

North Rupununi Wildlife Clubs: Makushi Amerindians' Perceptions of Environmental Education
and Positive Youth Development in Guyana

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Abstract

This doctoral research studied the North Rupununi Wildlife Clubs (NRWC), an Environmental Education (EE) Program for Makushi Amerindian youth in Guyana. The Club format for EE has become popular, and previous research on EE Club programs provide modest support for the hypothesis that EE Club membership increases pro-environmental attitudes and behaviour in children and youth. There is also increasing interest in the role EE Clubs can play in nurturing Positive Youth Development (PYD). This multi-site case study describes EE Clubs in three villages in the North Rupununi of Guyana. Data was collected from semi-structured interviews and focus groups with stakeholders (such as former Club members, volunteers with the Clubs, Elders, and village leaders). The researcher also kept a reflective journal. Findings suggest community members valued the positive impact they perceived participation in NRWC to have on youth and upon their community. Participants offered recommendations on how to improve the program. One of the original findings is that the Clubs may be a way to help reconnect indigenous youth with their elders and restore the transmission of Indigenous Knowledge. These findings contribute to our understanding of EE Clubs and their impact on pro-environmental behaviour, PYD, and communities. This may be relevant to other indigenous communities in isolated rural areas with EE Clubs, and to the field of EE in general.

Keywords: Amerindian, Elders, Clubs, Environmental Education, Guyana, Indigenous, Makushi, Positive Youth Development, Youth.

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Dedication

This Dissertation is dedicated in loving memory to Edna Johnson, 1935-2009. You are the reason I dreamed to return to Guyana.

Love Always.

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Chapter 1 – Introduction

In setting the context for this dissertation, Chapter 1 presents the Problem Statement — the ecological crisis currently facing humanity. The dual potential solutions of Environmental Education (EE) and the accessing of Indigenous Knowledge (IK) are introduced. Section 1.3 situates the author as a non-indigenous researcher, undertaking research in indigenous communities. Of interest to some readers is the relevant history of Guyana, mentioned in this chapter and provided in additional detail in **Appendix D**. The chapter then focuses on the North Rupununi region of Guyana and the Makushi people in whose communities the research was conducted. Finally, the history of the North Rupununi Wildlife Clubs (NRWC), the subject of this research, is described.

1.1. Problem Statement

The multifaceted environmental crisis is well-known by governments and the public. Nelson (2008, p.6) states, “Humanity and life on this planet currently face an unprecedented ecological crisis. Climate change, biodiversity extinction, food and water scarcity, overpopulation, threat of nuclear war, pollution, and toxicity... sadly, the list goes on and on.” Most individuals, nations, and corporations recognize that human actions are the main cause of this crisis (Leiserowitz, Kates, & Parris, 2006). We also know many of the strategies that need to be implemented in order to avert disaster and achieve environmental sustainability. These strategies include consuming fewer natural resources, releasing less carbon and other greenhouse gases, and reducing our use of toxins (IDRC, 2005; Starke & Mastny, 2010). Agreement on strategies has not translated into a concerted effort to change our practices. Humanity’s rapacious use of natural resources beyond the planet’s capacity to restore them, pollution of air, water and land, climate change, and destruction of the habitats of other species continue unabated.

Environmental degradation advances at an alarming pace (Berenguer, 2007; Kollmuss & Agyeman, 2002; Starke & Mastny, 2010). There is a gaping chasm between the *ought* – what we know we should do – and the *is* – what we actually do. Blake (1999) calls this the Value–Action Gap¹; that is, worldwide concern for environmental issues is not paralleled by pro-environmental behaviour (Kollmuss & Agyeman, 2002). How might we shift from the *ought* to the *is*? One potential strategy is environmental education (EE).

There are various formats for EE, and a popular approach is the environmental club. For example, there are over 97,000 Eco-Clubs in India alone (Roberts, 2009), and the Jane Goodall Institute (JGI)’s Club program Roots&Shoots (R&S) has over 8000 Clubs in 132 Nations and involves an estimated 150,000 children and youth (Andrews, 2013; The Jane Goodall Institute, 2013). Environmental Clubs have varied programs with different goals and objectives. Even within a well-established program, there may be considerable variation in how individual clubs function, what they do, and what impact they have on their members and on their communities. For this reason, it is important to understand the role that these Clubs play in specific contexts and populations.

Another strategy to address the environmental crisis is to look to the wisdom of indigenous peoples.² Worldwide, indigenous peoples have proven that humans can not only thrive within rich, vibrant, and dynamic societies without damaging their local ecosystem, they can even make their local ecosystems more productive (Ausubel, 2008, p.xxii). Indigenous peoples and the transmission of their Indigenous Knowledge (IK) and Traditional Ecological Knowledge (TEK) have been devastated by Colonialism. Direct persecution, imported disease,

¹ This gap is not unlike the “know-do” gap in public health, a term coined by the World Health Organization in 2006 to describe the gap in what is known through research and what is actually applied in medical practice (Estey, Kmetz, & Reading, 2008)

²Please see **Appendix A** for a glossary of terms such as “Indigenous” and “Western”.

and loss of control of their lands reduced indigenous populations in the “New World” by 80-90% (Diamond, 2005; Mann, 2005). Surviving Indigenous people have endured a loss of culture through missionary conversion, residential schools, mainstream schooling, as well as discriminatory policies and laws. The combined legacy of continuous loss of control over much of their ancestral lands and the loss of the IK about how to care for these lands has decimated indigenous people’s local ecosystems and hence the environment in general. Despite all these injustices and challenges, indigenous peoples are resilient. Many are proudly maintaining their culture and maintaining or regaining control of their land. In fact, Western societies should consider shifting their values and ways of being in the world from status quo Western to more indigenous ways of being and of relating to the Earth. Some indigenous cultures have thrived in diverse ecosystems for thousands of generations. In these times of ecological and economic crisis, there is much to learn from Indigenous peoples about living sustainably over the long-term (Adamson, 2008; Mohawk, 2008).

1.2. Purpose Statement

The broad purpose of this research is to contribute to the ongoing work of Makushi communities in the North Rupununi of Guyana, South America, in order for them to conserve their beautiful place and culture. This is a critical time. The local ecological community, and the smaller human subset of that community, the Makushi culture, is still vibrant, strong, and unique. The Makushi’s territory includes the Guiana Shield, which supports the largest unfragmented “frontier forest”³ in the world (Haden, 1999).

The relatively intact nature of the savannah, rainforest, and riverine ecosystems in Guyana, Suriname, and French Guyana can be largely attributed to the IK, practices, and

³ A frontier forest is a large, relatively intact forest ecosystem. A forest must meet several criteria to be designated a frontier forest; please see **Appendix A**.

stewardship approaches of indigenous peoples in their ancestral territories (Bubier & Bradshaw, 2002; Colchester, 1997). But there is increasing pressure from external forces, both economic and cultural, that threaten these ecosystems. The main threats to the forest, savannah, and riverine ecosystem in the North Rupununi are natural resource extraction (logging, gold mining, illegal wildlife trade) and the Georgetown to Lethem road (The Road⁴), which links the Guyanese coast to Brazil (Ozanne, Cabral, & Shaw, 2014).

Indigenous peoples everywhere, including the Makushi, need to navigate a difficult and crucial course, which includes many decisions about which aspects of their culture they will preserve, and which aspects will evolve as conditions change. This will require wise decision-making (and follow-through). Research can offer findings to help inform these decisions. For example, research about an indigenous community's local ecosystems could yield information to help with conservation. Research about indigenous community member's values, priorities, and dreams for the future could help inform decisions about the community's internal governance as well as what community representatives negotiate for their community's benefit at the national and international levels.⁵

The specific purpose of this doctoral research was to explore the role that the North Rupununi Wildlife Clubs (NRWC), an environmental education program operated by the Makushi, may play in encouraging pro-environmental behaviour in individuals and communities. The approach selected to explore the impact of NRWC was a qualitative, multi-site case study that employed interviews, focus groups, and observations in three North Rupununi communities.

⁴ Locals simply refer to the Georgetown-Lethem road as "The Road."

