge,” *supra* note 924.

different roles in the generation, transmission, and use of TK, and their contributions are different but at the same time complementary and interlocking.¹⁰⁷⁷ For instance, handwoven carpet production requires both women's and men's TK, each contributing at different stages of the production process.

Indigenous and local women's TK is based on everyday life experiences and deeply rooted in their spirituality and identity. As discussed in the case studies chapters, handwoven carpets and saffron are more than just commodities; rather, the TK required and the practices employed during their production constitute part of women weavers' and saffron growers' cultural identity. Their contributions in TK overlap and are connected to their multiple roles in the family and community. Indigenous and local women maintain principal roles in the upbringing of children, through which the intergenerational transmission and renewal of many forms of TK occur.¹⁰⁷⁸ Indigenous and local women are thus repositories of TK. The interviews with women carpet weavers show that all of the participants learned their weaving skills in their childhood and mostly from their mothers. The interviews also reveal that, as a result of formal schooling and migration, the knowledge of the older generations in handwoven carpet weaving and saffron production is often no longer passed on to the younger generations, and TK has declined among the younger generation.¹⁰⁷⁹

¹⁰⁷⁷ Helene Gregoire and Ashley Lebner, "Re-evaluating Relevance: Intellectual Property Rights and Women's Traditional Environmental Knowledge" (2000) Committee on Sustainable Development NGO Women's Caucus Position Paper for CSD-8. The precise distribution of TK among men and women, however, varies from place to place. See also Janice Jiggins, *Changing the Boundaries: Women-centered Perspectives on Population and the Environment* (Washington D.C.: Island Press, 1994); Dianne E. Rocheleau, "Gender, Ecology, and the Science of Survival: Stories and Lessons from Kenya" (1991) 8:1/2 Agriculture and Human Values 156.

¹⁰⁷⁸ See UNESCO, International Symposium of the Role of Women in Transmission of Intangible Cultural Heritage, Annotated Agenda, 27–30 September 1999, Tehran, Iran, <<https://ich.unesco.org/doc/src/00157-EN.pdf>>.

¹⁰⁷⁹ See also Chapters three and seven in Howard, *Women and Plants*, *supra* note 6, where Andrea Peroni and Nancy Turner talk about devalorization of women's traditional subsistence practices and cultural knowledge by dominant cultures as a major reason for the erosion of TK, where formal education systems pertaining to the dominant cultures are implicated and encourage girls to abandon their TK. Consequently, women's traditional sources of status erode and their specialized skills and knowledge are left behind.

Moreover, with rural outmigration, the role of local women remaining in villages as keepers of TK has become even more important as they continue the observance of age-old traditions and transfer of TK to the next generation.

Despite this, the local women I interviewed have an inadequate awareness of the significance of their role and their TK in handwoven carpet and saffron production mainly because of the gendered attitudes toward their contributions.¹⁰⁸⁰ Although they play a significant role in the TK-based production of handwoven carpets and saffron, their contribution does not provide them with proportionate status and power due to the fact that it is not recognized by the community, society, laws and policies, and even the local women themselves. The interviews show that the local women's attitude toward their own TK involves embarrassment, shame, or uncertainty to discuss their knowledge and practices.¹⁰⁸¹ This suggests that these women often lack confidence and the sense of legitimacy in their own knowledge. These attitudes emerge partly because men's activities are very often considered more important than women's tasks. This is referred to as the devaluation of women's work.¹⁰⁸² Social systems almost always assign more value and authority to the activities of men,¹⁰⁸³ to the extent that women themselves see their work as less valuable. As discussed in the case studies chapters, this attitude is so deeply ingrained in society that even the local women themselves may unwittingly perpetuate them.

The two case studies show that it is often men who are the face of and participate in the commercial activities of exchanging handwoven carpets and saffron, which are TK-based

¹⁰⁸⁰ See sections 4.6 and 5.4 of the thesis where the women's attitudes toward their knowledge in both sectors are discussed.

¹⁰⁸¹ See sections 4.6 and 5.4 of the thesis.

¹⁰⁸² International Labour Organization, *Global Report under the Follow-up to the ILO Declaration on Fundamental Principles and Rights at Work* (Geneva: ILO, 2003).

¹⁰⁸³ Judith A. Howard and Jocelyn A. Hollander, *Gendered Situations, Gendered Selves: A Gender Lens on Social Psychology* (New York: Altamira Press, 2000).

products. In the words of Howard, “women produce, but men exchange wealth!”¹⁰⁸⁴ This not only excludes women from monetary benefits of their work, but they are also excluded from participating in decision-making regarding their work and knowledge. The interviews show that this happens partly because women carpet weavers and saffron growers are confined to the domestic domain. They face restrictions on their mobility due to their multiple domestic chores and cultural restrictions on their freedom of movement.¹⁰⁸⁵ The women weavers and saffron growers are severely constrained by the burden of simultaneously balancing their triple roles (i.e., reproductive, productive, and community roles). Most of them struggle with time poverty¹⁰⁸⁶ because of their disproportionate share in the household tasks compared to men. Their time is fragmented and is at the disposal of the family, and demands of their multiple roles leave little room for any uninterrupted activity and dedicated participation in the value chain.

Despite the significant contributions of the local women to family income through their handwoven carpet and saffron production, in society they are still seen as economic dependents of men, and, as such, men often speak and make decisions on their behalf.¹⁰⁸⁷ This is, of course, contrary to the significance of their contributions, as my fieldwork shows that women carpet weavers and saffron growers play a crucial economic role through their TK in various sectors such as agriculture, textile, handicraft, and animal husbandry. Moreover, households headed by women, of which there are two main types, are a common form of domestic arrangement in the communities that I visited. First, there are de jure women-headed households, in which the male partner is permanently absent due to divorce or death. Second, are de facto women-headed households in which the male partner is temporarily absent, due to male outmigration to cities. In

¹⁰⁸⁴ Howard, *Women and Plants*, *supra* note 6 at 19.

¹⁰⁸⁵ See sections 4.6 and section 5.3.3 where restrictions on women’s mobility are discussed.

¹⁰⁸⁶ See footnote 707 on time poverty.

¹⁰⁸⁷ Gholizadeh, “Examining Causes,” *supra* note 829 at 179.

these cases, local women run their households in the absence of their spouses by utilizing their TK for handwoven carpet and saffron production for income generation. In the absence of their male partners, local women either ask one of their male relatives to take their TK-based products to market or they form groups among themselves, usually with an elder accompanying them, and take their TK-based products to market for exchange.¹⁰⁸⁸

Overall, the case studies make the gender relevance of TK law and policy apparent. While the tendency is to see Indigenous and local women's and men's needs as similar, the reality of their lives reveals a very different situation. Indigenous and local men's and women's situations are not the same even if they face similar threats and live in the same community. Indigenous and local women are disadvantaged in similar ways to Indigenous and local men, but also in additional ways as *women*, that is, in ways that are different from the men of their class. Assessing gender relevance of TK law and policy requires questioning whether or not such law and policy is likely to have an impact on gender equality. In order to assess the gender relevance of TK law and policy, the following elements are taken into account: (1) whether the policy target is people and (2) whether the policy has an impact on access and control of resources.¹⁰⁸⁹ According to the guidelines, if the answer to these two questions is positive, then gender impact assessment is applicable. In the context of TK law and policy, first, the target group is Indigenous and local people. Second, TK law and policy affect people regarding their access to and control of resources. Consequently, they have an impact on the social situation or position of women and men, by either improving or harming it. In other words, like most political decisions, TK law and policy have a concrete impact on the lives of women and men. That is why gender impact assessment is relevant and needed in order to assess their effects from a gender perspective. For instance, in the case of

¹⁰⁸⁸ See e.g. section 5.3.3 in Chapter 5 of the thesis.

¹⁰⁸⁹ Council of Europe, "Gender Mainstreaming," *supra* note 87 at 62.

women carpet weavers and saffron growers, TK law and policy can prevent various forms of TK misappropriation of Persian handwoven carpets and saffron and as a result improve these women's income. As another example, TK protection can ensure recognition of carpet weavers' and saffron growers' TK through labeling mechanisms for women's TK-based products.¹⁰⁹⁰ More importantly, TK law and policy determine the beneficiaries of TK and GRs and, as such, they impact women saffron growers' and carpets weavers' rights over their GRs and TK and their participation in decision making for such resources.

6.2.2 What Difference Does Difference Make: Gender Analysis

In this section, I argue that, in the context of TK law and policy, gender makes a difference in the lives of the local women I interviewed for three main reasons. First, there are different contributions of the local women to the TK system, and there is a differential impact of TK misappropriation on these women, which exemplify the feminist theories on difference,¹⁰⁹¹ explaining why and how women and men are different, not biologically but in their social, cultural, economic, and political life. Second, there is unequal access of the local women to resources at household, community, and national levels, which is illustrative of the theories on women's subordination,¹⁰⁹² explaining why and how women are subordinated in gendered relations. Third, there are restrictions on the local women's mobility and freedom, constraining their participation in decision making, that fall neatly under the theories on oppression,¹⁰⁹³ explaining why and how women's freedom is restricted or denied in gendered practices and policies. TK law and policy affect the living conditions and access to resources for the local women and men differently. This

¹⁰⁹⁰ For more details about such labeling mechanisms see section 6.3.2.2 of the thesis.

¹⁰⁹¹ See e.g. Joan Scott, "Deconstructing Equality-Versus-Difference: Or, the Uses of Post-Structuralist Theory for Feminism" (1988) 14 (1) *Feminist Studies* 32.

¹⁰⁹² See e.g. Abeda Sultana, "Patriarchy and Women's Subordination: A Theoretical Analysis" (2010) 4 *Arts Faculty Journal* 1.

¹⁰⁹³ See e.g. Anna G. Jónasdóttir, *Why Women are Oppressed* (Philadelphia: Temple University Press, 1994).

effect is known as “gender impact.” The assessment of the gender impact of TK law and policy involves analyzing the impact that these could have on the effective equality of the local women and men. My analysis identifies existing gender inequalities between the local women and men in terms of access to resources and in their exercise of rights (through participation in decision-making processes). It then proceeds to consider how this situation might improve through gender-responsive interventions where the local women’s TK is recognized and protected from misappropriation.

Restrictions on local women’s movement, lack of equal access to and control of their resources, and male representation of these women in decision making and in the market place, are manifestations of various forms of gender inequality in the local communities that I examined.¹⁰⁹⁴ Although there are variations in Indigenous and local communities, the case studies show that the local women’s use of and access to material resources and participation in decision making are often more restricted compared to their male counterparts. In other words, gender is a direct determinant for access to and control over resources, and for access to and use of public fora and political processes. It is therefore more than likely that Indigenous and local women and men are affected differently by TK laws and policies. In fact, given the differences between men and women, the impact of any TK law and policy instrument is experienced differently by men and women with regards to (1) their access to resources, (2) control of resources, and (3) gendered responsibilities to manage resources for family and community use. Below, I discuss some aspects in which the differential impact of TK law and policy may be felt by Indigenous and local women.

The representation of women in TK governance, in general, and in decision-making processes relevant to their TK (such as FPIC and benefit-sharing agreements), can change as a

¹⁰⁹⁴ See e.g. sections 4.1, 4.6, 5.3.3 and 5.5 of the thesis.

consequence of TK law and policy. Gender-unaware TK instruments negatively influence Indigenous and local women's abilities to protect and utilize the TK on which they depend and constrain their efforts to provide for their families. The case studies show that the local women's rights of access to and control over resources do not, in most cases, match their responsibilities arising from their multiple roles in the family and community. For instance, while the major part of value added in handwoven carpet and saffron production happens as the result of women's TK-based contributions, women weavers and saffron growers often do not have a strong say in decision making regarding resources at the household, community, and national levels. A gender-unaware TK instrument can create new, or even exacerbate the existing, gender imbalance between rights and responsibilities. For example, as discussed previously, the majority of the local women whom I interviewed experience time poverty due to their multiple roles.¹⁰⁹⁵ The local women's multiple roles and the unequal use of time between these women and men should be taken into account when TK policy and programs are designed. The various responsibilities of the local women and resultant time poverty could obstruct their participation in decision making around TK. Gender-unaware TK policy and programs can actually reinforce gender inequality by ignoring the reality of the local women's lives.

TK-based activities are often among the few employment sources for Indigenous and local women. The case of women carpet weavers shows that general labour, such as janitorial work, is the alternative employment option for most of the women carpet weavers. TK law and policy, if gender-responsive, can lead to increased employment of the local women who have the carpet weaving skill set, and as a result, provide them with a degree of financial independence. Moreover, as revealed by the interviews, due to the lack of employment opportunities, people in rural areas

¹⁰⁹⁵ See sections 4.6 and 5.5. of the thesis.

migrate to cities, especially the younger generation, and, as a result, the knowledge of the older generations in handwoven carpet weaving and saffron production is often no longer passed on to the younger generation. Gender-responsive legal protection of TK, followed by gender-responsive programs and initiatives promoting handwoven carpet and saffron production, can lead to a better return for labour associated with women's TK-based products and attract younger people to remain in their local communities and practise their TK. Conversely, if TK law and policy do not provide gender-responsive safeguards, they can constrict the labour market for the local women as men may take over women's positions when their activities prove to be profitable. In fact, the division of labour may change as a consequence of TK law and policy. These can also change the distribution of paid and unpaid work. The extent to which such changes are favourable to the situation of the local women depends on the degree of gender-sensitivity with which such law and policy are designed. The case studies show that the distribution of the income in handwoven carpet and saffron production, where both men and women are part of the value chain, is unequal even though the major part of value added occurs as the result of women's TK-based activities.¹⁰⁹⁶ This unequal distribution of benefits can change if fair compensation is required in TK instruments and is enforced through institutional safeguards. On the contrary, the unequal distribution of benefits can be exacerbated if TK instruments continue to overlook the local women's contributions.

The case studies indicate that TK protection/misappropriation affects the status of women and gender relations in the household and the community. The lack of TK protection and consequent misappropriations of handwoven carpets and saffron affected the local women and men differently due to the different roles that they have in the family and community. For instance, TK misappropriation in the case of handwoven carpet production, where unauthentic copies

¹⁰⁹⁶ See sections 4.7 and section 5.6 of the thesis.

decrease Persian handwoven carpets' share of the market, have an immense impact on the women weavers in terms of access to employment, which in turn affects their access to housing, food, and healthcare.¹⁰⁹⁷ In other words, lack of proper TK protection and resultant TK misappropriation have particularly adverse effects on the local women because of their greater dependency on such resources. More specifically, the impact of TK misappropriation on the local women is twofold. First, due to male outmigration to cities, the local women are burdened with a significant responsibility for family subsistence, and they are often the primary, and in many women-headed households, the sole, economic providers. TK misappropriation can lead to the local women losing their jobs while, at the same time, they have a systematically disadvantaged position in the labour market. They have fewer employment opportunities, less occupational mobility, and lower payments for the same or similar work. Second, misappropriation of the local women's TK results in them losing agency over their TK and also in a gradual erosion of their TK, leading to the destruction of the basis on which their cultural identity is founded and kept alive.

The gender analysis of TK, as evidenced by the two case studies demonstrates that Indigenous and local women are not unskilled labourers in the TK system. It reveals that their knowledge is different than men, and that it is untrue that they know nothing more than men. It also reveals the barriers that keep men and women in Indigenous and local communities from benefitting equally from TK law and policy. In other words, the gender analysis shows that the importance of addressing gender within the context of TK law and policy is due to the fact that:

(1) Indigenous and local women and men have different roles in the TK system and that the TK

¹⁰⁹⁷ There is as yet very little research and data on the differential ramifications of TK misappropriation for Indigenous and local women versus men. This is important because as cited by Hafkin and Huyer (in a different context) "Without data, there is no visibility, without visibility, there is no priority." Nancy J. Hafkin and Sophia Huyer, "Women and Gender in ICT Statistics and Indicators for Development," (2008) 4:2 MIT Press 25 at 26.

system is built upon both men's and women's contributions, (2) Indigenous and local women face restrictions in terms of access to resources, and (3) Indigenous and local women face barriers in participation in TK governance and decision-making processes. In many systems, women suffer discrimination due to both gendered legal systems and social norms and attitudes that deny them equal rights and opportunities, as is evidenced in the cases of handwoven carpet and saffron production where local women are excluded from full participation in economic life and decision making. If TK laws and policies fail to take these differences into account, not only are they unlikely to be effective or to meet their intended objectives, but they also perpetuate and even exacerbate the gender inequalities in Indigenous and local communities.

6.2.3 Positive, Neutral, or Negative? Weighing the Gender Impact

The goal of this section is to estimate the different effects (positive, negative, or neutral) of gender-unaware TK instruments in terms of gender equality. The following criteria are suggested to weigh the positive, negative, or neutral gender impact of any initiative on: (1) participation of women and men, (2) access to and control of resources, and (3) gender-based social norms and values.¹⁰⁹⁸ The impact will be considered transformative when TK instruments modify mechanisms or structures that help to reproduce gender inequalities. This means (1) acting on gender-based inequalities in access to and control over resources and decision-making power, (2) accommodating for social and cultural norms restricting women's mobility and freedom so that they can participate equally, and (3) promoting the equal social value of women's and men's contributions.¹⁰⁹⁹ In other words, the impact of TK instruments on the local women in the sectors that I studied can be determined by the position of the local women in terms of their access to and

¹⁰⁹⁸ The European Institute for Gender Equality (EIGE), *Gender Impact Assessment*, *supra* note 245 at 16.

¹⁰⁹⁹ The European Institute for Gender Equality (EIGE), *Gender Impact Assessment*, *supra* note 245 at 16.

control over resources, their participation in TK governance and decision making, and the level that TK instruments challenge and modify the gender inequality ingrained in social norms and gender roles.¹¹⁰⁰ Since the women carpet weavers and saffron growers are not directly represented in local, regional, and national political decision-making structures¹¹⁰¹ where TK law and policy are discussed, they are increasingly disadvantaged when dealing with issues related to TK. Therefore, regulating TK through a gender-unaware approach, or at worst, with the false image of a male TK holder, will create further challenges for the local women where they not only cannot benefit from their TK, but will also lose agency with respect to, and ownership over, their TK and resources. Given their limited rights in private property resources, such as agricultural land, establishing and strengthening rights to communal resources such as TK through gender-responsive laws and policies will help to empower the local women with a source of empowerment. Conversely, any gender-unaware IP mechanism regulating TK over handwoven carpets and saffron will further entrench inequalities faced by the local women in their access to and control over their TK. As mentioned earlier, gender-unaware IP mechanisms have ramifications in terms of employment opportunities for the local women, which itself affects the economic and social status of these women. Both case studies show that TK-based production of handwoven carpets and saffron are not just forms of cultural expression; for the local women, they are also a means of employment and of providing other basic amenities of life, such as housing, healthcare, and education.¹¹⁰²

Moreover, discriminatory practices that unfairly impact the local women in the distribution of benefits arising from their TK can easily be exacerbated if TK law and policy remain gender-

¹¹⁰⁰ Based on the criteria suggested in the EIGE toolkit. See The European Institute for Gender Equality (EIGE), *Gender Impact Assessment*, *supra* note 245 at 16.

¹¹⁰¹ See generally Gholizadeh, “Examining Causes,” *supra* note 829.

¹¹⁰² See section 4.7.2 and 5.5 of the thesis.

unaware. For instance, in the context of benefit sharing agreements with outsiders, given the gendered social norms in local communities of Iran that limit women's presence in the public sphere, without the intervention of a gender-responsive TK instrument requiring accommodations facilitating the local women's presence, these women can be treated unfairly and excluded from both the negotiation process and benefits arising from the commercialization of their TK. If TK instruments do not provide Indigenous and local women with the opportunity and the means to develop their capacities and obtain control of the decisions regarding their TK, then there is a danger that their TK will be "packaged as a product to be collected, owned, and sold"¹¹⁰³ without them being recognized or compensated in any way.¹¹⁰⁴ Supported by the two case studies, I argue that in a hierarchically gendered society, gender-unaware TK instruments influence Indigenous and local women negatively due to the fact that women are more likely to live in poverty, work in the informal economy, and have less access to resources and services due to gendered norms. To avoid this, differences in the position of Indigenous and local women and the way they manage, use, and control their resources and TK should be taken into account. This approach will surely yield not only greater gender equality but also more efficient and further-reaching results. The following parts will examine how such an approach can be achieved through gender mainstreaming in TK law and policy.

6.3 Mainstreaming Gender in TK Law and Policy

Generally, despite the gendered nature of TK in most cultures, TK law and policy have typically not been gender-responsive.¹¹⁰⁵ The general misconception and marginalization of women's role in the TK system, which is directly related to their lack of power and their low status

¹¹⁰³ Rocheleau, "Gender, Ecology," *supra* note 1077 at 158.

¹¹⁰⁴ Consuelo Quiroz, "Biodiversity, Indigenous Knowledge, Gender and Intellectual Property Rights" (1994) 2:3 *Indigenous Knowledge and Development Monitor*, Special Issue December 1994, no page number.

¹¹⁰⁵ Quiroz, "Biodiversity," *supra* note 1104 at 2.

within society, have often caused actors in mainstream TK law and policy discussions to overlook women's contribution to the TK system and their interests. In other words, mainstream TK law and policy discussions are gender-unaware, rather than gender-responsive, in their unnuanced use of concepts such as "Indigenous and local community," and in their failure to address gender-based inequalities. Consequently, half of the Indigenous and local population has been unnoticed by the prevailing invisibility of Indigenous and local women, their TK, their work, and their interests.¹¹⁰⁶ And this is so even though the same TK instrument that does not take into account the realities of Indigenous and local women's lives or their gendered experiences can simultaneously be an instrument that benefits mostly men. In fact, despite being designed with a motivation to promote social justice to the disadvantaged Indigenous and local communities, such instruments may be actually unintentionally reinforcing injustice for women because of their gender unawareness. One way of overcoming this is to mainstream gender in TK law and policy¹¹⁰⁷ with the goal of achieving gender justice that will mitigate and redress inequalities in the distribution of resources and opportunities between men and women.¹¹⁰⁸

The necessity of gender mainstreaming in TK law and policy can be drawn from a wide range of global agreements setting out women's rights and requiring gender mainstreaming.¹¹⁰⁹ In

¹¹⁰⁶ Rocheleau, "Gender, Ecology," *supra* note 1077 at 157.

¹¹⁰⁷ See generally, Gülay Caglar, Elisabeth Prügl and Susanne Zwingel, eds, *Feminist Strategies in International Governance* (New York: Routledge, 2013).

¹¹⁰⁸ See generally, Anne Marie Gotez, "Gender Justice, Citizenship and Entitlements: Core Concepts, Central Debates and New Directions for Research" in Maitrayee Mukhopadhyay and Singh Navsharan, eds, *Gender Justice, Citizenship and Development* (Ottawa: IDRC; New Delhi: Zubaan, 2007) 15–57.

¹¹⁰⁹ Including but not limited to Chapter 24 of *Agenda 21: Programme of Action for Sustainable Development*; Rio Declaration On Environment and Development; Statement of Forest Principles: The Final Text of Agreements Negotiated By Governments at the United Nations Conference On Environment and Development (UNCED) (3–14 June 1992), Rio de Janeiro, Brazil, <<https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>>; Paragraph K of the *Beijing Platform for Action*, Fourth World Conference on Women (September 1995) <https://www.un.org/en/events/pastevents/pdfs/Beijing_Declaration_and_Platform_for_Action.pdf>; Paragraph 37 of *Vienna Declaration and Programme of Action of the World Conference on Human Rights* (25 June 1993) <<https://www.ohchr.org/EN/ProfessionalInterest/Pages/Vienna.aspx>>; as well as the

fact, the mainstreaming of gender equality in TK law and policy is not only a question of efficiency and sustainability, but primarily an issue of human rights and social justice. Gender mainstreaming is a comprehensive strategy aimed at achieving greater gender equality, essentially narrowing the gender gaps that disadvantage women. According to the UN's Economic and Social Council, gender mainstreaming is "the process of assessing the implications for women and men of any planned action, including legislation, policies, or programs, in all areas and at all levels"¹¹¹⁰ and is "a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated."¹¹¹¹ In the context of TK, gender mainstreaming means the integration of women's concerns into all aspects of TK protection by explicitly considering the actual and potential role of women in the TK system and TK-based sectors, and the impact of laws, policies, programs, and plans on Indigenous and local women vis-a-vis local and Indigenous men.

While some governments have passed legislation to protect TK, such laws often tend to be silent on the role and rights of Indigenous and local women in TK, with no provision to ensure that Indigenous and local women have equal access, control, and share in benefits from the use of TK.¹¹¹² For instance, Iran's legislation for the protection of genetic resources has no gender provision, meaning there is no reference to women's role in the TK system and how women's

requirements and agreements stated in *The Convention on the Elimination*, *supra* note 389; UN System-wide Action Plan (UN-SWAP) on Gender Equality and the Empowerment of Women (GEEW) (CEB/2006/2) <<https://www.unsystem.org/content/un-system-wide-action-plan-gender-equality-and-empowerment-women-swap-0>>.

¹¹¹⁰ ECOSOC Agreed Conclusion: Mainstreaming the Gender Perspective into All Policies and Programmes in the United Nations System, <<https://www.un.org/womenwatch/osagi/pdf/ECOSOCAC1997.2.PDF>>.

¹¹¹¹ ECOSOC Agreed Conclusion, *supra* note 1110.

¹¹¹² Subramanian and Pisupati, *Traditional Knowledge in Policy*, *supra* note 85 at 89. For instance, South Africa has passed a specific act on protection of TK that has no gender provision. Republic of South Africa, *Protection, Promotion, Development and Management of Indigenous Knowledge Systems Act*, 2019.

contributions to TK should be recognized and compensated.¹¹¹³ Where the local women lack education and training, or access to resources, or face other constraints to mobility, it is not realistic to assume that they can participate in, and benefit equally from, TK instruments. Part of the solution for addressing the existing inequalities and ensuring that the local women can benefit from TK protection over Persian handwoven carpets and saffron as equals to their male counterparts is to devise TK instruments with gender provisions requiring equality of opportunity and treatment for both genders. Having equal legal rights is one of the necessary elements for Indigenous and local women's empowerment.

Some may argue that the gendered social norms restricting women will also restrict women from using the legal provisions to their benefit. In response, I argue that although the gendered social norms are part of the problem, we should not dismiss legal rights and gender provisions in TK instruments as irrelevant even if conditions for their implementation are less than ideal. Gender-responsive legal protection through gender provisions can not only empower the local women in demanding equal treatment and opportunity; it may also gradually change the discriminatory social norms and gender roles over time. Gender-responsive TK laws can even require positive or affirmative action where necessary.¹¹¹⁴ In other words, TK laws should not only prohibit inequality of opportunity and treatment for Indigenous and local women, but should also consider the effects of past discrimination, as the lingering effects of past discrimination can impede the enjoyment of present-day rights. Therefore, in order to move beyond formal equality

¹¹¹³ *Protection and Utilization of the Country's Genetic Resources Act*, *supra* note 538.

¹¹¹⁴ The concept of affirmative action originated in the United States, and later received wider acceptance in the context of women's equality due to its inclusion in the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW). For more details regarding affirmative action and its evolution history, see Terry H. Anderson, *The Pursuit of Fairness: A History of Affirmative Action* (Oxford, New York: Oxford University Press, 2004).

and achieve substantive equality¹¹¹⁵ of opportunity and treatment for Indigenous and local women, there may be a need for affirmative action to eliminate current direct and indirect consequences of past discrimination.¹¹¹⁶ If supported by affirmative actions and targeted measures, women carpet weavers' and saffron growers' capacity will be gradually strengthened, and, as a result, they could be able to benefit from gender-responsive TK legal instruments and receive recognition for their TK, while, at the same time, receiving due compensation for their TK-based activities. In other words, having laws, policies and programs that only satisfy formal equality on the paper is not enough. Women carpet weavers and saffron growers should be the beneficiaries of affirmative actions that are designed based on their needs and interests and remedy the past and present discriminations they are and have been experiencing. It should be borne in mind that a positive action program is temporary in nature, and once the consequences of past discrimination have been remedied, positive action should be removed, unlike gender equality law and policy that should be permanent. It is through gender mainstreaming that a greater articulation of the rights of Indigenous and local women in TK instruments can occur to empower them to protect their TK both defensively and positively.

6.3.1 Defensive Protection of Indigenous and Local Women's TK

In TK law and policy, two approaches are taken for protection of TK, i.e., defensive and positive protection strategies.¹¹¹⁷ Defensive protection aims to stop other people from acquiring IPRs over TK. Positive protection of TK, by contrast, is the granting and exercising of rights that

¹¹¹⁵ For more details regarding various forms of equality, including formal and substantive, see Magdalena Forowicz, "Concepts of Substantive Gender Equality: Looking for Coherence among the Regional and International Perspectives" in Carla M. Buckley, Alice Donald and Philip Leach, eds, *Towards Convergence in International Human Rights Law* (Leiden: Brill Nijhoff, 2016) 193–212.

¹¹¹⁶ *The Convention on the Elimination*, *supra* note 389, Article 4 explicitly allows affirmative action to remedy past discrimination.

¹¹¹⁷ WIPO, "Traditional Knowledge and Intellectual Property" (2015) Background Brief No. 1, <https://www.wipo.int/edocs/pubdocs/en/wipo_pub_tk_1.pdf>.

empower ILCs to promote their TK, control its uses, and benefit from its commercial exploitation. Defensive protection of Indigenous and local women's TK aims to stop (1) people outside the community from acquiring exclusive rights over their TK and (2) their male community members from acquiring rights over their TK in a manner that restricts women's access and control over their TK, resources, and the benefits arising from it. In other words, it involves using measures to prevent misappropriation of TK by unauthorized individuals and entities from both outside and within the community. As such, it should have two components: awareness raising and women's TK documentation.