⁵ Research would only complement existing traditional or imposed governance structures that assess and then meet the needs of community members.

1.3. Situating the Researcher

This research took place within indigenous Makushi communities to study the NRW program's impact. An important part of respecting the indigenous community with which a researcher wishes to work and for building a strong, genuine, and reciprocal relationship with the community is for the researcher to situate herself within the research context (Kovach, 2009: 110-113; Steinhauer, 2001; Wilson, 2008: 32). This is required of both indigenous and non-indigenous researchers. Self-awareness in research is integral to issues of accountability to the community and for identifying our location and its associated baggage (biases, assumptions, perspectives) from which we study, write, and participate in knowledge creation (Said, 1994; Schram, 2003, p.100-103). This is also important for me to do when writing about my research in order to be transparent with my readers about who I am and how I came to know what I am sharing. This allows readers "to ground their thinking and begin their own interpretation of what they are hearing, reading, and thus learning" (Gehl, 2014, p.5).

I am a Canadian woman of Scottish and English ancestry, conceived in Guyana, born in Toronto, and then spent my first year in Georgetown, Guyana. My life was irrevocably entwined through bonds of love with people in Guyana because my nanny in Georgetown, Edna Johnson, accepted the job of being my nanny in Ottawa, and moved with us to Canada when I was one-year old. Over the years, Edna became an integral part of my immediate family, like an Aunt or Grandmother who comes to live with you and takes on a parental role. Edna's mother was Patamona (an Amerindian people that inhabit the rainforest in Central Guyana, their territory is North of the Makushi; see map, **Appendix B**) and she was born in a village not far from the headwaters of Kaitour Falls. She was stolen from her mother by her Afro-Guyanese father, and was raised by an adoptive family in Georgetown, the coastal capital of Guyana. The narrative of

my childhood was therefore a mix of stories from Canadian parents and Grandparents, one Grandmother who came from Scotland at age 13, and Edna's stories of her family and friends in Georgetown (with some stories of The Interior⁶ woven in from biological siblings she met as an adult). From when I was a young child, I knew I would return to Guyana, and finally did so in 2006. I visited with Edna's family in the coastal capital of Georgetown, and I undertook volunteer work in Nappi and Yupukari villages in the North Rupununi, which are located in the Makushi's territory. It was then that I came to love this region of Guyana and its people. I wondered if one day I would have the opportunity to contribute to protecting the beautiful culture and ecosystems there.

Environmental Education is a calling for me. While I was determined to work in Guyana, another childhood dream was to visit Africa. Therefore I went to Tanzania in 2007 to gain hands-on experience with Roots&Shoots (R&S), the Jane Goodall Institute's humane and environmental education program, which is Club-based and uses an experiential learning approach. I initially met Jane Goodall in her kitchen since R&S volunteers in Dar es Salaam live in her home.⁷ She is an inspiration. I took to heart her belief that youth programs like R&S are key for the survival of humanity and her faith in the power of youth to change the world for the better (J. Goodall, personal communication, June 3, 2007).⁸ I started my PhD to study environmental education for youth shortly after returning from Tanzania in 2007.

I took a humble approach to this research and believe it is important for non-community member researchers to cultivate humility. Jones (2008, p.481) writes that at some point, for the

⁶ People living along the more populated North coast of Guyana refer to the sparsely populated and forested central part of Guyana South of the coast as "The Interior." The term is similar to Canadians living on the fairly populated border with the USA referring to the sparsely populated forested area North of major cities as "The North." The term "The Interior" has connotations of being a wild, mysterious, slightly dangerous place. See more in Glossary, **Appendix A**.

⁷She is rarely there due to her intense travel schedule; this is why R&S volunteers stay in her home.

⁸ Dr. Goodall has made the same statements every time I have heard her speak since 2007.

colonizer/settler⁹ engaged in critical inquiry, there is a moment when an indigenous participant or colleague speaks, and there is a recognition that “some things may be out of one’s grasp. It is a fleeting, slippery glimpse of (the possibility of) something inaccessible and unknowable.” Like the settler authors described in Peters (2010), I am aware of limits of my ability to know. The way Ross (2006, p. xi), explains this resonates with me: “I cannot tell you about Aboriginal reality, only about how I have come to understand my own exposure to small parts of it.” This is how I feel about this research with the Makushi communities. I can tell you about my understanding of the NRWC program and its impact on individuals and Rupununi communities. I can also present the voices and insights of Makushi participants, and then offer my interpretation in the hope that this helps the communities, and contributes to research on, and the practice of, environmental clubs for children and youth.

Another aspect I claim for my identity as researcher is that I am an emotional being. This research was not only rational. I intuitively knew who to approach, what questions to ask. I cried. I laughed. I grieved. I got irritated and frustrated. I felt betrayed. I felt protected. I felt gratitude. I tried to stay neutral during interviews and focus groups, not to deny the essence of my own humanity but to maximize the opportunity of for participants to speak their own Truth.

I will also take this opportunity to state that I conducted this research with a good heart, open mind, and humility about what I do not know and will never know in this lifetime. Further ethical and practical considerations for the research design, in particular situating the research within Ethical Space (Ermine, 2007; Ermine, Sinclair, & Jeffery, 2004) are discussed in Section 3.2.3.

⁹ See **Appendix A**, Glossary, for definitions of ‘settler’ and ‘colonizer’.

1.4. Context: Guyana

This research took place in the North Rupununi, Region 9¹⁰ of Guyana. Officially named the Co-operative Republic of Guyana, Guyana is also known as the “land of many waters” because of the many rivers and other waterways in the country (Vereeke, 1994). Guyana is situated on the north coast of South America with Suriname on its eastern border, Brazil to the south and south-west, Venezuela to the west, and the Atlantic Ocean to the north (see **Appendix B - Map**).

Guyana’s population in 2012 was 747,884, a slight decline from 751,223 in 2002 (Guyana Bureau of Statistics, 2014). As we shall see in the following section (1.4.2.) on Guyana’s history, several waves of immigration have resulted in multi-ethnic Guyana being known as “The Land of Six Peoples,” i.e., people of Amerindian, African, Chinese, Indian, Portuguese, and Caucasian ancestry. Guyana, a former British colony, is the only country in South America with English as its official language (many Guyanese speak an English Creole, and many Amerindians speak their indigenous languages). On the South American mainland, Guyana is the only member of the Caribbean Community (CARICOM), an organization of 15 Caribbean nations and dependencies that are predominantly Caribbean islands.¹¹ The coastal urban areas of Guyana are heavily influenced by Caribbean culture, while in contrast, Brazil exerts more of an influence on the local cultures in the North Rupununi due to its close proximity.

Guyana covers 214,970 km,² of which 77% is forested (UN data, 2014). There are four main geographical regions: the interior savannahs, the highland region, the hilly sand and clay area, and the low coastal plain (Bynoe & Williams, 2007; Vereecke, 1994). Guyana’s climate is

¹⁰ Guyana is divided into 10 administrative regions.

¹¹ See <http://www.caricom.org>

equatorial with the temperature in the coastal capital, Georgetown, ranging from 20 – 33.8°C and an average temperature of 26.8°C (UNdata, 2014).

1.4.1. The North Rupununi

The North Rupununi is situated in southwest Guyana (04° N 05', 59° W 02'), and is comprised of savannah, tropical lowland forest, and wetland vegetation types (Mistry, Berardi, & Simpson, 2008). On the eastern side, the savannah extends into Brazil. Within the Rupununi, the Kanuku Mountains divide the savannah ecosystem into north and south, and it is bordered by the Pakaraima Mountains in the north-west and tropical rainforest in the north and east (Byrne, 2013).

The North Rupununi's climate is "largely influenced by the inter-tropical convergence zone" (Byrne, 2013). The temperature near the research sites ranges from 22°C at night to 36°C during the hottest part of the day, that is in the afternoon (Rock View Lodge, 2014). The amount of annual rainfall decreases as the ecosystems transition from tropical rainforest to savannah. The average annual rainfall is between 1600 mm and 1900 mm, peaking during the rainy season months.¹² The Rupununi has one prolonged rainy season from April or May until August, and a brief period known as the cashew rains from December to January which punctuate the September to March dry season (Byrne, 2013).