6.3.1.1 Awareness Raising and Indigenous and Local Women's TK Documentation

There is a clear need to raise public awareness (at the local, regional, national, and international levels) concerning women's role in the TK system and also their role in TK-based production and conservation, and sustainable use of GRs. As documented in the earlier chapters, both saffron and Persian carpet production require high levels of skill; however, the work of the local women is often seen as menial and of low prestige. In the case of carpet weaving, for instance, national promotional activities, through organizing promotional festivals and fairs, have, to some extent, altered the public view toward seeing weavers as artists.¹¹¹⁸ Even so, there is still plenty of room for improvement. The interviews with the participants showed that the younger generation does not show any interest in carpet weaving, partly because of the tendency to associate or rank carpet weaving in the category of menial, unskilled, and low prestige jobs.¹¹¹⁹ In addition to

¹¹¹⁸ For instance, Iran's national Handmade Carpet Exhibition that takes place annually on Tehran's International Fairgrounds showcases a wide range of the carpets along with methods and production phases. The annual event attracts about 100,000 visitors.

¹¹¹⁹ In Chapter 4 of the thesis, for instance, I discussed how Ms. Haghi's 22-year-old daughter, who is a highly skilled weaver, had left carpet weaving under pressure from her aunt and cousins, who live in the capital city

educating the public, making the local women themselves aware of the significance of their TK and TK-based activities is also of critical importance because, according to the interviews, often, under the influence of gendered stereotypes, the local women themselves see their work as less valuable compared to that of men. When talking about the parts of the saffron and handwoven carpet production processes that are performed by men, the local women used adjectives such as “complicated” and “technical,” while they did not recognize their own TK as such. Moreover, they were largely unaware of the dynamics of the existing IP regime in relation to their TK and their products. Raising awareness among Indigenous and local women will increase alertness to identify and prevent interventions that can lead to misappropriation of their TK by others. For instance, in the case of saffron, raising awareness among the local women regarding the importance of saffron as a genetic resource and their vital role in its conservation, could strengthen the sense of collective ownership of saffron and other similar crops as crucial genetic resources. It sensitizes them to more carefully observe research activities (by outside companies such as pharmaceutical multinationals) taking place in their communities. As a result, they can react through local and national women’s advocacy groups if any ABS agreement with their community is sought or any patent is registered based on their knowledge of saffron. Raising awareness also promotes recognition and value of their TK, and such recognition would likely create some sense of satisfaction, identity, and fulfillment for local women. As discussed in both the handwoven carpet and saffron production chapters, there are strong links between the local women, their TK, and their sense of cultural identity.

Effective defensive protection of Indigenous and local women also requires gender-responsive TK documentation initiatives so that TK that is held by women is identified and

(Tehran) and told her that it is no longer prestigious for a girl to weave carpets. Interview No. 7. Interview by Ghazaleh Jerban, 12 October 2017, Kashan.

protected in local, national, regional, and international TK registries with gender tags. Creating local registries for TK, where committees at the community level with participation of both Indigenous and local women and men are established, can lead to increased awareness by Indigenous and local women and men of their TK and GRs. In the case of handwoven carpet production, for example, the different stages of production, the type of loom and methods of weaving, motifs and designs, material used, and techniques for their preparation in each region can be documented with gender tags differentiating the knowledge and processes that are employed by local men and women. In the case of saffron, the local register should include saffron as a genetic resource with a great body of associated TK not only on its production and preservation, but also for TK on its various uses, for example, as a traditional medicine and in cosmetic products. The knowledge of local women and men regarding traditional methods of saffron production and its uses then should be documented and tagged according to the extent of knowledge and also the type of saffron use by each gender. Provided with technical assistance and proper training, such local committees comprising both local men and women can be guided toward three activities. It is necessary to identify their TK and GRs in order to raise awareness first on the existence of such assets, and second, of misappropriation/biopiracy of their TK and GRs. For instance, the processes of handwoven carpet and saffron production involve genetic resources such as saffron, plant dyes, cotton, silkworm and sheep. Local people should be aware of bioprospecting activities,¹¹²⁰ which can lead to patenting based on their TK and GRs. Moreover, in the case of handwoven carpets, for instance, local people will be able to identify misappropriation of their traditional motifs and designs once it happens. Finally, the women must be conscious that they are beneficiaries of IP

¹¹²⁰ Bioprospecting is the process of the discovery and commercialization of new products based on biological resources that are often based on TK. See e.g. Rebecca Bratspies, "The New Discovery Doctrine: Some Thoughts on Property Rights and Traditional Knowledge" (2007) 31:2 American Indian Law Review 315.

rights over, and benefits arising from, their TK and GRs. This will increase Indigenous and local women's awareness that TK instruments are "about them" too, and that there are international and national instruments that support their demands.

Documentation of Indigenous and local women's TK is important for three main reasons: First, their TK will be safeguarded for future generations. Second, it will empower them through recognizing them as holders of knowledge. Third, for practical reasons, such data can be used for the process of FPIC and benefit sharing where identification of TK-holders and beneficiaries is necessary. Local TK registries, where TK at the community level is identified and registered through gender-responsive methods and tools should be initiated by national governments to first, capture and recognize TK that is largely held and practised by women, and second, to reflect this gendered division of TK in the records. The input of these local TK registries can be fed into larger national TK registries similar to the Indian TKDL.¹¹²¹ Both local and national registries can be updated regularly by local and national authorities. For instance, in the case of Persian handwoven carpets, each region's carpet motifs and plans, traditional methods of weaving, natural dye extraction, preparation of fiber and looms, etc. that are publicly available can now be easily documented electronically and classified. In the case of saffron, traditional methods of land preparation, bulb selection, planting, harvesting, and processing, in addition to traditional uses of saffron as medicine and its cosmetic uses, can be collected and classified with gender tags.

Of course, the registries should only include TK that is already publicly available, and not secret TK, similar to the TKDL. It should be borne in mind that documentation of TK and TCEs

¹¹²¹ Traditional Knowledge Digital Library is an Indian repository of traditional knowledge, especially about Indian medicinal plants, created to protect Indian traditional medicinal knowledge and prevent its misappropriation at International Patent Offices. See <<http://www.tkdil.res.in/tkdil/langdefault/common/Home.asp?GL=Eng>>. Regarding the use of tags for TK- and TCE-based products, see for example, Local Contexts which was founded by Jane Anderson and Kim Christen in 2010. Local Contexts offers digital strategies for Indigenous communities, cultural institutions and researchers through the TK (Traditional Knowledge) and BC (Biocultural) Labels and Notices. For more details, see, <<https://localcontexts.org/>>.

could expose them to misappropriation. However, confidential dissemination of documented TK among patent offices provides TK holders with defensive protection of their TK against misappropriation. In fact, the effect of documentation depends on how dissemination of, and access to, its content is undertaken and regulated. My case studies of saffron and handwoven carpets show that, in these two instances, the TK used in saffron and carpet production is already available to the public in various forms such as published books.¹¹²² Therefore, collecting them in the TK registries does not newly expose the TK to the public; instead, it strengthens TK-holders' position in claiming their TK.

In order to develop gender-responsive TK registries at both the community and national levels, there is a need for gender-responsive guidelines to inform the TK documentation effort. Unfortunately, my search for such gender-responsive TK documentation guidelines did not yield any results. For example, the WIPO's publication as one of the recent resources on TK documentation, aiming to serve as a toolkit providing practical guidance on key issues that need to be thought through, before, during, and after TK documentation efforts, makes no reference to women and how gender should inform TK documentation processes.¹¹²³ Therefore, some guidelines need to be developed in this area. In developing gender-responsive guidelines for TK documentation, it should be noted that a gender-responsive TK documentation requires knowing the target community. Understanding the history of the community aids in understanding the social processes and power structures that create gender inequalities in the community. Early, meaningful engagement and consultation that deliberately seeks out participation from women within the community is of utmost importance. Asking critical questions about whether women are properly

¹¹²² For saffron, see e.g. Abrishami, *Saffron: From Early Days*, *supra* note 833. For carpet, see e.g. Daneshgar, *Iran's Carpet*, *supra* note 591.

¹¹²³ WIPO, "Documenting Traditional Knowledge: A Toolkit" (2017), <https://www.wipo.int/edocs/pubdocs/en/wipo_pub_1049.pdf>.

engaged and consulted can expose existing gender inequalities that limit participation of women. In such occasions, depending on circumstances, separate consultation sessions can be arranged for local women where they feel comfortable to talk about their practices, share their views, and raise their concerns.

6.3.2 Positive Protection of Indigenous and Local Women's TK

Positive protection of Indigenous and local women's TK requires measures that promote their control over their TK and benefits arising from its use. It also requires capacity building to (1) increase Indigenous and local women's participation in TK governance at various levels (community, national, and international) and (2) promote proactive use of TK for economic empowerment.

6.3.2.1 Capacity Building for Participation in TK Governance¹¹²⁴

Capacity building for participation in TK governance will help Indigenous and local women to gain and enhance control over their TK. As in most ILCs, there is a need to remove the constraints on the ability of women to make decisions and to act on those decisions. Arising from the case studies, Indigenous and local women's capacities to effectively participate in TK governance at community, national, and international levels, and to represent their interests in negotiations, are often compromised by the fact that they are subject to asymmetrical power relations with respect to (1) dominant culture, economic, and political systems, and (2) their own community and household dynamics. Promoting inclusive TK governance through capacity building for Indigenous and local women results in a "gender-positive" TK governance

¹¹²⁴ Strengthening women's capacity for participation in TK governance has a dual function. It can equip women to both (a) stop people outside the community from acquiring IPRs over their TK (defensive protection), and (b) proactively gain IPRs for their TK and exercise their right (positive protection). That being said, given the proactive nature of positive protection and participation in TK governance, I put this item under positive protection.

environment that is ideally a setting in which Indigenous and local women TK holders feel empowered to not only safeguard their TK from misappropriation, but also to form women's groups, associations, or cooperatives to harness the economic benefits arising from commercialization of their TK.

One might wonder whether a feminist vision of an IP regime is compatible with expansion of IP over women's TK and its commercialization. Generally, the existing views can be organized into three categories. The first stance is against expansion of IP over TK as an aspect of anti-commodification. The second stance supports recognition of women's IP right over TK even though that results in an overall expansion of IPRs. And finally, there is a pragmatic stance promoted by scholars such as Phillips who use a cost and benefit analysis in examining the issue of women's TK commodification.¹¹²⁵ Bartow, for example, questions whether women should increasingly "commodify" their creative output.¹¹²⁶ Phillips approaches the question differently, asking whether commodification of women's TK through IP could bring positive effects to the women's lives.¹¹²⁷ Following Bartow's approach, one might argue that expansion of exclusive rights to protect Indigenous and local women's TK and buying into the property discourse is not compatible with a feminist vision of IP system. However, as Barwa and Rai argue, expanding the concept of IP over TK "might be one strand of engaging with it creatively to protect vulnerable communities from the ravages of unequal IP regimes."¹¹²⁸ This does not mean that opposition to IP through legal and political action stops. Rather, instead of staying outside of the TK law and policy discussions, the call for gender mainstreaming as a feminist governance strategy offers an

¹¹²⁵ Phillips, "Commodification," *supra* note 155.

¹¹²⁶ Bartow, "Fair Use," *supra* note 65 at 564–69.

¹¹²⁷ Phillips, "Commodification," *supra* note 155.

¹¹²⁸ Barwa and Rai, "Knowledge and/as Power," *supra* note 375 at 110.

opportunity to engage and shape the otherwise-gender-unaware outcome. This is what Rai has called an “in and against” position.¹¹²⁹ Susan Behuniak-Long argues that commercialization of women’s TK-based products may homogenize the culture and identities expressed in such products, and expunge all traditional meaning and ethos.¹¹³⁰ Zelizer and Williams, however, suggest that the question of whether or not to commercialize should be abandoned altogether.¹¹³¹

Phillips’ pragmatic stance on Indigenous and local women’s TK commercialization, in which she weighs the costs and the benefits of such practice, sounds closer to the reality of the lives of the local women I interviewed. Commercialization of their handwoven carpets and saffron has relatively improved their economic position and provided them with a degree of financial independence through new revenue generation.¹¹³² Commercialization of such TK-based products at both national and international markets, if taking place in a gender- and culturally-sensitive manner where women’s contribution is acknowledged and fairly compensated, brings women out of the dark corners of national and international trade. Such publicity aligns with Third World feminist views that reject the false image of Third World women as ignorant, irrational, unskilled, and passive where they are often profiled as unproductive members of society with no agency.¹¹³³

In other words, commercialization of handwoven carpets and saffron, if taking place under gender-responsive TK protection mechanisms, can empower these local women in three principal

¹¹²⁹ Shirin M. Rai, “Women and the State: Some Issues for Debate” in Shirin M. Rai and Geraldine Lievesley, *Women and the State: International Perspective* (London: Taylor and Francis, London, 1996) 5–22. At its deepest, the call for gender mainstreaming in TK law and policy is not an effort to play “catch up” with the competitive spirit of the dominant approach in IP regime. It is rather an attempt to convert the system to a sense of responsibility, nurturance, and rejection of hierarchy.

¹¹³⁰ Susan Behuniak-Long, “Preserving the Social Fabric: Quilting in a Technological World” in Cheryl B. Torsney & Judy Elsley, eds, *Quilt Culture, Tracing the Pattern* (Columbia: University of Missouri Press 1994) 151–168 at 151.

¹¹³¹ Viviana Zelizer and Joan Williams, “To Commodify or Not to Commodify that is Not the Question” in Martha Ertman and Joan Williams, eds, *Rethinking Commodification: Cases and Readings in Law and Culture* (New York: New York University Press, 2005) 363–382 at p 363.

¹¹³² Phillips, “Commodification,” *supra* note 155 at 15.

¹¹³³ Mohanty, “Under Western Eyes,” *supra* note 171 at 56, 72. For more details about the false image depicting rural women as passive members of community, see Gholizadeh, “Examining Causes,” *supra* note 829 at 179.

ways where they can harness the social and economic benefits of their TK. First, it generates understanding by outsiders of their tradition and culture. One might argue that increased exposure to the outside world could lead to more opportunities for misappropriation. In response, I would argue that in today's connected world, exposure of TK-based products of Indigenous and local communities to the outside world is inevitable. National and international policies should not aim at limiting the exposure; rather, these local women should be equipped with the proper gender-responsive protection mechanisms facilitating their presence in national and international markets. Second, as discussed in Chapters 4 and 5, it brings a sense of pride, confidence, and recognition for Indigenous and local women in their communities. Third, recognition of the economic contribution of local women through handwoven carpet and saffron production can give them a stronger voice in household and community decision making. If occurring after proper capacity building, commercialization of their TK can empower Indigenous and local women economically, especially when they take the lead themselves. A labeling system can be used to highlight the fact that particular TK-based products are mainly produced by Indigenous and local women of a specific region or community to ensure that these women are compensated fairly. Such an approach can be complemented by legal and policy mechanisms requiring dedication of a certain percentage of the sale of those TK-based products to projects addressing women's needs in the community by, for example, building a women's healthcare centre or a childcare centre in the village. It should be borne in mind that, since TK is a multidimensional asset, an important precondition for commercialization of TK (both TK-based products and TK itself through licensing agreements) is that the decision about which TK can be commercialized and which TK cannot (due to its sacred or cultural significance for Indigenous and local women) should be made solely by respective Indigenous and local women themselves.

6.3.2.2 Capacity Building for Proactive Use of TK

The primary way of attaining economic gain from TK is through benefit sharing, which can be achieved through agreements between ILCs and the companies that wish to put their TK to commercial use. My use of the term benefit sharing here is not limited to the ABS agreements, which are typically used for GRs and associated TK. Rather, it includes any agreement for other types of TK and TCEs where ILCs agree to the use of their TK and TCEs for production of TK- and TCE-based products and receive monetary and non-monetary benefits in return. For instance, in the case of saffron and handwoven carpets, various scenarios can be imagined. In one scenario, a company would negotiate for an ABS agreement to access saffron and the associated knowledge for its use in the treatment of depression. In another scenario, a company would negotiate a licencing agreement for the use of a community's carpet designs to be woven by local women on the company's new line of apparel.

While effective participation of Indigenous and local women in benefit-sharing agreements is one way in which they can benefit from their TK, another promising approach is when Indigenous and local women themselves capitalize on their TK by producing and selling TK-based products or services. Development and promotion of TK-based micro, small, and medium-size enterprises (MSMEs)¹¹³⁴ that are initiated and driven by Indigenous and local women have significant potential for empowerment of Indigenous and local women. This requires culturally sensitive participatory capacity building to (1) form and strengthen women-led cooperatives, (2) conduct training courses on recognition, protection, marketing, and commercialization of their products, and (3) provide flexible funds and grants to Indigenous and local women in the form of

¹¹³⁴ The term “micro, small, medium-size enterprises (MSMEs)” is borrowed from the World Trade Organization, Joint Declaration on Trade and Women's Economic Empowerment, WTO Ministerial Conference in Buenos Aires, December 2017, <www.wto.org/english/thewto_e/minist_e/mc11_e/genderdeclarationmc11_e.pdf>.

micro-finance.¹¹³⁵ TK-based production often requires very minimal initial capital, flexible working hours, and little other production infrastructure, such as a workspace. It is now widely recognized that projects in Indigenous and local communities that are locally run, locally owned, and culturally relevant will deliver more sustainable outcomes.¹¹³⁶ Harnessing TK for Indigenous and local women's economic empowerment through promoting women-led TK-based MSMEs has the important ancillary benefit of creating jobs for Indigenous and local women and leads to their financial independence.¹¹³⁷ As most Indigenous and local women appear in the lower end of socioeconomic statistics, the potential to generate an income from the trade of their TK-based products is significant to their well-being. It provides a source of income and employment so they can improve their financial condition and addresses their personal and shared social challenges of poverty, inadequate health care, housing, and access to education for their children, among others.¹¹³⁸

¹¹³⁵ For the impact of micro-finance in development, see the work of Muhammad Yunus, who won the 2006 Nobel Peace Prize for his microfinance economic development programs. Muhammad Yunus, *Creating a World Without Poverty: Social Business and the Future of Capitalism* (New York: Public Affairs, 2007). For the impact of micro-finance in empowering Third World women, see Amanda Ulrich, "Can the World's Poorest Women be Saved?: A Critical Analysis of the CEDAW's Rural Women's Economic Rights and Alternative Approaches to Women's Economic Empowerment" (2007) 45:2 *Alberta Law Review* 477 at 497.

¹¹³⁶ Peter Drahos and Susy Frankel, *Indigenous Peoples Innovation: Intellectual Property Pathways to Development* (Canberra: ANU Press, 2012) at 36.

¹¹³⁷ See e.g. Desmond Osaretin Oriakhogba, "Empowering Rural Women Crafters in KwaZulu-Natal, South Africa: The Dynamics of Intellectual Property, Traditional Cultural Expressions, Innovation and Social Entrepreneurship" (2020) 1:1 *South African Law Journal* 145. See also, Ghazaleh Jerban, "The SDGs and Gender: The Case of Indigenous and Local Women's Traditional Knowledge" (2019) *New Thinking on SDGs and International Law*, Policy Brief No. 3, Centre for International Governance Innovation, where the intersection between trade, sustainable development goals (SDGs) and women TK holders' economic empowerment is examined.

¹¹³⁸ For example, Macy's Rwanda Path to Peace program has brought the Rwandan women's traditional art of basket weaving to customers in the United States. The initiative has helped to break the cycle of poverty for thousands of rural women, by turning a traditional handicraft into a profit-making business in a country that was torn by conflict. For more details, see Jessica Ellis and Leposo Lillian, "Rwandan Basketmakers Weave Their Way into Macy's" *CNN* (22 June 2012), <<https://www.cnn.com/2012/06/19/world/africa/rwanda-women-peace-baskets/index.html>>.

Promotion of TK-based production in the form of MSMEs can also help to preserve ancient techniques and cultural heritage and to strengthen Indigenous and local women's communities where they continuously learn among themselves. Moreover, since TK-based production involves value-added raw material transformation that adds profitability to finished products, TK-based MSMEs can generate high profit in domestic and foreign markets. Trade in TK-based products can contribute to the economic and social development of Indigenous and local communities. For instance, artisan production is a US\$34 billion industry globally and is the second largest employer in developing countries, after agriculture.¹¹³⁹ This means that TK has economic and commercial value, and therefore has the potential to narrow the existing gender income gap. In fact, given the emergence of TK as a concrete strategic trade interest,¹¹⁴⁰ developing TK-based MSMEs will contribute to improved economic opportunities for Indigenous and local women. This, in turn, would offer not only opportunities for employment, financial independence, and increased self-esteem, but also strengthen their agency where they become architects of their future, and thus, increase their sense of identity and dignity. A gender-responsive legal instrument not only excludes free-riding competitors, but also enables Indigenous and local women to commercialize their TK-based products, should they wish to do so. Therefore, it can empower Indigenous and local women through enhancing opportunities for them.

¹¹³⁹ The Aspen Institute, Impact Report 2014, Alliance for Artisan Enterprise, <<https://static1.squarespace.com/static/52669d1fe4b05199f0587707/t/563cac9ee4b0bfc7c1abddba/1446816926754/2014+AAE+Impact+Report+FINAL.pdf>>. According to Rita Teatota, Commerce Secretary of India, traditional medicinal plants and their products account for an estimated US \$1.2 billion in exports. Rita Teatota, Inaugural Address, *supra* note 29. Catherine Saez, "Developing Countries Weigh Restarting Talks for TRIPS Amendment on Biological Resources", *Intellectual Property Watch* (29 March 2017), <www.ip-watch.org/2017/03/29/developing-countries-weigh-restarting-talks-trips-amendment-biological-resources/>.

¹¹⁴⁰ See e.g. Marsha Cadogan, Oluwatobiloba Moody and Mary Ambrose, "Traditional Knowledge Belongs in Progressive Trade Policy" The CIGI Podcast Series, (23 August 2017), <<https://www.cigionline.org/multimedia/traditional-knowledge-belongs-progressive-trade-policy>>.

Unfortunately, despite their major role in the TK system and TK-based production, women carpet weavers and saffron growers face many challenges to participating in local and global markets. This is because they are at a disadvantage in a number of areas, including the recognition and protection of their TK. Legal rights can powerfully reinforce their capacity to capitalize on their TK.¹¹⁴¹ Granting legal rights over their TK in a gender-responsive manner can increase their capacity to benefit from TK protection on terms that recognize the value of their contribution, respect their dignity, and make it possible for them to ask for and negotiate a fairer distribution of returns in their interaction at various levels, from the household to local, national, and international levels. This will increase their agency and their real power over economic decisions, and shift gender norms and structures toward more equality. Gender-responsive TK mechanisms, by recognizing their role and requiring participation and compensation of women carpet weavers and saffron growers implemented through national programs and initiatives, can give these women a more secure footing in handwoven carpet and saffron value chains. Fully accessible, transparent, and enabling legal mechanisms, should be utilized by mobilizing local women through women carpet weavers' and saffron growers' cooperatives and associations. These women's groups and associations should be provided with appropriate technical support to strengthen their soft skills, including their negotiation and managerial abilities, through customized training and capacity-building interventions so that they can participate in both TK governance and their TK-based products' value chains.

A gender-responsive TK protection mechanism should also call for marketing capacity-building programs that help local women to highlight the important aspects of handwoven carpets

¹¹⁴¹ See e.g. Madhavi Sunder, "The Invention of Traditional Knowledge" (2007) 70 *Law & Contemporary Problems* 103. Sunder, in her study of the impact of geographical indications on traditional handicrafts in India, shows that legal rights can powerfully reinforce the capacity of Indigenous and local groups in capitalizing on their TK.

and saffron, which are women-made and TK-based products. Prevention of fakes and reducing the market share of imitations would be crucial to enhancing trade in Persian handwoven carpets and saffron. A gender-responsive TK protection mechanism should establish a system of authentication that would work at both national and international levels. Women's roles in production should be highlighted through approaches similar to the Fairtrade labeling system.¹¹⁴² The Fairtrade labeling system could be a model for a gender-based labeling system to identify and certify the conditions by which local women's TK-based products, such as handwoven carpets and saffron, are produced. This could open up opportunities to market these products to those buyers who are willing to pay a premium¹¹⁴³ for local women's TK-based products, as such labels certify that the local women who produced the products were compensated and treated fairly in compliance with gender-responsive TK regulations and guidelines. Labelling local women's handwoven carpets and saffron in this manner would attract national and international consumers who are willing to buy products that are in line with their value judgments (regarding both gender inequality and injustice toward Indigenous and local people).

Despite the fact that many governments have devised national laws for protection of TK, international protection of TK remains very important, as national laws do not have effect beyond

¹¹⁴² An example of Fairtrade is a coffee grower that pays their workers well and gives them a healthy work environment. Based on Fairtrade Labelling Organizations certification, there are now FAIRTRADE Certification Marks on different products such as coffee, tea, rice, bananas, mangoes, herbs and spices, wine and footballs.

¹¹⁴³ There are empirical studies showing that people pay more for (or buy more of) products that meet the values they feel are important. For instance, empirical analysis suggests that green-labelled housing projects attract a premium price. See e.g. Li Zhang, Hongyu Liu and Jing Wu, "The Price Premium for Green-Labelled Housing: Evidence from China" (2016) 54:15 *Urban Studies*, 3524. Moreover, surveys in which consumers are asked whether they would be willing to pay more for (or buy more of) products that meet Fairtrade standards yield strong positive responses. See e.g. Patrick De Pelsmacker, Liesbeth Driesen and Glenn Rayp, "Do Consumers Care About Ethics? Willingness to Pay for Fair-Trade Coffee" (2005) 39 *Journal of Consumer Affairs* 363 at 375 (explaining results indicating that a Fairtrade label is almost as important to consumers as flavour); Shareen Hertel, Lyle Scruggs and C Patrick Heidkamp, "Human Rights and Public Opinion: From Attitudes to Action" (2009) 143 *Political Science Quarterly* 443 at 443, 448–49.

national borders. Further, history shows that without putting in place international commitments toward gender equality, national governments are not necessarily going to show any progress on the gender equality path. Therefore, the issue of *international gender-responsive* protection of TK is a critical complement to existing efforts to enact gender-responsive laws nationally. Although a gender responsive TK protection mechanism would not be a panacea in countries like Iran where the gender equality index is far from ideal,¹¹⁴⁴ it would still be an important factor. International obligations for gender-responsiveness of national TK law and policy are key to enabling Indigenous and local women to demand measures for substantive gender equality by national TK protection mechanisms. As discussed in the earlier chapters, the WIPO-IGC is the international forum that is currently working on the issue of TK protection in a holistic manner rather than focusing only on particular aspects of it, and it has the mandate of developing an international legal instrument(s) to effectively protect various forms of TK, including TCEs and TK associated with GRs.¹¹⁴⁵ Therefore, the following parts examine the issue of gender in the context of IGC work. It sheds light on the committee's degree of gender sensitivity, and explores if and how it should respond to the need for gender mainstreaming.

6.4 Gender and TK in the WIPO-IGC

When TK protection is discussed at various fora, including the WIPO-IGC, women are usually depicted – if they are depicted at all – as “peripheral,” taken care of through a couple of women-specific programs. Similarly, the WIPO-IGC has so far tended to evade gender discussions, or has responded to them only very peripherally. More specifically, as examined in Chapter 3, the Committee's current draft texts make no reference to Indigenous and local women.

¹¹⁴⁴ For the status of gender equality in Iran, see Centre for Supporters of Human Rights and Minority Rights Group International, “Beyond the Veil,” *supra* note 1064. See also “National Review,” *supra* note 1064.

¹¹⁴⁵ See section 3.2.10 in Chapter 3 of the thesis.

WIPO-IGC sessions to date have not had any gender-related items on their agenda.¹¹⁴⁶ Moreover, as discussed earlier, in WIPO's publications on TK, such as WIPO's toolkit for TK documentation¹¹⁴⁷ and its guide on ABS agreements,¹¹⁴⁸ there is no mention of gender and how it should inform the TK documentation or ABS processes.

Lately, however, WIPO has organized a program called "Project-Based Training and Mentoring Program on Intellectual Property for Women Entrepreneurs from Indigenous Peoples and Local Communities."¹¹⁴⁹ The program offers mentoring to a mere 24 Indigenous and local women selected from various regions, and, as such, barely constitutes lip service to addressing gender inequality in the context of TK. It aims to strengthen the capacity of women entrepreneurs from Indigenous and local communities to make strategic and effective use of IPRs, in support of projects based on TK and TCEs. While offering a shadow of hope by showing a sign of gender-sensitivity in the so-far-gender-unaware activities of WIPO on the issue of TK and while a step in the right direction, the program is, at its best, only a negligible and piecemeal response to the issue of women and TK. Moreover, although a sign of progress, steps must be taken to ensure that this program does not become an isolated example of gender-sensitivity in the work of WIPO on the issue of TK. Although women-specific programs and initiatives are necessary and play an important role in capacity building, this single program should neither be used to quiet the calls for a gender-inclusive approach to the issue at the WIPO-IGC, nor should it create a sense of complacency that gender issues have been addressed. Such initiatives should be proliferated,

¹¹⁴⁶ For the list of IGC sessions and documents, see <https://www.wipo.int/meetings/en/topic.jsp?group_id=110>.

¹¹⁴⁷ WIPO, "Documenting Traditional Knowledge," *supra* note 1123.

¹¹⁴⁸ See also WIPO's publication "A Guide to Intellectual Property Issues in Access and Benefit Sharing Agreements" (2018), which remains silent regarding gender issues, <https://www.wipo.int/edocs/pubdocs/en/wipo_pub_1052.pdf>.

¹¹⁴⁹ For more details about the program, see the program's page at WIPO's website, <https://www.wipo.int/tk/en/women_entrepreneurs/>.

designed, and implemented in a manner such that their outcomes contribute to the ultimate objective of addressing the pervasive gender gaps in the current IP system.

Indeed, WIPO needs to do much more than temporary women-specific programs to incorporate a gender perspective systematically and effectively into its work and outcomes. More specifically, the WIPO-IGC should examine how each provision of the instrument(s) implicates the equality and needs of Indigenous and local women. That being said, I am well aware that given the contested history of TK negotiations at the WIPO-IGC, upsetting the current “order” by calls for gender equality is a major political project. However, it is one that has been postponed for too long. The WIPO-IGC process and outcome instrument(s) can and should have an equitable effect on all stakeholders, including Indigenous and local women. Such instrument(s) should provide adequate protection for TK while advancing a myriad of other policy objectives, such as gender equality and women’s empowerment.