The North Rupununi Wetlands is estimated to cover 22,000 hectares (Byrne, 2013). During the rainy season, water levels rise in the Essequibo, Rupununi, Rewa, and Simoni Rivers and in creeks that flood the North Rupununi savannahs and forests (Mistry, Berardi, & Simpson, 2008). When the waters recede during the dry season, this leaves isolated water bodies such as

¹² Coastal areas have rainy seasons from May to September and again from November through January (Guyanesepride.com, 2014).

ponds (Mistry, Berardi, & Simpson, 2008). The area has over 200 ponds, lakes, inlets and creeks (Byrne, 2013).

A unique feature of this floodplain is that during the rainy season, the flooded area becomes a mix of the waters from the above rivers, and hence a mixing of black, white, and clear water systems (Byrne, 2013). This, and the mixing of the Amazonian and Guiana Shield eco-zones in this area, has resulted in exceptionally high biodiversity: “Over 400 species of fish, 191 species of mammals, 650 species of birds, 100 species of reptiles and 65 species of amphibians have been recorded in the region” (Byrne, 2013). The Rupununi, Rewa, and Essequibo Rivers in the North Rupununi support healthy populations of several endangered species, including the Giant River Turtle (*Podocnemis expansa*), Black Caiman (*Melanosuchus niger*), Giant Otters (*Pteronura brasiliensis*), and Arapaima (*Arapaima gigas*; a giant air-breathing fish) (Fernandes, 2006).

As noted in 1.2., the North Rupununi is part of the Guiana shield, which boasts the largest unfragmented frontier forest in the world (Haden, 1999). Approximately 80 percent of Guyana’s forests are State owned, and 13.9 percent are held by the indigenous Amerindian communities (Conservation International, Climate Focus, Terracarbon LLC, SarVision, & Development and Policy Management Consultants, 2009). The forests are threatened by logging and gold mining (Ozanne et al., 2014), which could be exacerbated by paving The Road (from Georgetown to Lethem) (MacDonald, 2014). This is a key time because the deforestation rate is still low, approximately 0.3 percent per annum (543 ha/annum) prior to 2001 (Food and Agriculture Organization of the United Nations (FAO), 2001) and 0.29% in 2009 (Guyana Forestry Commission, 2009). Local Amerindian communities are essential to the protection of the forests

(and other ecosystems), whether they are on land owned by the state or are on Amerindian Titled Land,¹³ and forests within and without of the protected zones (Ozanne et al., 2014).

1.4.2. Brief Notes on the History of Guyana and Amerindians

The following are brief notes on the hisptroy of Guyana and the Amerindians who inhabit Guyana. Readers who are interested in a more detailed account of Guyana's fascinating history and about the recent history of Amerinidans are encouraged to read **Appendix D: Brief History of Guyana and Amerindians** at this time. The indigenous Amerindian peoples are the first inhabitants of the area that is now called Guyana, and they have lived there for approximately 12,000 years (Vereeke, 1994). A Spanish sailor first sighted the coast of Guyana in 1500, and it appeared wild and untamed to European explorers (Colchester, 1997, p.7). But it was far from uninhabited. Up to 160,000 Amerindians are estimated to have lived in the area now called Guyana, Suriname, and French Guiana before first contact with Europeans in 1580 (Whitehead, 1988; Benjamin, 1992). Of the estimated 15 Amerindian nations at that time, nine now remain in Guyana: the Akawaio (*Kapon*), Arawak (*Lokono*), Arekuna (*Pemon*), Carib (*Karinya*), Makushi (*Pemon*), Patamona (*Kapon*), Wai Wai, Wapishana, and Warrau¹⁴. The other six tribes disappeared or were assimilated within mainstream Guyanese society following colonization (Vereecke, 1994).

The Amerindian peoples were diverse as well as numerous. Their cultures were finely tuned to the specific ecosystems in which they lived. The Carib-speaking Makushi (*Pemon*)

¹³ Titled Land in Guyana means that the indigenous claim to a traditional territory has been formally recognised under the Amerindian Act, and the community's land has been demarcated.

¹⁴ There are several different spellings of the names of some of the Amerindian tribes in Guyana (such as 'Makushi,' 'Macushi,' 'Macusi'). I have not detected a source for the definitive spelling of Amerindian people names, therefore, in this Dissertation, I use the spelling of Amerindian people names as they are spelled in the majority of the literature I drew on. For the Makushi, I use the spelling used by the communities I worked with. Please also note that like many other names of indigenous peoples currently used by mainstream culture, these are not necessarily the names indigenous people uses to refer to themselves. Therefore, in brackets and in italics of the list are the Amerindians' own name for themselves. See 1.5. for the meaning *Pemon* for the Makushi.

inhabited the northern Rupununi savannahs as they do to this day. All the Amerindian tribes were at the time (and still are) “woven together by an intimate network of trading alliances, in which foodstuffs, tools, poisons, drugs, resins, dyes and magical objects and a whole host of other forest products were exchanged” (Colchester, 1997, p. 9). Communication was maintained through a maze of waterways complemented by an intricate network of forest trails (Lathrap, 1970). See **Appendix B** for map of current Amerindian territories.

Due to many waves of colonially imposed immigration, today’s “Land of Six Peoples” is indeed multi-cultural, with people of Amerindian, African, East Indian, Chinese, Portuguese, Caucasian, and mixed ancestry. As a result of the colonial policy to promote conflict between these ethnic groups, Guyanese society was deeply divided and Guyanese politics have been tumultuous at times (Bulkan, 2013). It is beyond the scope of this Dissertation to detail Guyana’s recent history, but some highlights follow to set the context for the current political and environmental situation of Guyanese Amerindians in general, before turning specifically to the Makushi who participated in my research (1.5.).

Historically, the Amerindian’s status on their own land changed over time as the economy of Guyana shifted, and as the indigenous Amerindian population decreased while the settler population increased due to the immigration of thousands of Africans and then Indians to work on the colonists plantations. Amerindians did play a key role as a “third force” in the battle between Indo-Guyanese and Afro-Guyanese interests when Guyana was striving for Independence from the UK in the 1960s (Bulkan, 2013). One positive Amerindian achievement when Guyana gained Independence in 1966 was the inclusion in the Independence agreement of a commitment to settle Amerindian land claims, thanks to Amerindian Parliamentarian Stephen Campbell’s concerted lobbying (Bulkan, 2013).

Today, the Amerindian population in Guyana is lower than before contact with European colonizers, and Amerindians are a minority in their ancestral territory, but it is a large minority that is growing. Amerindians are the fourth largest ethnic group, at 9.2% of Guyana's population in the 2002 census (Beaie, 2007).

A new chapter may be opening for Amerindians in Guyana. For the 2015 general election A Partnership for National Unity (APNU) and Alliance for Change (AFC) formed a coalition which narrowly won the general election in May 2015, thus ending the previous regime's 23 year rule (GECOM, 2015; Marks, 2015). One of the first actions by the new government was to change the name of the Ministry of Amerindian Affairs to "Indigenous Peoples Affairs Ministry", in accordance with the preference of Amerindians to be referred to as indigenous people (Demerara Waves, 2015).¹⁵ Sydney Allicock, from Surama (see 1.5.), became the new Minister of Indigenous People's Affairs.

1.5. Situating the Participants: The Makushi

The Makushi are a savannah people whose territory is found in modern day Guyana and Brazil. Approximately 9,000 Makushi live in southern Guyana, and another 15,000 in the Roraima State of Brazil (Forte & Makushi Research Unit, 1996). A more recent estimate of the population of Makushi in just the 18 villages and communities that comprise the North Rupununi District Development Board (NRDDB) is 6000-8000 (Byrne, 2013). The Kanuku Mountain Range that divides the Rupununi savannah into north and south also forms a natural boundary between Makushi territory to the north and Wapishana territory to the south (Forte & Makushi Research Unit, 1996). The Essequibo river forms the western boundary of their territory, and to

¹⁵ In 2005, three Amerindian NGOs lobbied for the term to "indigenous people" to replace "Amerindian" in the Amerindian Act. The PPP/C government did not comply. Two of the three NGOs also still use the term Amerindian. At the time of my fieldwork, participants used the term Amerindian for more than Indigenous People, therefore I use the term Amerindian in this dissertation. See more details in Bulkan (2013, p.1-2).

the east the Takutu and Ireng rivers demarcate the border with Brazil (see Map, **Appendix C**). Guyana's Regional System of Administration which divided Guyana into 10 Regions was instituted in 1980. There are 24 Makushi communities located in Region 9 (the North Rupununi), and three further north in Region 8, on the southern edge of Patamona territory (Forte & Makushi Research Unit, 1996). The majority of people in the North Rupununi are Makushi, but Patamona, Arawak, Wapishana, Arekuna, and coastlanders also live in the area (Byrne, 2013).

The Makushi call themselves *Pemon* (Colchestr, 1997, p.9; Forte & Makushi Research Unit, 1996), and are an eastern arm of the Pemon nation. Another branch of the Pemon are the Arekuna, whose language is closely related to the Makushis' (Forte & Makushi Research Unit, 1996). Only a small part of the Arekuna's current territory is in Guyana, at the very far west near the border with Venezuela (Colchester, 1997, p. 9). The Pemon are known for their strongly egalitarian traditions (Thomas, 1982). The Makushi were famous in the late 18th century for making a very potent form of curare, a lethal poison which paralyzes its victim and for which no antidote existed at the time (Forte & Makushi Research Unit, 1996, p. 15). The Makushi used curare on their arrows to hunt prey. Today the poison is not made in the North Rupununi (Forte & Makushi Research Unit, 1996, p.15).

The Makushi were not designated by the Dutch as a 'free nation' in 1686, thus they were targeted for slave raiding until the Dutch abolished Amerindian slavery in their colonies in 1793. For over a century, "[t]he Makushi and other Amerindian peoples were hunted like game from all sides" (Forte & Makushi Research Unit, 1996, p.8), enduring slave raids by the Caribs from the north and by Brazilian slavers from the west (Forte & Makushi Research Unit, 1996). The Makushi's oral history vividly recalls slave raids, tribal wars, and "of the refuge sought in places like Easter Mountain north of Surama" (Forte & Makushi Research Unit, 1996, p.7). Despite

these stresses, oral and written records confirm the Makushi in the 1700s made long-distance journeys by river to the coast to trade or work to obtain Western goods, and to learn about Christianity (Forte & Makushi Research Unit, 1996, p.9). The writing of foreigners who travelled into the Makushi's territory "suggest a people eager for knowledge about the outside world and astute as to their own contributions to the fortunes of these new interlopers" (Forte & Makushi Research Unit, 1996, p.9). Bananas and sugarcane (among other Old World plants) were quickly incorporated into the Makushi's diet.

The Makushi's total population between 1835 and 1932 was estimated to be around 3,000, with half of that total living in British Guiana (and the rest in Brazil). As noted earlier, indigenous populations in South America, including the Makushi, were declining in late 19th and early 20th centuries. In 1918, the influenza pandemic took a heavy toll on the Makushi and other Amerindian populations (Forte & Makushi Research Unit, 1996, p.10). The Report of the West India Royal Commission (also known as The Moyne Report), conducted in 1938-39 exposed the horrendous living conditions in Great Britain's Caribbean colonies, and the section on British Guiana recommended that "special measures should be taken to protect the Amerindian people in the remote hinterland" (Great Britain, 1945). The Makushi population estimates in the 1940s in British Guiana were approximately 1,800 by Iris Myers, who lived with the Makushi from 1933-1944 (Myers, 1993) and 1,686 by the Amerindian Welfare Officer, P. Storer Peberdy in 1946 (Forte & Makushi Research Unit, 1996, p.11). Like other Amerindian peoples, the Makushi were stricken with disease from the "Old World" to which they had little immunity (DeFillips, Maina, and Crepin 2004). The leading causes of death were yellow fever, helminthic infections, malaria, and even the common cold, and there was high mortality from measles outbreaks in 1930 and then 1950 (Forte & Makushi Research Unit, 1996, p.11). Myers (1993) noted that the

Makushi in Brazil and British Guiana were in constant contact, and that due to increasing pressure from settlement by non-Makushi in Brazil, there was migration by Makushi from Brazil to the North Rupununi, where there was plenty of room for them due to the decline in population in the North Rupununi. With the introduction of the Medical Rangers program in 1946 and the control of malaria, the Makushi population began to increase such that within a generation, the Makushi population was estimated to be 4,680 in 1969 (Government of Guyana, 1969). The Makushi population in Guyana has doubled since to the most recent estimate of 9,000 (Forte & Makushi Research Unit, 1996, p.11).

Colonization affected not only the Makushis' population and health (above) but also their culture and lifeways. Throughout Amazonia, de Castro (1996, p.194) notes that "present-day Amerindian ways of life are not evolutionary events but rather the consequence of political choices, historical decisions that privileged certain values at the expense of others." In the 19th century the Makushi in the Rupununi gained increasing knowledge of the outside world, and they were impacted by scientific and ethnographic studies, increased conversion by missionaries, opportunities for trade, and most importantly, the introduction of the cattle ranching and balata industries (Forte & Makushi Research Unit, 1996, p.9).

From 1838 onwards, Anglican and then Roman Catholic missionaries sought to convert the Makushi, and these rival forms of Christianity carved out their spheres of influence.¹⁶ Both Churches established schools in the Rupununi in the post World War II period (Forte & Makushi Research Unit, 1996, p.12). As part of the conversion process from the Makushi's traditional indigenous spiritual beliefs to Christianity, the missionaries condemned many of the Makushi's traditional beliefs and practices. Churches and mission schools in the Region imposed

¹⁶ Uniquely among Amerindians, a Makushi founded "Areruya", an indigenous Christian Church no longer found in the North Rupununi but still active in the Mazaruni and North Pakaraima villages (Forte, 1996).

ethnocentric disapproval of “savage” and “pagan” customs, and its members sought to eliminate or change key aspects of the Makushi’s values and their material and cultural lives (Forte & Makushi Research Unit, 1996).

The introduction of cattle ranching was a major impact on the people of both the North and South Rupununi (MacDonald, 2014). The history of the Rupununi is entwined with that of Roraima State in neighbouring Brazil, especially with respect to this introduction of cattle (Forte and Makushi Research Unit, 1996, p.13). Uncertainty about the border between British Guiana and Brazil before 1904 allowed Brazilian ranches to become established on the eastern shores of the Takutu River by 1887 (Myers, 1993). After the border was settled in 1904, many Brazilians stayed in British Guiana, and the British took control of any ranches left behind (Baldwin 1946, p.37; Myers 1993, p.14; Torrado 2007, p.26). In 1892, Dadanawa Ranch was established in Wapishana territory by the Scottish-Jamaican gold prospector HPC Melville, and cattle ranchers began importing cattle from Brazil (Bridges 1985: p.6; Henfrey 1964, p.170; Melville 1956, p.30; Watkins 2010, p.199). Dadanawa Ranch remains the largest cattle ranch in Guyana (MacDonald, 2014). The cattle were originally brought from Brazil, and the economic incentive for ranching in the Rupununi was also due to demand from Brazil. Nearby Manaus and much of upper Amazonia was experiencing a “rubber boom” (Hecht 2013; Hecht and Cockburn 2010; Grandin 2009). From the early 18th century to the end of the 19th century, the Brazilian Amazon supplied nearly all of the world’s rubber, which was in high demand as the Industrial Revolution in the United States and Europe boomed (Grandin 2009, p.26). Brazilian rubber barons needed food for their workers, hence there was a demand for Rupununi beef (Henfrey 1964, p.171; Melville 1956, p.30; Myers 1993, p.28; Waugh 1934, p.29-30). The collapse of the Brazilian rubber industry in 1910 was a serious blow for the Rupununi’s cattle industry (Slater 2002, p.12).

Therefore, Rupununi ranchers persuaded government officials in Georgetown to develop a cattle trail to transport live cattle from the Rupununi to Georgetown, thus replacing the Brazilian market with the coastal Guyanese market (Colchester 1997, p.52; Farage 2003, p.111; Melville 1956, p.31). This eventually became The Road, which now figures so prominently in the Rupununi landscape, the one red-laterite artery linking the Rupununi to Guyana's coast, which is still unpaved.