6.4.1 Gender Mainstreaming in the Work of the IGC: A Legal Obligation

The overwhelming majority of WIPO members have already made a commitment to gender equality under international human rights law. For example, as of April 2020, 186 of WIPO’s 193 members have ratified the *Convention on the Elimination of All Forms of Discrimination Against Women* (CEDAW).¹¹⁵⁰ Although CEDAW does not specifically address the issue of TK, implementing states’ obligations taken under CEDAW requires states to ensure gender mainstreaming into TK-protection instruments.¹¹⁵¹ In other words, one of the main objectives of international human rights law is the elimination of gender discrimination, and the issue of Indigenous and local women’s TK should not be an exception. As a United Nations’

¹¹⁵⁰ Among WIPO members, only USA, Somalia, Iran, Sudan, Tonga, Niue, and the Holy See have not ratified the CEDAW. For a list of countries that have ratified CEDAW, see <https://tbinternet.ohchr.org/_layouts/15/TreatyBodyExternal/Treaty.aspx?CountryID=161&Lang=EN>.

For a list of WIPO Member States, see <<https://www.wipo.int/members/en/>>.

¹¹⁵¹ *The Convention on the Elimination*, *supra* note 389, Article 2.

specialized agency dedicated to promoting innovation and creativity for economic, social, and cultural development through the use of IP, WIPO is committed to promoting gender equality and the empowerment of women within its mandate and in line with the commitments of the UN. More specifically, the UN System-Wide Action Plan (UN-SWAP) on Gender Equality and the Empowerment of Women requires gender mainstreaming to be systematically and measurably incorporated into all major institutional functions of the UN system entities.¹¹⁵² Moreover, WIPO adopted its own Policy on Gender Equality in 2014, which requires the organization to mainstream a gender perspective in its policies and programs.¹¹⁵³ The Policy clarifies that:

the process of assessing the implications for women and men of any planned action, including legislation, policies or programs, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programs in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality.¹¹⁵⁴

It is claimed that the implementation of the WIPO Policy on Gender Equality is supported through annual action plans developed by the WIPO Gender and Diversity Specialist, in close cooperation with the Gender Focal Points.¹¹⁵⁵ However, the current degree of attention to gender in the context of WIPO-IGC's work on TK leads one to question whether the claims of WIPO regarding gender mainstreaming can in fact be substantiated. Although there is no single model for implementing gender mainstreaming, there seems to be a gap between the Organizations' commitments to gender mainstreaming and the WIPO-IGC's work. In other words, in line with

¹¹⁵² UN System-wide Action Plan (UN-SWAP) on Gender Equality and the Empowerment of Women, *supra* note 1109.

¹¹⁵³ WIPO Policy on Gender Equality (5 August 2014) Office Instruction No. 47/2014, <https://www.wipo.int/export/sites/www/women-and-ip/docs/en/wipo_policy_gender_equality_en.pdf>.

¹¹⁵⁴ WIPO Policy on Gender Equality, *supra* note 1153, Annex page 1.

¹¹⁵⁵ WIPO now has 25 gender focal points, covering key areas of IP including patents, copyright, trademarks, traditional knowledge, and more. For more details on the Organization's gender activities, see <https://www.wipo.int/ip-outreach/en/ipday/2018/wipo_gender_equality.html>.

WIPO's gender action plan and in order to be responsive to its commitment to gender mainstreaming as a UN agency, the WIPO-IGC should firmly incorporate gender into its agenda. A comprehensive response by the WIPO-IGC to the issue of women and TK requires an overarching methodology for integrating gender into all aspects of the Committee's work in a manner that leads to a gender-responsive legal instrument for protection of TK. In other words, gender needs to go beyond rhetoric in the work of the Committee through the incorporation of gender at both the conceptual level, where gender contributes to a broader understanding of the issues, and at the strategic level, where the implications of such understanding appear in the design of the instruments.

In fact, with the gender action plan and WIPO's commitments to gender mainstreaming, it is not a question of whether to include Indigenous and local women in the process and outcome of the WIPO-IGC; rather, it is looking for ways on how to include them. It is not about "adding" or "gluing" gender to already drafted texts and designed strategies as an annex or a paragraph disconnected from the rest of the text. Instead, it requires a logical, interconnected, coherent, and comprehensive inclusion of Indigenous and local women's perspectives into the process and outcome. The following parts aim to illustrate what it means to move beyond a superficial and ineffective inclusion of women.

6.4.1.1 Gender Mainstreaming in the Process

Gender mainstreaming requires actions relating both to participation of women in the WIPO-IGC process and inclusion of their perspective in the content of WIPO-IGC work. A general recognition of Indigenous and local women's role in TK without providing for strategies, plans, and programs to specifically involve them in the process of TK law and policy formulation is not enough. The following questions help to assess the current gender-responsiveness of the WIPO-

IGC process: (1) Are Indigenous and local women represented at the Committee? (2) Is the participation of Indigenous and local women's representative supported? (3) Is proper consideration and attention given to the representatives of Indigenous and local women? (4) Are their views being discussed and reflected in the texts adopted?

WIPO's Fund for Accredited Indigenous and Local Communities was established to finance the participation of the nominated representatives of Indigenous and local communities in the work of the Committee and other related activities of WIPO.¹¹⁵⁶ However, the extent to which Indigenous and local women and their advocacy groups were able to access the mechanism and participate in the process, which is intended to represent Indigenous and local women's interests, is itself another research topic. Although, according to the rules, a balance should be maintained between the men and women beneficiaries of the fund,¹¹⁵⁷ it should be borne in mind that even where women attend TK law and policy fora, they are not necessarily the voice of Indigenous and local women. This is mainly because (1) they are trained and acting in the dominant male culture of national and international organizations, and (2) they fear being associated with the "feminist label", which is not well-received in many Third World countries and traditional communities.¹¹⁵⁸ In other words, having women delegates and women representatives as accredited observers in the WIPO-IGC process does not necessarily mean that the perspective, needs, and interests of

¹¹⁵⁶ Establishment of the WIPO Voluntary Fund for Accredited Indigenous and Local Communities, Annex to document WO/GA/32/6, WIPO General Assembly (39th session), <https://www.wipo.int/export/sites/www/tk/en/igc/pdf/vf_rules.pdf>.

¹¹⁵⁷ Paragraph 6(h), WIPO Voluntary Fund for Accredited Indigenous and Local Communities: Amendments to the Rules, WO/GA/39/11, WIPO General Assembly (39th Session), <https://www.wipo.int/edocs/mdocs/govbody/en/wo_ga_39/wo_ga_39_11.pdf>.

¹¹⁵⁸ Gholizadeh, "Examining Causes," *supra* note 829 at 179–80.

Indigenous and local women have been represented and incorporated into the work of the Committee.¹¹⁵⁹

It should be noted that the participation of Indigenous and local women themselves in the process is necessary to counter the patriarchal tendency to think and decide for them (regardless of the idealism of intention). This is not because of an expectation that only Indigenous and local women would be their own advocates, but because the under-representation of Indigenous and local women in the process perpetuates the male-dominated environment with values, norms, attitudes, and procedures that are not necessarily conducive to promotion of gender equality. Moreover, it is important to emphasize that, while there are arguments as to the different kinds of knowledge, perspective, and approaches that Indigenous and local women might bring to the table, their participation should not depend on having to demonstrate these benefits to earn their place at the table. Even if an outcome that seems “good” in its gender provisions could be provided without Indigenous and local women’s participation, it would not fully adopt a gender perspective if Indigenous and local women themselves had not been involved in the process. I am well aware that implementation of this approach is challenging. My interviews with women carpet weavers and saffron growers show that they do not have knowledge of discussions around legal protection of TK. This may also be the case for the rest of Indigenous and local women across the world who do not necessarily have knowledge of IP and TK protection. This makes the issue of Indigenous

¹¹⁵⁹ For instance, in the list of participants for the 40th WIPO-IGC session, there are 130 participants who have used a female prefix (including Ms., Sra., Mme.) compared to 150 who have used a male prefix (including Mr., Sr., M.) which is relatively gender balanced. Even if, on paper, there is balanced gender representation in the delegations, that is not a guarantee that women’s interests are represented. This will depend on the mandate of the delegation and the agenda they pursue. For the list of 40th WIPO-IGC session, see <https://www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_40/wipo_grtkf_ic_40_inf_1_prov_2.pdf>.

Regarding ILCs’ representatives, according to the rules for the voluntary fund, a balance should be maintained between the male and female beneficiaries of the fund. However, as I have highlighted, even where women attend TK law and policy fora, they are not necessarily the voice of Indigenous and local women. This is not an issue of quantity; rather, a genuine gender-balanced representation should show itself in the outcomes.

and local women representing their own interests problematic. Therefore, in order to facilitate participation of Indigenous and local women in TK law and policy processes, there is a need for awareness-raising campaigns for both the public and among these women, formation of women's associations, identification and training of women candidates to represent their fellow Indigenous and local women, and also networking between Indigenous and local women (including with those from other countries and communities).

There are two key issues regarding participation of Indigenous and local women: (1) adequacy of representation, and (2) Indigenous and local women's own consciousness about their specific interests.¹¹⁶⁰ Indigenous and local women's participation in the process is adequate only when it has an impact on the decisions made. It is not by numbers alone that participation should be assessed, but also in terms of Indigenous and local women's ability to protect their interests. The key difference here is whether one looks at the composition of the Committee to determine equal representation, or at the outcome instrument(s) and decisions made, or at both. Therefore, the Committee's response to gender equality in the process should not rest content with bringing Indigenous and local women representatives to the negotiating table in a simplistic manner; rather, it should ensure that such representatives have the capacity and autonomy to represent Indigenous and local women's interests. This requires an exploration for ways to enhance the capacity of Indigenous and local women.

To improve Indigenous and local women's awareness of their TK-related interests while ensuring their capacity to effectively participate in the Committee's work, their participation should be facilitated by Member States and the Committee through Indigenous and local women's

¹¹⁶⁰ Fatima Alvarez-Castillo, Julie Cook Lucas and Rosa Cordillera A. Castillo, "Gender and Vulnerable Populations in Benefit Sharing: An Exploration of Conceptual and Contextual Points" (2009) 18:2 Cambridge Quarterly of Healthcare Ethics 130 at 134.

advocacy groups where technical assistance and gender-responsive accommodations are provided. Indigenous and local women's representatives should have access to trained legal advisors so that they can effectively participate and represent their interests in the process. A positive impact of such an approach is the inclusion of the voices of disadvantaged (Indigenous and local) women in the dialogue for TK protection, thereby empowering them as both the beneficiaries of the TK instrument(s) as well as contributors to it.

6.4.1.2 Gender Mainstreaming in the Content

Gender mainstreaming in the content of the WIPO-IGC work aiming at achieving gender-responsive TK instrument(s) should be guided by the question of how the outcome instrument(s) can recognize and address the restrictions and barriers that Indigenous and local women face in taking and keeping control over, and benefiting from, their TK. The Committee should not aim for mere inclusion of women in the instrument(s) through a couple of fragmented gender provisions. In order to be gender-responsive, the WIPO-IGC instrument(s) need to be both gender-responsive (by recognizing and addressing differences between Indigenous and local men and women and ensuring that women will benefit equitably) and gender-transformative (by helping Indigenous and local women gain or keep control and agency over their TK and resources). The WIPO-IGC outcome instrument(s) should provide Indigenous and local women with three types of incentives: (1) social incentives, through requiring awareness raising and gender-responsive TK documentation where their contribution are recognized and valued, (2) economic incentives, through requiring equitable sharing of benefits arising from TK, and (3) institutional incentives, through requiring institutional safeguards ensuring their effective participation in TK governance, including FPIC and benefit-sharing agreement processes. Therefore, the critical elements of such gender-responsive instrument(s) can be listed as follows:

- Recognition of Indigenous and local women's contribution to TK, which helps to legitimize and value their contributions.
- Recognition of gender-based differences in roles, responsibilities, and constraints in Indigenous and local communities.
- Requiring awareness raising regarding Indigenous and local women's TK, and gender-responsive TK documentation efforts so that Indigenous and local women's TK is not disregarded in the process and seen as less valuable or as non-knowledge.
- Effective participation of Indigenous and local women in TK governance at community, national, regional, and international levels, including FPIC, ABS, and other TK licensing processes, by accommodating for their gender-based responsibilities and constraints.
- Capacity building and technical assistance for effective participation of Indigenous and local women in TK governance.
- Capacity building for proactive use of TK by Indigenous and local women in the form of TK-based MSMEs.

Without entering into the discussions on how to best regulate TK, which have themselves been and continue to be the topic of the WIPO-IGC negotiations and numerous studies,¹¹⁶¹ the following part identifies some of the key entry points for incorporating gender into the WIPO-IGC's outcome instrument(s).

6.4.1.3 Gender Mainstreaming in the Text of WIPO-IGC Drafts

¹¹⁶¹ See e.g. Oguamanam, "Towards a Tiered," *supra* note 796.; William Fisher, "Toward Global Protection for Traditional Knowledge" (2018) CIGI Papers No. 198, <<https://www.cigionline.org/sites/default/files/documents/Paper%20no.198.pdf>>; Dutfield, "TK Unlimited," *supra* note 470.

Recognizing Indigenous and local women's role in the TK system and the gender differences in access to, control over, and decision-making regarding TK, should be followed with concrete and effective provisions in the TK instruments and not simply through the inclusion of preambular language or broad statements. This can happen with many national and international instruments where women are sporadically mentioned in the instrument or only referenced in the preamble. From a women's empowerment point of view, a TK instrument that recognizes Indigenous and local women's role in TK, but does not attend the gender power imbalances through provisions redressing such inequalities, could be worse than not having an instrument at all. Given the silence of the existing draft articles regarding gender, the Committee needs to re-examine them in order to ensure a systematic incorporation of gender into them. There is a clear danger that the current gender-unaware approach in the texts, which can be justified by formal equality,¹¹⁶² only reproduces substantive inequalities for Indigenous and local women. The absence of gender provisions in the current texts does not mean that they will equally apply to Indigenous and local women and men. Rather, for Indigenous and local women, this would mean discriminatory treatment in the processes such as FPIC, benefit-sharing agreements, and discriminatory treatment in TK documentation. Mere recognition of the important role that women play in the TK system in the preamble of the instrument(s) is not enough; rather, such recognition should be translated into concrete provisions recognizing and requiring action to close gender gaps. In other words, when drafting a treaty text, at each provision, the question has to be asked with respect to each provision: Does the proposed language promote gender equality or replicate or

¹¹⁶² Formal equality means the same treatment of all people, whereas substantive equality recognizes that the law must take elements such as discrimination, marginalization, and unequal distribution into account in order to achieve equal results for everyone. For more details, see Savitri W. E. Goonesekere, "The Concept of Substantive Equality and Gender Justice in South Asia" (2011) United Nations Entity for Gender Equality and the Empowerment of Women, <<https://asiapacific.unwomen.org/en/digital-library/publications/2011/12/the-concept-of-substantive-equality-and-gender-justice>>.

further entrench existing gender gaps that Indigenous and local women face? The following part provides some entry points through which gender could be incorporated into the texts of the WIPO-IGC instrument(s):

Preamble: In the preamble, it is necessary to acknowledge gender differences in terms of needs and interests, as well as gender inequalities concerning access to and sharing of benefits. As examined in Chapters 4 and 5, women carpet weavers and saffron growers do not receive the benefits arising from their TK to the extent they deserve. Part of the problem is due to the existing gender norms and part of the problem goes back to the lack of gender-responsive TK protection law and policy. Recognizing women's role in the TK system and their different needs, and acknowledging the structures that replicate and entrench existing gender inequalities, and the need to address such inequality, will serve as a starting point and a sound basis for a logical sequence where a gender perspective is considered throughout the entire instrument. Moreover, inclusion of gender equality among guiding principles in the preamble is essential and brings two benefits: (1) it provides foundation and legitimacy for further gender-related provisions and (2) all other provisions will have to be interpreted in light of gender equality.

Objectives: Gender equality and empowerment of Indigenous and local women through recognizing and valuing their TK, and enabling them to harness social and economic benefits of their TK, should be included as one of the objectives of the instrument(s). Paying attention to the significance of Indigenous and local women's role in the TK system and empowering them is necessary for the ultimate goal of effective protection of TK. As discussed in the case studies chapters, partly due to the absence of proper gender-responsive TK recognition and protection that would entail better remuneration, many local women and most of the younger generation have lost their interest in carpet weaving and saffron production, which in the long run will put the TK in

danger of being forgotten. Therefore, in order to keep TK alive and protect it, which is the main objective of any TK instrument, Indigenous and local women should be incentivized to continue practising their TK.

Definition of subject matter: To incorporate gender fully, in the sense implied by a Third World feminist analysis, is to redefine TK in broader, more inclusive, and even fluid terms. It implies a definition based on the diverse experiences and the distinct knowledge of many different groups. Rather than a fixed definition of TK, therefore, there should be a process for defining it in context to ensure that various forms of Indigenous and local women's TK are included in the scope of the definition. The subject matter provision in the WIPO-IGC instrument(s) should require Member States to ensure that there will be no gender discrimination in recognizing TK held and practised by Indigenous and local women as subject matter of the instrument(s), especially if, as some alternatives in the texts suggest, it will be left to Member States' discretion to define the subject matter.¹¹⁶³ The instrument(s) should require Member States to take legislative and administrative measures, in addition to policy measures to protect the subject matter from gender-based discrimination. For instance, under national TK law and policy, the methods of warp winding in carpet loom preparation that is mostly done by men should not be treated differently than methods of weaving that is mostly done by women, in terms of the level of protection that they receive. As discussed in Chapter 4, due to the gendered norms, the former is seen as a technical job while the latter is associated with women's household activities and treated accordingly without remuneration. One of the functions of having gender-responsive provisions for TK subject matter is to prevent gendered social norms from depriving Indigenous and local

¹¹⁶³ *The Protection of Traditional Knowledge: Draft Articles*, *supra* note 512, Article 3. *The Protection of Traditional Cultural Expressions: Draft Articles*, *supra* note 513, Article 3; *The Consolidated Document Relating to Intellectual Property and Genetic Resources*, *supra* note 514, Article 3.

women of the benefit of the status of eligible TK subject matter for their knowledge and receiving compensation accordingly.

Beneficiaries: As discussed in the case studies chapters, women's roles in both handwoven carpet and saffron production are seen as less important than those of men in the value chain, even though the largest part of added value occurs as the result of women weavers' and saffron growers' work. Moreover, women carpet weavers and saffron growers themselves tend not to have a full grasp of the value (material and non-material) of their TK, which in turn affects their perception of "Beneficiaries." Unless supported by precise legal rules, women can easily be excluded as beneficiaries as they often face disadvantages in many Indigenous and local communities. Explicit recognition of Indigenous and local women as beneficiaries will provide them with the legal basis to claim their rights. The WIPO-IGC instrument(s) provisions on Beneficiaries should acknowledge social, structural, and cultural determinants that affect recognition of Indigenous and local women as Beneficiaries and call for representation and participation of women during FPIC and benefit sharing agreement processes. As discussed in the next part, generalized provisions on FPIC and fair benefit sharing often fail in practice to ensure that women are treated fairly.¹¹⁶⁴ This is because, where the vulnerability of Indigenous and local people is homogenized through the use of terminologies such as "Indigenous and local populations/people", the gender differences and the gendered structures and practices in communities that create further marginalization are overlooked. Using the term "Indigenous and local women" brings them to the fore, and prevents the very significant gender differences in terms of opportunities, rights, and obligations from being ignored. In addition to the explicit provisions, there is a need for guidelines on how to make FPIC and benefit sharing agreement processes gender-responsive, which is examined in the next section.

¹¹⁶⁴ See e.g. Alvarez and Feinholz, "Women in Developing Countries," *supra* note 1074.

Capacity building: General capacity building provisions in the instrument(s)¹¹⁶⁵ will not necessarily and automatically benefit Indigenous and local women if gender is overlooked in their design and implementation. Therefore, the need for inclusion of gender in capacity building and/or women-specific capacity building should be highlighted in the instrument(s). Capacity building that does not take into account the realities of Indigenous and local women's lives, or their gendered existence, is likely to benefit mostly male members of families and communities. As discussed earlier in the chapter, awareness-raising and capacity-building activities among Indigenous and local women about the value of their TK and how it can be used to their benefit are critical. For instance, because women carpet weavers and saffron growers are not given the same opportunity and access to education as men, they tend to have limited financial literacy and skills, which limits their access to credit and other services along the handwoven carpet and saffron value chains. This affects their negotiation power regarding how and how much they get paid for their TK-based products.

6.4.1.3.1 The Need for Developing Guidelines for Gender-Responsive Benefit-Sharing Agreements

The IGC instrument(s) should be accompanied by guidelines for gender-responsive FPIC and benefit-sharing processes. The Gender Toolkit, very recently developed by the UNDP-GEF Global ABS Project, is a good example that should be followed and reiterated by the IGC in the form of legal guidelines.¹¹⁶⁶ The main aim of the guidelines will be to answer the demand for a systematic approach to inclusion of Indigenous and local women in FPIC and benefit-sharing

¹¹⁶⁵ *The Protection of Traditional Cultural Expressions: Draft Articles*, *supra* note 513, Article 15; *The Consolidated Document Relating to Intellectual Property and Genetic Resources*, *supra* note 514, Article 13.

¹¹⁶⁶ UNDP and The Global Environment Facility, "Mainstreaming Gender into ABS Value Chains: Gender Toolkit" (2019) <<https://abs-sustainabledevelopment.net/wp-content/uploads/2019/09/Gender-Toolkit-Final-Version-11092019.pdf>>.

processes. Indeed, the guidelines are intended to be a resource document of practical use for governments, decision makers, and stakeholders involved in FPIC and benefit sharing. Such guidelines must be observed by entities wanting to engage with Indigenous and local communities to ensure that Indigenous and local women have a say in negotiations and a share in the derived benefits. In the absence of gender-responsive benefit-sharing processes, Indigenous and local women who play major roles in TK generation, development, and TK-based production can be easily excluded from the negotiations and the ownership of benefits accruing from the commercialization of TK.¹¹⁶⁷ Gender-responsive guidelines for benefit sharing provide Indigenous and local women with tools to use in advancing their rights and can also serve as a moral force against the committed parties. Not having clear guidelines and parameters on how to approach FPIC and benefit sharing in a gender-responsive manner leaves uncertainties that burden both ILCs and interested entities with the onus of creating gender-responsive agreements by themselves. On one hand, interested entities fear the risk that they can damage their image if they try to negotiate without clear rules on how to include Indigenous and local women. On the other hand, Indigenous and local women may feel powerless to participate in FPIC and benefit-sharing negotiations without clear rules equipping them with the tools they need for effective participation.

Gender-responsive benefit sharing requires attention to both the outcome and the process of benefit sharing.¹¹⁶⁸ “As an outcome, just and fair benefit sharing is where women are allocated

¹¹⁶⁷ There are case studies showing that women are marginalized in the process of ABS. See e.g. Julie Cook Lucas et al, “Sharing Traditional Knowledge: Who Benefits? Cases from India, Nigeria, Mexico and South Africa” in Doris Schroeder and Julie Cook Lucas, eds, *Benefit Sharing: From Biodiversity to Human Genetics* (Dordrecht: SpringerLink, 2013) 65–94; Julie Cook Lucas and Fatima Alvarez Castillo, “Fair for Women? A Gender Analysis of Benefit Sharing” in Doris Schroeder and Julie Cook Lucas, eds, *Benefit Sharing: From Biodiversity to Human Genetics* (Dordrecht: SpringerLink, 2013) 129–152 at 129.

¹¹⁶⁸ Cook Lucas and Alvarez-Castillo, “Fair for Women?,” *supra* note 1167 in Schroeder and Cook Lucas, *Benefit Sharing*; *supra* note 1167 at 146.

their rightful share; as a process, it ensures that women fully participate at all levels and in all aspects of the (often protracted) negotiation and decision-making process.”¹¹⁶⁹

6.4.1.3.1.1 Participation in Decision Making

The assumption that discussion with ILCs automatically includes women is not borne out by empirical research, which shows gender markers in various forms and degree exist in almost every ILC around the world.¹¹⁷⁰ Negotiating FPIC and benefit-sharing agreements is a public, political activity tending not to be inclusive of Indigenous and local women. Even if by some unusual circumstance they are included, Indigenous and local women may not be able to fully participate or represent their interests due to their multiple roles and time poverty, unless they are offered accommodations, such as childcare, to facilitate their participation.¹¹⁷¹ Therefore, guidelines should require accommodations for their circumstances to facilitate effective participation of Indigenous and local women. Given the fact that ILCs are not homogenous, the definition of effective participation should be contextualized according to cultural and social practices; however, Indigenous and local women’s participation should not be bound by such practices, as studies show these practices themselves can be the sources of women’s exclusion. Guidelines should include examples of the kinds of measures that will enable women to fully participate while taking into account their specific circumstances. For instance, facilitating Indigenous and local women’s participation in FPIC and benefit-sharing processes may require offering childcare or pickup services (where the women do not have to arrange and pay for transportation out of pocket) that enable them to participate without thinking of their children or

¹¹⁶⁹ Cook Lucas and Alvarez-Castillo, “Fair for Women?,” *supra* note 1167 in Schroeder and Cook Lucas, *Benefit Sharing*, *supra* note 1167 at 146.

¹¹⁷⁰ See e.g. Fatima Alvarez Castillo and Julie Cook Lucas, “Fairness and Gender in Benefit Sharing in Genetic Research: Learning from the Kani, San, Nigerian, Kenyan and Icelandic Cases for Moving Forward” Special Issue (2009) *The University of the Philippines Manila Journal* 140.

¹¹⁷¹ See e.g. Alvarez and Feinholz, “Women in Developing Countries,” *supra* note 1074.

financial limitations. According to the case studies, transportation for both women carpet weavers and saffron growers was among the factors restricting their participation in any activity outside their homes. Childcare was also critical, as some of the participants had to work in opposite shifts so that they could take care of each other's children. In one case, one of the carpet weavers had to quit her job at the carpet workshop due to her limited access to both transportation and childcare services. She was not living within walking distance of the workshop and did not have anyone to pick up her child from school and take care of him after school.¹¹⁷² It is noteworthy that although women's attendance in decision-making fora is important, it is not by numbers alone that participation should be assessed. Rather, the quality of Indigenous and local women's participation in decision making should be assessed based on their ability to protect their interests.

A gender-responsive measure ensuring that Indigenous and local women's views are expressed and constitute a basis for decision making is to set up women-only negotiating and decision-making assemblies, where the results are then fed into other bodies. The case studies show that women carpet weavers and saffron growers were more comfortable and confident when talking in the women-only environment of the saffron picking circles and carpet weaving workshops. Moreover, as the case studies show, women's status changes with their age.¹¹⁷³ The elderly women, if provided with technical support, could be key for representing women's interests in negotiations because culturally they are respected by young and old and men and women. In order to help Indigenous and local women to handle the negotiations and decision-making processes, they should also be offered technical assistance and access to legal advisors who pay the utmost attention to their fiduciary duty to the Indigenous and local women. If, due to their

¹¹⁷² Interview No. 5. Interview by Ghazaleh Jerban, 11 October 2017, Kashan.

¹¹⁷³ Ms. Ghadami and Bibi Rahmat were two elders who were highly skilled in carpet weaving and saffron growing. They were both very respected in the community. Interview No. 2. Interview by Ghazaleh Jerban, 10 October 2017, Kashan. Interview No. 12. Interview by Ghazaleh Jerban, 23 October 2017, Bidvey.

gender-based constraints, Indigenous and local women lose the chance to participate in FPIC and benefit-sharing negotiations and decision making, their male counterparts will gradually learn and gain proficiency in how to deal with interested entities demanding their TK, while Indigenous and local women remain isolated, with low competency in negotiation and decision-making skills.

6.4.1.3.1.2 Identification of Beneficiaries

In many cases, the empirical evidence demonstrates as unrealistic the assumption that when benefits arising from TK are shared with a community, women will get their fair share.¹¹⁷⁴ In the absence of gender-responsive guidelines, resources will most likely flow disproportionately to men in the community and consequently reinforce the existing gender hierarchies.¹¹⁷⁵ Although there are variations among benefit-sharing cases, there is a common risk of women and their needs being overlooked in benefit sharing.¹¹⁷⁶ Unless explicitly recognized as beneficiaries in benefit-sharing agreements, Indigenous and local women can easily be marginalized from access to and use of benefits arising from their TK due to the discriminatory practices rooted in the gendered nature of society. Depending on their level of gender sensitivity, benefit-sharing agreements, as processes through which control over resources is granted and access is affected, can either enhance women's power within their communities if they are drafted as gender-responsive instruments or lead to their loss of resources, power, and influence if they are gender neutral.

6.4.1.3.1.3 How Benefits Should Be Used

While it can be argued that benefits to the community from funds resulting from benefit-sharing agreements could help women as well, due to the predominance of the caring and nurturing

¹¹⁷⁴ See e.g. Cook Lucas and Alvarez-Castillo, "Fair for Women?," *supra* note 1167 in Schroeder and Cook Lucas, *Benefit Sharing*, *supra* note 1167 at 129.

¹¹⁷⁵ See e.g. Alvarez and Feinholz, "Women in Developing Countries," *supra* note 1074.

¹¹⁷⁶ Alvarez-Castillo, Cook Lucas and Castillo, "Gender and Vulnerable Populations," *supra* note 1160 at 131.

roles among women, they have the tendency to under-prioritize women's needs. In fact, studies show that interests of children can be easily conflated with those of their mothers on the assumption that mothers do not have interests distinct from those of their children.¹¹⁷⁷ This goes against the empirical evidence that women in ILCs have serious problems independent from those experienced by their children and family.¹¹⁷⁸ Therefore, putting funds into health systems or into capability-building projects (i.e., education or training), as mentioned in some of the guidelines,¹¹⁷⁹ will not necessarily and automatically benefit women directly. A gender-responsive benefit-sharing arrangement should grant women agency and control over the decisions regarding the revenues earned from TK. In other words, a gender-responsive ABS requires not only equality in terms of who receives the benefits but also how the benefits are used to respond to women's needs and their developmental priorities in the community. Assigning definite seats and voting rights to women in the management council of trust funds arising from benefit sharing could be a first step. Gender-responsive benefit-sharing schemes should go beyond simple financial returns and provide Indigenous and local women with opportunities to improve their situation. Women can use benefits to organize and lead projects that not only address their practical, short-term needs, but also attend

¹¹⁷⁷ Cook Lucas and Alvarez-Castillo, "Fair for Women?," *supra* note 1167 in Schroeder and Cook Lucas, *Benefit Sharing*, *supra* note 1167 at 132.