The Rupununi's cattle ranching industry collapsed after the aforementioned 1969 Rupununi Uprising. Key ranches and out-stations were burned down, and many of them were converted to state ownership. The highly subsidized air-freight service from Lethem to the Coast established after World War II was cut by the Guyanese government as part of its response the Uprising (Colchester, 1997, p.52). Without the subsidized flights, the cattle trail regained its role for transporting the small amount of cattle still sent to the coast (MacDonald, 2014). People of European descent had owned most of the ranches, but most of the ranch employees were Makushi or Wapishana.

Another important industry was balata. Makushi and Wapishana people were employed to harvest balata, a natural latex obtained from the sap of the bulletwood tree (*Mailkara spp.*) via "balata bleeding": cutting the trunk to cause the sap to "bleed" out (Myers, 1993). This natural latex was one of Guyana's important national exports from the 1860s until the end of World War I (Forte & Makushi Research Unit, 1996, p.13).

Forte and Makushi Research Unit (1996, p.13) point out that medical officials and ethnographers who were concerned with the wellbeing and survival of the Makushi in the 1940s thought the impact of outsiders and colonization on the Makushi was negative (for example, see Giglioli, 1943; Myers, 1993; Peberdy, 1948). Peberby (1948, p.8) for example, described the

Makushi as being more traumatized and less resilient than the southern Wapishana, that they were being hemmed in relentlessly by the cattle ranching on the savannah, and that they were being incorporated into the ranching and balata industries. He wrote that the Makushi had persistent contact with “an originally impoverished rancher-industrialist-settler population struggling for establishment on Macusi country”, and that:

The limited benefits derived by the Macusi, mostly of an impermanent nature, from rancher occupation, have not sufficed to replace tribal customs of self-sufficiency based on tribal laws which constituted the very backbone to racial dignity and independence. These customs have been greatly disrupted by alien infiltration and occupation. The younger generation cannot go back to the customs of their forefathers and they are not yet equipped to absorb overnight the customs of Christian civilisation. (Peberby 1948, p.9)

A key impact of both the cattle and balata industries was the opportunity for Makushis to earn wages, and thus participate in the cash economy and obtain non-local goods. This is a stark contrast to the Makushi's pre-contact lifestyle, when Makushi families were self-sufficient for locally obtained food, clothing, and shelter. Pre-contact, Makushi were not paid for their labour. Any large tasks that required more labour than a family could manage (such as cutting a field to plant cassava) was achieved through *mayu*, when Makushi gather to work collectively (Elias, Rival, & McKey, 2000). Traditionally, people who participated in a *mayu* were not paid. Rather, the group imbibed *parikari* (cassava based beer; alcoholic and nourishing) to bring a festive spirit to the task, and there was reciprocity in that those labouring on their neighbour's farm would expect assistance when they needed a *mayu* on their farm (Elias, Rival, & McKey, 2000).

While colonization had its negative effects, the Makushi excelled in some of the new employment opportunities, and were praised for their skills. For example, Peberdy credited the Makushi with any success achieved in the cattle, timber, and balata industries for providing “a unique and competent labour force” (1948, p.8). The cattle and balata industries “provided sustainable income-generating opportunities in the post World War II period (Forte and Makushi

Research Unit, 1996, p.14). In addition, balata bleeding was a rainy season activity, which allowed Makushi workers to focus on farming and fishing during the dry season. Although the balata industry had waned after World War I, it did not collapse in the Rupununi until the 1970s. Unfortunately for Rupununi residents, the collapse of the balata industry coincided with the near collapse of the cattle industry following reprisals from the government in response to the quashed Rupununi Uprising (Colchester, 1997, p.135; Watkins, Oxford, & Bish, 2010). This left the Makushi with no local sources of cash income, and this led to the seasonal migration to Brazil for work, which had a powerful impact on Makushi society and families (Forte and Makushi Research Unit, 1996, p.14). It also led to intensification of the wildlife trade, and to “over-fishing of the giant river turtle and arapaima by the Makushi in order to gain some cash income” (Forte and Makushi Research Unit, 1996, p.14).

Touted as a solution to generate local jobs and conserve local natural resources (Funnell & Bynoe, 2007), ecotourism operations began in the early 1990s in the North Rupununi. Rock View Lodge (near Annai) was formally established in 1993, and some families in Surama started engaging in ecotourism activities shortly thereafter. Surama Eco-Lodge was then established in 1997 (Funnell & Bynoe, 2007). The Iwokrama Centre for Rainforest Conservation and Development (Iwokrama) was established in 1996.¹⁷ To ensure financial sustainability, Iwokrama initiated several business ventures, including ecotourism (Funnell & Bynoe, 2007). These and other ecotourism initiatives in recent years have provided opportunities for Makushi to work as tour guides (particularly for birding), cooks, cleaners, and drivers (Funnell & Bynoe, 2007), and Iwokrama’s Field Station provides opportunities to work as rangers and research assistants.

¹⁷The late President Desmond Hoyte first offered the international community about 410,000 hectares of pristine rainforests for conservation projects in 1989. When the late President Jagan succeeded Hoyte, he endorsed Hoyte’s decision. Guyana’s Parliament passed the Iwokrama Act with bipartisan support in 1996 (Maud, 2003).

Despite all the changes to the Makushi's way of life, particularly the Christianisation by missionaries and the integration of many Makushi into the economic system, some aspects of Makushi culture have been preserved. The relationship of Makushi to the natural world in their ecosystems is still essential, and is eloquently described as follows:

The Makushi relationship to their lands forms the bedrock of their subsistence way of life and has in turn shaped their social and cultural pattern. In common with other Amerindian peoples, they have treasured their relationship to a nurturing landscape, reinforced by their language from which the placenames have been derived as well as the poetic associations encountered at every turn between flora and fauna, nature and culture. Their rights to their traditional lands were challenged by the Carib, as documented in the village histories, and they waged a guerrilla war until the enemy left them in possession. (Forte & Makushi Research Unit, 1996, p. 287)

Another way the Makushi have maintained their culture is the central role of bitter cassava production. Cassava is the staple and main source of carbohydrates for the Makushi (Elias et al., 2000; Forte & Makushi Research Unit, 1996; Richards-Greaves, 2013). Cassava is used to make farine and cassava bread, staples that do not spoil in the tropical climate. Cassava is also used to make parikari, the alcoholic and nourishing beverage central to Makushi social life and celebrations (Elias et al., 2000; Forte & Makushi Research Unit, 1996; Schacht, 2013). Also, cassava is used to make cassareep, a thick black syrup made from the boiled down liquid extracted during bitter cassava production. Cassareep is used all over Guyana to make pepperpot, Guyana's national dish (Richards-Greaves, 2013, p.84). Before contact with Europeans, a Makushi family produced just enough of these cassava products to feed the family, share with other kin, and for trade with other Amerindians. After contact, Makushi began producing surpluses of these cassava products for sale to obtain funds to purchase Western goods (Schacht, 2013). While this provides Makushi with the opportunity for income, it has led to intensification of cassava farming. This, combined with the "villagization" of Amerindians (disrupting the

previous semi-nomadic life) (Hennessy, 2013) and rapidly increasing population, is putting additional pressure on rainforest ecosystems in the North Rupununi (Chung Tiam Fook, 2011).

There has been a loss of cultural diversity of Amerindian peoples in Guyana since first contact. The Atorai and Taruma in the far south appear to have become extinct due to the slave wars and epidemics (Colchester 1997, p.9-10). Some tribes in the north have lost much of their indigenous languages, and economic changes following European colonization “have homogenized the Amerindian world. Environmentally-honed economic strategies adapted to the regional trading networks have been lost as more lucrative trades with newcomers took over” (Colchester, 1997, p. 10). The Makushi are an Amerindian people who have maintained many of their culture’s unique attributes, including their language, ethnobotanical knowledge and other TEK, songs and dances, and cassava production methods. In turn, their local environment is relatively pristine and productive, and the Makushi are actively involved in community-based conservation, and in cultivating local economic development and employment opportunities that are sustainable (such ecotourism, above). Within this context, it is important to assess local initiatives seeking to promote environmentally-friendly behaviour and positive youth development (PYD), since this will help communities at the local level to conserve their natural resources, while simultaneously nurturing conservation leaders who can advocate on behalf of their communities at the national and international levels. One such program that has these aims is the North Rupununi Wildlife Clubs.

1.6. Context: Background on North Rupununi Wildlife Clubs Program

The North Rupununi Wildlife Clubs (NRWC) program is a club-based approach to EE. NRWC is supported by the Iwokrama International Centre for Rainforest Conservation and Development (Iwokrama), the North Rupununi District Development Board (NRDDB), and

Makushi Amerindian communities. NRDDDB represents communities in the North Rupununi, and is as a non-governmental, not-for-profit, community-based organization that acts “as the umbrella for convening the elected representatives of the North Rupununi communities” (North Rupununi District Development Board (NRDDDB), 2012). Most of the 18 villages and communities that comprise the NRDDDB are legally recognised with titles under the Amerindian Act (Byrne, 2013). As of 2011, 13 of the 18 NRDDDB communities had active Clubs. From 1999 to 2012, approximately 1,500 children and youth aged eight to 20 years old had participated in NRWC (James, n.d.). There is anecdotal evidence that youth have benefitted from Club membership,¹⁸ and evidence of benefit from a survey conducted by Iwokrama on the program (James, n.d.), but no peer-reviewed research to date on the impact of these EE Clubs on members,¹⁹ nor on their communities.

Some larger groups like Roots&Shoots (R&S) and Wildlife Clubs of Kenya (WCK) have their history summarized online and in journals: R&S (Jane Goodall Institute (JGI), 2013; Johnson-Pynn & Johnson, 2005; Johnson-Pynn & Johnson, 2010), and WCK (McDuff & Jacobson, 2000; McDuff & Jacobson, 2001; Wildlife Clubs of Kenya, 2013). Sources like this are not available at this time about NRWC.²⁰ Therefore I learned about the history of NRWC from internal Iwokrama documents I was given, presentations at a Centralized Meeting (13-14 February, 2010), and 2010 Wildlife Festival, as well as personal communications from Samantha James, Iwokrama’s Community Education and Awareness Manager, during my January-April

¹⁸ Positive views about NRWC’s impact were communicated to me by community members and Iwokrama staff from 2009-2011.

¹⁹ There was a paper (Mulder, Schacht, Caro, Schacht, & Caro, 2009) that had Club membership as an item, and claimed no association between Club membership and pro-environmental attitude. This finding is highly problematic, as described further in 2.6.

²⁰ There are a few paragraphs about the Clubs on NRDDDB’s website (but not about Club History, despite the heading “History of the North Rupununi Wildlife Clubs” (North Rupununi District Development Board (NRDDDB), n.d.), and an online article in Guyana Times International describes some history (James, 2012).

2010 reconnaissance. The main secondary source is *Annex 1: Key Events in the History of the North Rupununi Wildlife Clubs* (2009) (hereafter abbreviated to (*Annex 1*, 2009), part of an internal Iwokrama report about club activities prepared for donors that was emailed to me by Ms. James (S. James, personal communication, 1 December 2009). This document chronicles key events from 1998-2009. I was also given an earlier version of the document, *Key Events in the History of the North Rupununi Wildlife Clubs* (2005), which described the Club's history from 1998-2005, and is identical to the 2009 document up until the last few entries on the Clubs from 2004-2005. The history from 2006-2009 derives from the 2009 document and online sources. The following is a summary based on these sources.

In the 1990s, Makushi communities were asserting or reclaiming control over the management of their natural resources, and new opportunities for sustainable economic development through ecotourism emerged. At a statutory NRDDB Meeting in January 1998, North Rupununi community leaders requested that Iwokrama facilitate a workshop to discuss North Rupununi and Iwokrama Forest wildlife management issues, problems, and solutions (*Annex 1*, 2009). This resulted in Wildlife Management Workshop I in April 1998, a meeting of community leaders to discuss wildlife and fisheries management in the area, facilitated by Iwokrama. One recommendation was for educational programs:

Many participants felt that educational programmes using leaflets, posters, and booklets in Makushi and English distributed through schools, youth groups, wildlife clubs, churches, women's groups, workshops, and other media would help to raise awareness about wildlife issues (NRDDB, Forte, Janki, & Watkins, 1999).

Above is the only mention in the report from Workshop I about wildlife clubs. The idea of establishing wildlife clubs was then developed at the Wildlife Management Workshop II in July 1998. Ranger positions were becoming available in the area, so that the clubs were

originally conceived to be “Junior Ranger” and wildlife clubs, and that these clubs could become “an integral part of the wildlife management programme of the North Rupununi” (North Rupununi District Development Board (NRDDB), n.d.). Workshop participants decided the clubs would be for 8-18 year-olds and would help club members “gain first hand experience of natural resource management and prepare children for the future” (*Annex 1*, 2009). The proposed objectives of the clubs should be to: “develop an awareness and understanding of the forest plants, animals, and physical characteristics; help in wildlife inventories in the area; understand natural resource management and conservation” (*Annex 1*, 2009).²¹ Participants proposed that club members would organize activities to attain these goals, such as: “forest walks, camping, learning the scientific and local names for animals and plants, wildlife knowledge competitions between villages, exchange visits to other communities, developing collections of insects, plants, and animals for the schools, and the preparation of wildlife related art work” (*Annex 1*, 2009). They envisioned Iwokrama rangers helping clubs develop by presenting talks and leading forest walks. “Clubs should also be closely associated with the schools so that materials and teachers will be available to club members” (*Annex 1*, 2009).

From November to December 1998, there were community visits to discuss the development of Wildlife and Junior Ranger Clubs. A young volunteer and Iwokrama Rangers visited 12 North Rupununi villages to discuss the development of clubs. The Santa Rosa Conservation Club was used as an example. (Santa Rosa is the largest Amerindian village in Guyana, located on the Moruka River in Barima-Waini (Region 1), and already had an active environmental club in 1998.) Issues of organization, activities, and fundraising were discussed at meetings. Clubs were subsequently formed in 11 of the villages from December 1998 to

²¹ This wording for Club objectives is verbatim what still appeared on NRDDB’s website as of 2014 (North Rupununi District Development Board (NRDDB), n.d.).

September 1999. From 1998 to 1999, representatives from the new clubs and from schools visited Iwokrama's Field Station to discuss conservation and development issues.

In June 1999, there were two large infusions of funds to the Clubs. Chase Wildlife Foundation donated \$3,000USD to purchase Nikon Monarch ATB binoculars for each of the clubs. And Columbus Zoo Conservation Fund donated \$3,600USD to purchase copies of the *Birds of Venezuela* and *Mammals of the Neotropics* for the clubs. Hence each Club was equipped with binoculars and bird and mammal identification guides.

In 2000, Iwokrama research assistants and rangers visited all communities with Clubs to train Club members to use GPSs, begin wildlife observational activities, and write funding proposals. In May 2000, 12 representatives from the Clubs attended the Santa Rosa Conservation Club's Festival in Moruka. Also that May, Surama's Club held a video-conference with two schools in New York. This was part a Philadelphia Zoo – American Zoo and Aquarium Association pilot project to raise awareness about Giant Otters. The Rain Forest Alliance Network (RAN) Catalyst Grant provided \$2,083USD to support the participation of 14 club representatives to be trained in amphibian, mammal, and bird ecological survey techniques from July to September 2000.

NRWC's first Wildlife Conservation Festival was in April 2001. The three-day festival was held at Bina Hill (Annai, North Rupununi). Delegates came from the 12 North Rupununi Wildlife Clubs, the Santa Rosa Conservation Club, and the Kanukuruta Youth Conservation Club from Nappi. Hence, 245 children from the Rupununi and beyond came together "to celebrate Guyana's wildlife" (*Annex 1*, 2009). That year, the North Rupununi Clubs were registered as members of the Guyana Environmental Protection Agency (EPA) network of environmental clubs.