¹¹⁷⁸ See e.g. V. Menon "The Politics of Maternity and Fertility Control: The Case of the Forest Dwelling Kani Women of Kerala" in Ramarao Indira and Deepak Kumar Behera, eds, *Gender and Society in India*, vol 2 (New Delhi: Manak Publications, 1999) 212–221 where the research shows that the Kani women have many urgent needs of their own. But Julie Cook Lucas and Fatima Alvarez Castillo's examination of how Kerala Kani Samudaya Kshema trust funds are distributed shows that the interests of the children were conflated with those of their mothers. For more details, see Cook Lucas and Alvarez-Castillo, "Fair for Women?," *supra* note 1167 in Schroeder and Cook Lucas, *Benefit Sharing*, *supra* note 1167.

¹¹⁷⁹ Bonn Guidelines talks about putting benefits into the health system and capacity-building projects, but there is no mention of gender and equity issues that must be considered. *Bonn Guidelines on Access to GRs and the Fair and Equitable Sharing of the Benefits Arising from Their Utilization Secretariat of the Convention on Biological Diversity*, *supra* note 461.

to their strategic, long-term needs and create ripples of social change. There are examples of how women's collective efforts were fruitful in advancing their situations.¹¹⁸⁰

6.4.1.3.1.4 The Case for Gender Impact Assessment Before Benefit-Sharing

Agreements and Inclusion of a Gender Chapter in Benefit-Sharing Agreements

Requiring a gender impact assessment by entities willing to engage with ILCs before any benefit-sharing agreements allows for the screening of benefit-sharing schemes in order to detect and assess their differential impact on women and men in respective communities, so that these imbalances can be redressed before the agreement is endorsed. It allows for research regarding the gender division of labour in the community, and the needs and interests of Indigenous and local women, to see whether such schemes reproduce and maintain the existing gender inequalities and have discriminatory results. The purpose of my proposal for requiring GIA before adopting benefit-sharing agreements is to minimize the possibility of these agreements having a negative impact on gender equality and to maximize the efficiency and sustainability of benefit-sharing schemes. In their GIA efforts, interested entities should:

- 1) Collect recent socio-economic data for the project area, which is disaggregated on the basis of gender and age. Complement quantitative data – especially if such data are lacking or very out of date – with qualitative insights.
- 2) Identify existing gender inequality regarding disease burden, access to healthcare, jobs, livelihoods, mobility, access to resources, etc.

¹¹⁸⁰ A classic example are the women garment workers, rag pickers, vegetable vendors, and handcart pullers in India who organized the Self-Employed Women's Association (SEWA) in 1972 to fight against exploitation and for the right to unionize. This organization has become a nationwide network of poor women that includes livelihood and women's rights advocacy projects. For more details, see Deipica Bagchi, and Saraswati Raju. *Women and Work in South Asia: Regional Patterns and Perspectives* (Taylor and Francis, 2013).

3) Obtain the views, aspirations, and concerns of women and men during the public consultation process to see what the differing expectations are between men and women about the project.

4) Examine whether the planned project affects men and women differently and in what way. How can differential impacts be mitigated? By asking questions such as: What benefit (monetary/non-monetary) will the option bring to both men and women in the community? What cost will the option impose on both men and women in the community? Are women in the community considered among the rightful targets of the benefit-sharing scheme? Does the benefit sharing scheme make the best out of opportunities to eliminate gender-based disadvantages that women face in the community? These questions should be followed with more specific questions such as: Will the distribution of income between men and women change and in what way? Will the use of time for productive work between men and women change and in what way? Will women's employment rate be increased and what will be the social consequences of this? Will roles and responsibilities for men and women in the household change and in what way? What would be the consequences of this in the society in question? Are there equal opportunities to benefit from the project? Will women have an increased or decreased role in decision making?

Once the GIA is conducted, it should be followed by inclusion of a stand-alone gender chapter in benefit-sharing agreements where the gender implications of the agreements are addressed. The chapter should also account for how (1) women are included in the FPIC and benefit-sharing negotiations, (2) women are included as beneficiaries of the agreement, and (3) benefit-sharing schemes are designed based on GIA and take into account women's needs and

interests. If implemented effectively, the proliferation of such GIA and chapters in benefit-sharing agreements would lead to collection of gender-disaggregated data in the area of TK.

6.5 Conclusion

Throughout the years, men and women in ILCs have developed different yet complementary TK specific to their conditions, needs, and priorities, which need to be recognised and valued equally in the quest for TK protection. The relevance of TK to women is threefold. First, women's contribution to TK must be recognized and compensated. Second, women should participate in various levels of TK governance as equals to their male counterparts. Third, TK law and policy must be responsive to the needs and interests of both Indigenous and local women and men. To date, gender is far from being systematically addressed in existing TK law and policy, which is why this chapter calls for gender mainstreaming in both the process and content of TK law and policy. Gender aspects of TK are not issues that can be considered later after all the technical niceties in TK law and policy have been worked out; rather, they have to be considered throughout various stages of policy and law making.

More specifically, this chapter focuses on the WIPO-IGC as the only currently active forum that has a holistic approach to the issue of TK protection through its work on the three draft articles for effective protection of GRs, TK, and TCEs. The chapter argues that Indigenous and local women themselves should be involved in the process and, in order to facilitate such participation, there is a need for awareness-raising and capacity building. Moreover, gender mainstreaming in the content of the outcome of the instrument(s) does not mean inclusion of a couple of fragmented gender provisions. It is argued that the IGC instrument(s) should be both gender-responsive, by recognizing and addressing differences between Indigenous and local men and women and ensuring that women will benefit equitably, and gender-transformative, by helping Indigenous and

local women gain or keep control and agency over their TK and resources. The chapter then proposes some entry points through which gender can be incorporated into the texts of the IGC instrument(s). It also calls for guidelines for gender-responsive benefit-sharing agreements followed by proposals for (a) conducting gender impact assessment before benefit-sharing agreements and (b) inclusion of a gender chapter in benefit-sharing agreements.

As discussed in the chapter, there are sound reasons for the international community and national governments to invest in gender-responsive TK law and policy, which can only be accomplished if countries show political will. The added value brought by gender mainstreaming in TK law and policy includes (a) increasing efficiency and effectiveness of TK instruments, (b) ensuring the incorporation and conservation of women's knowledge, skills, and experiences, (c) contributing to empowerment of Indigenous and local women, (d) promoting gender equality, and (e) compliance with international and national commitments.

CHAPTER 7: CONCLUSION

*There is nothing so disempowering as the idea that there is no alternative.*¹¹⁸¹

One of the contentious topics in international IP regimes is the issue of TK. For a long time, TK of ILCs around the world was seen in legal regimes as natural raw materials open to all to take or the common heritage of humanity, leading to a systemic devalorization of such knowledge. The crosscutting nature of TK has put the issue on the agenda of various international fora; but, as each forum has a particular area of focus, this has resulted in piecemeal responses to TK and gender has been largely missing in TK law and policy. More specifically, although the questions of what role IP regime should play in correcting the status quo and how TK should be protected have been raised in IP fora and grown into their own subset of IP scholarship, this is still an area where gender inequality has remained largely overlooked. Except for a few instances in international agreements, there is no reference to the differentiated role of men and women in the generation, transmission, and use of TK. As examined in Chapter 3, there are few incidental references to women's role in the TK regime complex, which at best, has received a line or two, even though recognition and reinforcement of Indigenous and local women's role in TK systems can and should form the basis for an alternative gender-responsive approach to TK law and policy. These minor references are a far cry from the necessary integration of gender that would address the structural inequality that women face.

The inclusion of a gender perspective in TK law and policy makes visible the different ways in which women and men use, preserve, know, and participate in TK systems. It will only be through the application of a gender approach that international fora and national governments can

¹¹⁸¹ Diane Elson and Nilüfer Cagatay, "The Social Content of Macroeconomic Policies" (2000) 28:7 World Development 1347 at 1360.

ensure that TK law and policy do not leave the women in ILCs behind. As examined in Chapter 6 and the case studies in Chapters 4 and 5, in the absence of proper gender-responsive TK protection, Indigenous and local women face challenges to maintain their livelihoods and their cultural integrity.

The fieldwork results make the gender relevance of TK law and policy apparent. While the tendency is to see Indigenous and local women's and men's needs as similar, the reality of their lives shows a very different situation. Indigenous men's and women's situations are not the same, even if they face similar threats and live in the same community. Indigenous and local women are disadvantaged in similar ways to Indigenous and local men, but also in additional ways as *women*; that is, in ways that are different from the men of their class and nationality. The gender analysis of TK drawn from the two case studies demonstrates the invalidity of assumptions such as (1) Indigenous and local women are unskilled labourers in the TK system, (2) their knowledge is not different than men and they know nothing more than men, and (3) both men and women in Indigenous and local communities benefit equally from TK law and policy. Generally, Indigenous and local women are very often disadvantaged by gender inequalities within households, and at community, national, and international levels. It is little wonder that many mothers do not inspire their daughters to continue their traditional occupations. And unsurprisingly, daughters are mostly abandoning the countryside in search of a better life. Unfortunately, the productive work, the great body of TK, and the cultural heritage that the younger generation leaves behind are likely to be lost to future generations. Without proper gender-responsive TK instruments, how can it be expected that Indigenous and local women will be able or willing to maintain and promote their traditional occupations and knowledge systems? International organizations and national governments need to crystallize their recognition of women's roles in TK into concrete actions.

They need strategies for incorporation of Indigenous and local women's needs in TK discussions and for going beyond the small and fragmented efforts.

The gender impact assessment of the current trend of gender unawareness in TK law and policy as conducted in Chapter 6 reveals that Indigenous men's and women's situations are not the same even if they face similar threats and live in the same community. As such, TK law and policy have differential gender impacts as evidenced by the two case studies. These differential gender impacts are due to the fact that (1) Indigenous and local women and men have different roles in the TK system and that the TK system is built upon both men's and women's contributions, (2) Indigenous and local women face restrictions in terms of access to resources, and (3) Indigenous and local women face barriers in participation in TK governance and decision-making processes. In other words, the impact of any TK law and policy instrument is experienced differently by men and women because of the fact that women are disadvantaged vis à vis men in (1) their access to resources, (2) control of resources, and (3) gendered responsibilities to manage resources for family and community use.

The thesis uses three criteria to weigh the positive, negative, or neutral gender impact of TK law and policy in terms of (1) participation of women and men in TK governance (2) access to and control of resources, and (3) gender-based social norms and values that hinder women's participation or their access to resources. Guided by feminist legal methodology, an approach founded on women's experience of exclusion, and using two feminist methods of gender impact assessment and qualitative interviews, the thesis makes a case for mainstreaming gender in TK law and policy.

The international community has reiterated gender equality as one of its objectives several times, and the issue of Indigenous and local women's TK should not be an exception. It is

imperative that commitments contained in international agreements on gender equality are translated into tangible actions and results. A mere recognition of Indigenous and local women's role in the TK system is not enough; rather, there is a need for a shift away from the present approach. In fact, TK should be seen as a means of power, and therefore, it should be used as a source of empowerment for Indigenous and local women. If we define empowerment as a process in which women realize their needs and interests, get the incentive and confidence to pursue them, and strengthen their capacity to achieve them, then a TK instrument is well positioned to contribute to women's empowerment. Such empowerment can be realized by both removing the barriers to Indigenous and local women's equal participation in TK governance and strengthening their capacity for meaningful participation. It is through gender mainstreaming that a greater articulation of the rights of Indigenous and local women in TK instruments can occur to empower them to protect their TK both defensively and positively.

Defensive protection of Indigenous and local women's TK requires awareness raising about women's TK both among the general public and within the community. Making Indigenous and local women aware of the significance of their TK and TK-based activities is of critical importance because, as shown by the case studies, under the influence of gendered stereotypes, Indigenous and local women themselves often see their work as less valuable. Targeted capacity building for Indigenous and local women is a necessary component in awareness raising. Such initiatives should be designed with the objective of helping Indigenous and local women to (1) identify their TK and GRs, (2) be aware of misappropriation of their TK and GRs, and (3) be conscious that they are beneficiaries of IP rights over, and benefits arising from, their TK and GRs. Awareness raising should be completed by gender-responsive TK documentation efforts so that

TK that is held by Indigenous and local women is identified and protected in local, national, regional, and international TK registries with gender tags.

Positive protection of Indigenous and local women's TK aims at promoting their control over their TK and benefits arising from its use. First, this requires capacity building to increase Indigenous and local women's participation in TK governance at various levels (community, national, and international). Indigenous and local women are, on one hand, victims of TK misappropriation in quite gender-specific ways. On the other hand, they have been active agents in TK-based community activities, often bringing them a gender-specific perspective and one that is needed to inform alternatives. Second, it also requires promoting proactive use of TK by Indigenous and local women for their economic empowerment. The two case studies show that it is often men who are the front face of and participate in the commercial activities of exchanging TK-based production. Most of women's TK-based production is for sale in local, national, and international markets, but women are not the primary beneficiaries of the economic gain of their own activities. Despite their share in production, most of them do not have the economic and financial independence that they deserve. Promotion of TK-based micro, small, and medium-size enterprises (MSMEs), that are initiated and driven by Indigenous and local women, is a way to harness their TK for their economic empowerment. Such an approach will provide them with the means of income generation where they can improve their financial condition and address their personal and shared social challenges. It can also help to preserve their TK and cultural heritage by providing incentives for younger generations.

A gender-responsive TK legal instrument can create an environment where Indigenous and local women, backed by IP protection, can explore markets to sell their TK-based products beyond their own community and country since the national and international IP regulatory systems will

be fully accessible, transparent, and enabling. Legal rights, as contained in both national frameworks of their countries and international instruments, will give them a more secure footing in the national and global markets. A gender-responsive legal instrument not only excludes free-riding competitors but also enables Indigenous and local women to commercialize their TK-based products, should they wish to do so. TK is one of the few resources upon which Indigenous and local women might draw, and their ability to do so should be enhanced through better legal protection. A TK instrument that is inclusive of Indigenous and local women's interests should be multidimensional: it should have both economic empowerment and capacity-building components. After decades of academic attention and governmental and intergovernmental efforts, the puzzle of TK has remained unsolved. Women's control over their resources, decisions, and actions will be a key factor in the success of any solution for TK. Women's control is influenced in part by the recognition, reinforcement, and improvement of Indigenous and local women's roles and capabilities.

Indigenous and local women face a journey from invisible contributors to the TK system to users of TK law and policy and ideally to contributors to TK law and policy making. Mainstreaming gender in TK law and policy will facilitate this journey. Only with a gender perspective in place can a more complete picture of human relationships and the TK system be seen. The general misconception and marginalization of women's role in TK, which is directly related to their lack of power and their low status within society, have often caused researchers and policy makers to ignore Indigenous and local women's interests and needs in mainstream TK policy discussions. In other words, without a combination of gendered frameworks and gender-responsive agenda setting, programs, policies, and monitoring, Indigenous and local women will continue to be left in dark corners of TK law and policy. International fora and national

governments should avoid using an “add women and stir” approach in TK law and policy. Instead, they should mainstream gender in a manner that allows for tracking how gender equality is being progressively realized (or not) through decision-making processes and allocation of resources.