Then in November 2001, the Citizen Science Monitoring project, supported by the Audubon Society, was initiated: “The goal of this project is to produce an integrated cost-effective environmental monitoring programme using wildlife club members and community environmental workers²² as citizen scientists to monitor key environmental and wildlife features in the North Rupununi (*Annex 1*, 2009). It was intended that the program’s aspects and processes could be transferred to other rural areas in South America. In December, the development of the Clubs in the North Rupununi was presented at the International Wildlife Workshop in Georgetown, Guyana. Also in 2001, the Bina Hill Institute (BHI) was established on the same compound (Bina Hill) as NRDDDB. This is the compound where the Wildlife Festivals occur.

In April 2002, Wildlife Conservation Festival II was held, and over 200 people attended. One more community established a Club, thus delegates from the 13 North Rupununi Clubs were joined by delegates from clubs from outside the region, such as Santa Mission, Wakapoa, and Essequibo Coast. The Festival’s theme was “Healthy Youths towards an Healthy Environment.” Shortly after Festival in April, a five-day Cycle of Inquiry Training Workshop was held on developing protocols for monitoring that were appropriate in the North Rupununi. The goal was for the “Cycle of Inquiry” training to be a research and management tool for community members. In August, a protocol for amphibian monitoring to provide data for the Declining Amphibian Population Task Force was developed. All the Clubs were visited from October to November to implement bird monitoring protocols. Clubs began to collect data on birds.

Wildlife Conservation Festival III was held in April 2003, and 285 people attended. There were 14 Clubs in 2003,²³ all of which sent delegates. Other invitees were from Karanambu

²² Note the community environmental worker program was only ran from 1999-2001. See **Appendix A**.

²³ The Clubs names in 2003: Wowetta Junior Wildlife Club, Annai Youth Conservation Wildlife Club, Surama Junior Wildlife Club, Rewa Junior Wildlife and Conservation Club, Kwatamang Conservation Wildlife Club, Yakarinta Giant Otter Club, Massara Junior Wildlife Club, Toka Junior Conservation Club, Fairview Wildlife

Trust and Conservation International (CI). The Festival's theme was "Today we conserve to enjoy tomorrow." That September, the protocols for rainfall monitoring and for conducting floral transects were implemented with the wildlife clubs. The goal was to generate data on daily rainfall and on the timing of the fruiting and flowering of plants (phenology). In October, five Club members (from the Surama, Fairview, Aranaputa, and Kwaimatta Clubs) successfully graduated as Certified Tour Guides, which meant they were legally qualified to be guides for the Iwokrama Reserve.

The 2004 Wildlife Conservation Festival IV was held in August (instead of April as were the previous Festivals), with the theme "Our Environment, Our Home, Our Business." Over 212 participants from 19 communities attended the festival. Most delegates were from one of the 14 North Rupununi Clubs. The North Rupununi Junior Wildlife Development Council²⁴ (NRJWDC, the overarching body that coordinated the individual Clubs) also invited delegates from Bartica, Santa Rosa, Nappi, and St. Ignatius. The travel of these invitees was funded by Intraserb Bus Service²⁵ and CI. Festival was also attended by the Minister of Tourism, Industry and Commerce, Miss Guyana 2004, and the Director of Education from the Jacksonville Zoo (Florida). Activities of the 2004 Festival included: "club reporting, sports, workshop on social issues, and competitions in traditional skills such as basket weaving, cotton spinning and archery. Skits and cultural presentations were made by the youths as well as members of the Makushi Research Unit" (*Annex 1*, 2009).

Observation Club, Aranaputa Junior Wildlife Club, Apoteri Arapaima Junior Wildlife Club, Rupertee Junior Wildlife Club, Crash Water Junior Wildlife Club and Kwaimatta Junior Wildlife Club.

²⁴ The date NRJWDC was formed was not mentioned in the documents I was given, but must have been to 2004 since the 2005 *Key events in the history of the North Rupununi Wildlife Clubs* mentions NRJWDC in 2004.

²⁵ Known locally as "The Big Bus," the daily Intraserb Bus was an important bus service on the laterite Rupununi Road, providing safe affordable travel into and out of the Rupununi from 2003-2012.

Throughout 2004, Clubs continued citizen science-based monitoring of birds, rainfall, and phenology. Graphs of their 2004 data were presented to the Clubs at the December Centralized Meeting²⁶.

Between May 2004 and January 2005, 13 North Rupununi primary schools visited the Iwokrama Forest and the Canopy Walkway. These visits were funded by a CI grant. The rationale was that “Visits promote a greater understanding of Iwokrama, and encourage further environmental and wildlife club activities” (*Annex 1*, 2009).

In February 2005 the executive members of the NRJWDC and two Iwokrama Outreach Rangers participated in a one-day workshop on public speaking to “boost confidence and ability to communicate effectively” (*Annex 1*, 2009). The Outreach Rangers also participated in a three-day course on Environmental Education at the Iwokrama Field Station as part of the new Ranger Training curriculum. In November, there was a Cycle of Inquiry follow-up workshop. And two more Clubs were founded in 2005 after youth from these villages attended the 2004 Wildlife Festival.²⁷ There was no Wildlife Festival in 2005; however, the 5th Festival was held the next year.

In 2006, a grant from WWF Guianas for “Education and Monitoring in the Iwokrama Forest and North Rupununi” provided funding for ongoing support of the conservation and monitoring activities for the Clubs, and of “building awareness and capacity of youths in sustainable use and management of the forest” (*Annex 1*, 2009). The WWF grant also supported visits from Iwokrama’s Outreach Team to Clubs and primary schools. The Outreach Team gave

²⁶ Centralized Meetings bring delegates from all Clubs for training and to organize Festival; see 4.3.

²⁷ One of the Clubs formed was in Yupukari, one of my research sites.

presentations in schools and worked with Clubs on bird identification skills. Pentax Binoculars were purchased for each of the then 15 Clubs to assist with bird monitoring.

The grant also supported two Centralized Meetings and the 5th annual Wildlife Festival. The 2006 Festival theme was: “Keep an Eye on Our Environment and Care for Nature,” selected by Club members during the February Centralized Meeting. The theme makes reference to the Club’s four years of Citizen Science monitoring. Over 200 youths from the communities of the North Rupununi as well as from St. Ignatius, Nappi, Katoka, and the Waini attended. Members of the Youth Leadership Programme at BHI, many of whom were former Club members, helped organize and facilitate the Festival (*Annex 1*, 2009).

In 2007, Guyana’s HIV/AIDS Prevention and Control Project (GAPCP), a World Bank and Government of Guyana (GoG) initiative (World Bank, 2004), provided funding through the Healthy Lifestyles Project. This funded community outreach by Iwokrama’s Outreach Team, Centralized Meetings, a Calendar, and the 2007 Wildlife Festival. CI provided \$1000USD for Wildlife Festival T-shirts and transportation. EPA provided Festival prizes and also helped with transportation.

In 2008, GAPCP’s Healthy Lifestyles Project once again supported Community Outreach by Iwokrama. The goal of the project was to educate North Rupununi youth about healthy lifestyle choices with respect to HIV/AIDS Prevention, STIs, Domestic Abuse, Alcohol Abuse, and human rights. Iwokrama’s Outreach team visited primary schools and the 15 Clubs. The grant funded the printing of 2000 Healthy Lifestyles notebooks that were distributed to schools and Clubs.

The Healthy Lifestyles Project also supported the three-day 7th annual Wildlife Festival, held at BHI in March. The theme was “Environment is Life. Let’s Live It!” Over 201 Club

members between the ages of 8 and 18 attended “with spectacular costumes and beautifully painted banners” and *Annex 1* attributes the success of the event to “a true cooperative effort and synthesis of local and national efforts of those interested in environmental health and youth development” (*Annex 1*, 2009). The following organizations supported the 2008 Festival: Annai Secondary School, Annai Village council, BHI, Guyana Red Cross Society, Guyana’s Ministry of Education, Iwokrama Butterfly team, NRDDDB, and MRU. WWF Guianas funded the production of 350 Festival t-shirts, and CI supported delegate’s transportation to and from Festival.