The WIPO-IGC remains the main active forum with the mandate to develop an international legal instrument(s) to effectively protect various forms of TK, including TCEs and TK associated with GRs. As a forum claiming to have a holistic approach to the issue of TK, IGC is legally obligated to mainstream gender in its work. A comprehensive response by the IGC to the issue of women and TK requires an overarching methodology for integrating gender into all aspects of the Committee’s work in a manner that leads to a gender-responsive legal instrument for protection of TK. Gender mainstreaming requires actions relating both to participation of women in the IGC process and to inclusion of their perspective in the content of the IGC work. Participation of Indigenous and local women themselves in the process is necessary to reject the patriarchal tendency to think and decide for them (regardless of the idealism of intention). This is not because of an expectation that only Indigenous and local women would be their own advocates, but because the under-representation of Indigenous and local women in the process perpetuates the male-dominated environment with values, norms, attitudes, and procedures that are not necessarily conducive to promotion of gender equality. Indigenous and local women’s participation should be facilitated by Member States and the Committee through Indigenous and local women’s advocacy groups, where technical assistance and gender-responsive accommodations are provided. Indigenous and local women’s representatives should have access to trained legal advisors so that they can effectively participate and represent their interests in the process. Two key issues regarding participation of Indigenous and local women should be taken into account: (1) adequacy of representation and (2) Indigenous and local women’s own

consciousness about their specific interests. Indigenous and local women's participation in the process is adequate only when their participation has had an impact on the decisions made. It is not by numbers alone that participation should be assessed, but also in terms of Indigenous and local women's ability to protect their interests.

Moreover, the content of the IGC work needs to be both gender-responsive (by recognizing and addressing differences between Indigenous and local men and women and ensuring that women will benefit equitably) and gender-transformative (by helping Indigenous and local women to gain and keep control and agency over their TK and resources). The Committee also needs to re-examine the text of its current draft articles for a systematic incorporation of gender into them. Chapter 6 has provided some of the entry points: (1) The preamble of the instrument(s) should acknowledge gender differences in terms of needs and interests, as well as gender inequalities concerning access to and sharing of benefits. (2) Gender equality and empowerment of Indigenous and local women, through recognizing and valuing their TK and enabling them to harness social and economic benefits of their TK, should be included as an objective of the instrument(s). (3) There should be a provision ensuring that there will be no gender discrimination in recognizing TK held and practised by Indigenous and local women as subject matter of the instrument(s), especially if, as some alternatives in the texts suggest, it will be left to Member States' discretion to define the subject matter. (4) There should be provisions requiring representation and participation of women during FPIC and ABS processes. Generalized provisions on FPIC and fair benefit sharing often fail in practice to ensure that Indigenous and local women are treated fairly. (5) The need for inclusion of gender in capacity building and/or women-specific capacity building should be highlighted in the instrument(s). (6) While recognizing the role of customary laws in TK governance in the instrument(s), it is necessary to add a provision ensuring that the customary

laws, including adjunct religious protocols, cannot diminish or extinguish Indigenous and local women's human rights. (7) The IGC instrument(s) should be accompanied by guidelines for gender-responsive FPIC and ABS processes.

Gender-responsive guidelines for ABS provides Indigenous and local women with tools to use in advancing their rights and can also serve as a moral force against committed parties. Gender-responsive FPIC and ABS require attention to both the outcome and the process of access and benefit sharing. Negotiating FPIC and ABS agreements is a public activity tending not to be inclusive of Indigenous and local women, due to the gendered social norms and Indigenous and local women's multiple roles and time poverty. The IGC's gender-responsive ABS guidelines should require (1) effective participation of Indigenous and local women in FPIC and ABS processes, (2) accommodations facilitating participation of Indigenous and local women, (3) identification of women among beneficiaries, and (4) allocation of part of the benefits (monetary and non-monetary) to Indigenous and local women in the community. The research, in Chapter 6, has also proposed conducting a gender impact assessment before any ABS agreements. Such assessments allow for the screening of ABS schemes in order to detect and assess their differential impact on women and men in respective communities, so that these imbalances can be redressed before the agreement is endorsed. Once the GIA is conducted, it should be followed by inclusion of a stand-alone gender chapter in ABS agreements where the gender implications of the agreements are addressed.

With the contested history of TK negotiations at the IGC, gender mainstreaming might be perceived as upsetting the current "order," but, as discussed in Chapter 6,¹¹⁸² under instruments

¹¹⁸² See section 6.4.1 of the thesis where gender mainstreaming in WIPO-IGC is discussed.

such as the UN-SWAP on Gender Equality and the Empowerment of Women,¹¹⁸³ WIPO-IGC is obligated to mainstream gender in its work, an obligation whose implementation has been postponed for too long. The IGC does not have to start from zero; there are good practices and lessons to learn from the work of CBD as examined in Chapter 3. The existing gender provisions in CBD and its protocols and guidelines should not be ignored; rather, they should be built upon. With the 41st session of the IGC being postponed due to the COVID-19 pandemic,¹¹⁸⁴ an opportunity has emerged to look back on the Committee's work to date through a gender lens and identify gaps and omissions.¹¹⁸⁵ Therefore, in view of this timely opportunity and the current urgency, my research calls for mainstreaming gender in the work of the IGC to ensure that Indigenous and local women's interests as the holders of this doubly gendered category of knowledge is taken into account. It will be a missed opportunity for Indigenous and local women's empowerment if the IGC process continues without adopting a gender perspective.

IGC outcome instrument(s) can and should provide adequate protection for TK while advancing a myriad of other policy objectives, such as gender equality and women's empowerment. Without engagement and effective participation of Indigenous and local women, there is little if any hope of achieving the objective of the instrument(s). There is a need for further research with the goal of providing specific strategies and programs for capacity building among Indigenous and local women. TK programs and initiatives have to recognize and respond to their particular needs and interests, as well as to their different aspirations. Programs and initiatives

¹¹⁸³ UN System-wide Action Plan (UN-SWAP) on Gender Equality and the Empowerment of Women, *supra* note 1109.

¹¹⁸⁴ According to WIPO's website, IGC 41, which was planned to take place from March 16 to 20, 2020, is postponed due to the pandemic. <<https://www.wipo.int/tk/en/igc/snapshot.html>>. <https://www.wipo.int/portal/en/news/2020/article_0011.html>.

¹¹⁸⁵ Although determining the WIPO-IGC's agenda and the program of work is within the hands of the authority that issues the Committees's mandate, i.e., WIPO General Assembly (comprising of the Member States with equal vote), the Committee can also influence its own agenda, the program of work, and mandate.

should involve them as part of the planning and implementation. Further research is required to examine strategies for development and promotion of women-led, TK-based MSMEs in a culturally sensitive manner so that they can harness the social and economic benefits of their work while strengthening their communities. Interactions between elements of economic empowerment and preservation of cultural identity should be examined taking into account specific characteristics of ILCs.

Issues of gender, TK, IP, and development are closely interrelated and cannot be addressed independently. Simply put, gender is not an issue that can be incorporated as an afterthought once all the technical niceties have been worked out. Rather, it needs to be addressed at each and every stage of the law making and policy formulation process.

Appendix A: Carpet Interviews

No.	Name of interviewee*	Date of interview	Place of interview	Name of interviewer
1	Ms. Fallah	Oct 10 th 2017	Kashan, Iran	Ghazaleh Jerban
2	Ms. Ghadami	Oct 10 th 2017	Kashan, Iran	Ghazaleh Jerban
3	Ms. Hashemi	Oct 10 th 2017	Kashan, Iran	Ghazaleh Jerban
4	Ms. Fotoohi	Oct 11 th 2017	Kashan, Iran	Ghazaleh Jerban
5	Ms. Taheri	Oct 11 th 2017	Kashan, Iran	Ghazaleh Jerban
6	Ms. Ahmadi	Oct 11 th 2017	Kashan, Iran	Ghazaleh Jerban
7	Ms. Haghi	Oct 12 th 2017	Kashan, Iran	Ghazaleh Jerban
8	Ms. Akbari	Oct 12 th 2017	Kashan, Iran	Ghazaleh Jerban
9	Ms. Karami	Oct 12 th 2017	Kashan, Iran	Ghazaleh Jerban
10	Ms. Yekta	Oct 13 th 2017	Kashan, Iran	Ghazaleh Jerban
11	Ms. L. Noori	Oct 13 th 2017	Kashan, Iran	Ghazaleh Jerban
12	Ms. F. Noori	Oct 13 th 2017	Kashan, Iran	Ghazaleh Jerban
13	Ms. G Noori	Oct 14 th 2017	Kashan, Iran	Ghazaleh Jerban
14	Ms. Naderi	Oct 14 th 2017	Kashan, Iran	Ghazaleh Jerban
15	Ms. Vahidi	Oct 14 th 2017	Kashan, Iran	Ghazaleh Jerban
16	Ms. Afshar	Oct 23 rd 2017	Bidvey, Iran	Ghazaleh Jerban

* As stated in Chapter one for confidentiality and anonymity, the real names of the participants are replaced by pseudonyms.

Appendix B: Saffron Interviews

No.	Name of interviewee*	Date of interview	Place of interview	Name of interviewer
1	Batool Khanoum	Oct 20 th 2017	Bidvey village, Iran	Ghazaleh Jerban
2	Mahtab	Oct 20 th 2017	Bidvey village, Iran	Ghazaleh Jerban
3	Zahra khanoum	Oct 20 th 2017	Bidvey village, Iran	Ghazaleh Jerban
4	Fereshteh Khanoum	Oct 21 st 2017	Bidvey village, Iran	Ghazaleh Jerban
5	Kobra khanoum	Oct 21 st 2017	Bidvey village, Iran	Ghazaleh Jerban
6	Pari Khanoum	Oct 22 nd 2017	Bidvey village, Iran	Ghazaleh Jerban
7	Fatemeh Khanoum	Oct 22 nd 2017	Bidvey village, Iran	Ghazaleh Jerban
8	Maryam Khanoum	Oct 22 nd 2017	Bidvey village, Iran	Ghazaleh Jerban
9	Aghdas Khanoum (Ms. Afshar)	Oct 23 rd 2017	Bidvey village, Iran	Ghazaleh Jerban
10	Eshrat khanoum	Oct 23 rd 2017	Bidvey village, Iran	Ghazaleh Jerban
11	Goli Khanum	Oct 23 rd 2017	Bidvey village, Iran	Ghazaleh Jerban
12	Bibi Rahmat	Oct 23 rd 2017	Bidvey village, Iran	Ghazaleh Jerban
13	Zari khanum	Oct 24 th 2017	Bidvey village, Iran	Ghazaleh Jerban
14	Narges Khanoum	Oct 24 th 2017	Bidvey village, Iran	Ghazaleh Jerban
15	Mohtaram Khanoum	Oct 25 th 2017	Bidvey village, Iran	Ghazaleh Jerban

* As stated in Chapter one for confidentiality and anonymity, the real names of the participants are replaced by pseudonyms.

APPENDIX C: Interview Topics and Sample Questions

The interviews will be in 3 parts, each of which will have clusters of questions. These clusters of questions will be used as a guide and a checklist during the interview. The parts and the topics to be covered in each part are as follows:

Part 1: Women's role in their family and community

- Your responsibilities as a woman in your family and community.
- Your family's/community's expectations of you as a female member.

Part 2: Saffron/carpet production and the extent of women's participation

- An overview of key stages of saffron/carpet production.
- Parts of the TK-based production in which women are more involved.
- Parts of the process involving TK, which are performed only by women.

Part 3: Your community's traditional way of knowing, sharing and transferring the TK involved in saffron/carpet production

- When do you start learning/teaching the know-how and skills that are necessary for saffron/carpet production?
- How do you learn/teach the know-how and skills that are necessary for saffron/carpet production?

Sample Questions

Part 1

1. What are your responsibilities as a woman in your family/community?
2. What are your family's/community's expectations of you as a female member?
 - Does it differ depending on different seasons of the year?
 - Probe for daily chores and type of domestic work done by women.
3. Are there certain people who are responsible for making sure that traditional practices of your community are preserved?
 - Who are the preservers?
 - How do they do that?
4. Tell me more about your general experience as a woman in your community.

Part 2

5. How many stages exist in saffron/carpet production?
6. Describe the different stages of saffron/carpet production?
7. What specific skills and know-how are required in each stage?
 - To what extent do they affect the quality of the end product?
8. Does every member of the community/family have these skills?
 - If no, probe for the characteristics of those members who have these skills.
 - How have they learned these skills?
9. Tell me about your engagement in saffron/carpet production. On what occasions do women take part in the saffron/ carpet production processes?

- Probe whether it is voluntary or it is expected by family/community or it is for financial reasons (making income).
10. In what parts of the production process are women most involved?
11. Are there specific phases of the process which are performed only/predominantly by women?
- If yes, probe for the reason; is it because they have specific skills, characteristics, etc.?
12. How is the final product sold?
- Are women involved in the transaction phase? If not, why? If yes, how?
13. Is your contribution in production of saffron/carpet compensated?
- If yes, how do you receive the compensation?
 - Probe for money vs. other benefits.
14. Do you receive equal payment/benefits in comparison to your male counterparts?
- If not, why?

Part 3

15. How did you learn the necessary skills for saffron/carpet production?
16. How are the skills and know-how for saffron/carpet production transferred from one generation to the next?
- Probe whether there are any training programs in the family or community.
 - Who are the trainers? Mothers or specific individuals in the community?
 - Is there any challenge for passing it on today?
17. When did you begin learning the know-how necessary for saffron/carpet production?
- From what age do you start training the next generation?
18. Do you teach different skills to your daughters and sons with regard to saffron/carpet production?
19. What is your community's traditional method of teaching the know-how necessary for saffron/carpet production?
20. Are there any modern programs offering formal training with regard to saffron/carpet productions?
- If yes, do women have access to them?
 - Are there certificates or degrees to recognize training?
 - Are there tests and/or other milestones in the training process?
21. Do you think your community's traditional ways of teaching/learning the necessary know-how for saffron/carpet production are different from what they are today?
- If so, how different?
 - Probe for the following differences: organization, ownership, transmission, use, etc.
22. Are there any programs providing subsidies or financial support to saffron/carpet producers?
- If yes, do you as women have access to them?
 - If yes, have you ever used or planning to use them? If not, why?
23. Are there any requirements such as apprenticeships in order to be qualified as a carpet weaver/saffron producer?
- If yes, is it possible to fail?
 - Probe for any hierarchy in expertise, seniority.
 - How do they get promoted? How do they move up to more professional tasks?
 - How does someone eventually become a trainer who mentors other?
24. Are there people who would like to learn but are excluded? If yes on what basis?

25. What other jobs/trades/professions are prevalent in the community?

- How do young people decide which profession to pursue?
- Who decides? Is it individuals themselves?

25. Do you have anything else that would be of interest to this study that you would like to share?

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Please note, in order to give visibility to Iranian scholars in alignment with the theoretical framework adopted in the thesis (Third World feminism), the references that are in Farsi in the original text are cited in both English and Farsi.

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