It appears 2008 was a busy year, with multiple sources of funding and several projects. The entries for 2008 and 2009 in *Annex 1* are extensive and there is some lack of clarity and duplication, hence the following are highlights. A Jacksonville Zoo grant supported continued Citizen Science Monitoring. One Iwokrama Ranger and one Club member were hired to monitor the road near Canopy Walkway by bicycle. The grant also supported the Outreach Team to continue supporting the monitoring of birds, rainfall, and butterflies by the 16 Clubs.

Two grants administered by the Chicago Zoological Society (CVS) were obtained. First, the Global Conservation Leadership Program for Youth, Conservation Endowment provided funding to hire two former wildlife club members to be Iwokrama Community Outreach Officers and Research Assistants. One bicycle was also purchased for an Iwokrama Ranger (also a former Club member) so that he could accompany the two Outreach Officers. This three-person Outreach Team conducted their community outreach to the 16 North Rupununi communities by bicycle. They also distributed HIV/AIDS Healthy Lifestyles notebooks to Clubs and schools. In addition this grant supported the purchase of a Sony laptop, digital camera, and the production of amphibian posters.

Second, through CZS's Chicago Board of Trade Endangered Species Fund, two members of the CZS visited Guyana in October 2008 "to assist in developing a strategy for capacity building with wildlife club members and mentoring the leadership ladder of conservation with clubs." (*Annex I*, 2009). The visitors participated in a Centralized Meeting and conducted training on the Cycle of Inquiry. The goal was to support local indigenous youth to use research methods to "develop conservation guidelines and action plans to manage natural resources with direct impact on a number of endangered species in the area" (*Annex I*, 2009).

In early 2009, the Chicago Zoological Society (CZS) launched the Global Conservation Leadership Program for Youth. Chicago-area teens and youth from the Clubs began piloting a conservation leadership exchange program (Chicago Zoological Society, n.d.). There were staff exchanges over this year-long partnership. Two Iwokrama staff members made presentations about NRWC and Iwokrama's training program at the Global Youth Conservation Conference held at Brookfield Zoo (Chicago) in August (Chicago Zoological Society, n.d.). Then in October 2009, two educators from CZS travelled to the North Rupununi and visited schools and Clubs, and made presentations at the October Centralized Meeting.

Meanwhile, funding was obtained to support monitoring of Fresh Water River Turtles and Giant Otters. WWF Guianas funded a project to help conserve *Podocnemis expansa* and *Podocnemis unifilis* within the North Rupununi Wetlands and "to strengthen the community traditional and socio-cultural management of *P.expansa* and *P.unifilis* in the North Rupununi to sustain the use of the species as food" (*Annex I*, 2009). From February to March 2009, community researchers and Club members monitored turtle nesting beaches and their ecology in the Rewa River basin.

The Chicago Board of Trade Endangered Species Fund financed a project to build local capacity to ensure continued, community-based monitoring of the endangered Giant River Otter in the Rupununi Wetlands and Iwokrama Forest.²⁸

In 2009, Yupukari's Club won the ECOCLUB.com Ecotourism Award for their "Wild to Web" project (Karwacki, 2009). In response to this award, the Guyana Tourism Authority awarded Yupukari's Club, "Best Nature Club."

The Forestry Research Network (FORENET) granted funding to evaluate Iwokrama's capacity building programs with communities in 2009, including evaluating NRWC (as well as the Makushi Research Unit (MRU) and the discontinued community environmental worker (CEW) program). The evaluation was conducted in 2011. To date, the results are not available publicly except in one online pdf document created from a Power Point Presentation which gave highlights of the evaluation (James, n.d.).

My reconnaissance was in 2010, and my observations from that time are described in **Appendix E**. Data collection was in 2011, and the data analysis is presented in Chapters 4 and discussed in Chapter 5.

1.7. Structure of the Dissertation

A few salient points about the structure of this Dissertation follow. The structure is fairly traditional, with this **Chapter 1** as an Introduction, **Chapter 2** is the Literature Review, and **Chapter 3** describes the methods used to explore the research questions. The Dissertation could be read straight through, however, readers interested in more details about Guyana's history and Amerindian interest in Guyanese politics ought to read **Appendix D** once they read 1.4.2. And readers interested in the North Rupununi context may wish to read my narrative account of my

²⁸ According to *Annex 1* (2009), Giant River Otters were surveyed in the Rupununi wetlands and Iwokrama Forest in 2002, and not since. The grant was important to support continuous monitoring.

observations from 2010 and 2011, which are in **Appendix E**, before reading the **Chapter 4 – Analysis and Findings**. This may give the reader a richer foundation for interpreting the data analysis and the **Chapter 5 – Discussion**. Chapter 6 offers implications for practices based on the findings.

The reasons why **Appendix E** is in the appendices rather than have these observations in the data analysis chapter is because the majority of these observations were made in a 2010 reconnaissance, before my Thesis Proposal was accepted and before the research questions were fully determined. Since these observations are from an earlier period than the data collection in 2011, and significant changes had taken place in some of the Clubs I studied, it was not appropriate to mix this 2010 data with the 2011 data.

Summary – Chapter 1

The promotion of Environmental Education (EE) and the application of Indigenous Knowledge (IK) are two promising approaches to deal with the current environmental and social crises. The environmental crisis is global, but there are still pockets of relatively healthy, productive, and biodiverse ecosystems. These healthy ecosystems tend to be inhabited and cared for by indigenous people, and are intrinsically valuable to them. They are also valuable to the rest of the world as places that act as carbon sinks and safeguard biodiversity. Therefore it is in everyone's interest to protect these areas and the culture of the indigenous people who live there. The broad purpose of this research is to contribute to the ongoing work of Makushi communities in the North Rupununi of Guyana to conserve their beautiful place and vibrant culture. In this Chapter, I situated myself as a non-indigenous researcher, a Canadian woman of Scottish and English ancestry. I then provide context for the research sites by means of a brief history of Guyana. Interested readers should read **Appendix D** for more details about this history. Points to

note are the waves of migrations that took place after European colonization that lead to modern-day Guyana being “The Land of Six Peoples;” the deliberate tactics of colonial regimes to foment conflict between Amerindian, African, and Indian people; the history of Amerindian culture, health, and autonomy being undermined by the colonial British government; and the corruption and lack of accountability of Guyana’s post-independence governments. Amerindian interests in Guyanese politics were then described, concluding with the possibility that the election of a broad coalition of Guyanese parties in May 2015 could open a new positive chapter for Amerindian rights and interests. The Makushi were then situated by providing a brief history of their people (1.5.). The Makushi are one of the nine remaining indigenous peoples, and inhabit the North Rupununi of Guyana and the neighbouring Roraima state of Brazil.

The background about the subject of this research, their local North Rupununi Wildlife Club (NRWC) program, was then given. Following Wildlife Management Consultations in 1998, Makushi communities requested that Iwokrama provide environmental education for their youth. NRWC was founded in 1999 following further community consultation. From 1999 to 2012, approximately 1,500 children and youth aged eight to 20 years old had participated in NRWC (James, n.d.). As of 2011, there were 13 active Clubs. There is anecdotal evidence that youth have benefitted from Club membership,²⁹ and evidence of benefit from a survey conducted by Iwokrama on the program (James, n.d.), but there is no peer-reviewed research to date on the impact of these EE Clubs on members, nor on their communities.

²⁹ Positive views about NRWC’s impact were communicated to me by community members and Iwokrama staff from 2009-2011.

This Dissertation has a traditional structure and can be read straight through, but readers interested in the North Rupununi context may wish to read **Appendix E** after reading Chapter 3 and before they read Chapter 4.

Chapter 2 - Literature Review

This literature review explores the relevant literature on Environmental Education (EE), the Club-based approach to EE, and Positive Youth Development (PYD). A brief history of EE is described, followed by the use of club-based non-formal education approaches to EE. Next, literature is discussed about increasing pro-environmental behaviour, and then how to support Positive Youth Development (PYD). I then discuss the convergence between encouraging pro-environmental behaviour and supporting PYD, which can occur in club-based programs. Finally, gaps in the literature, in particular, the lack of peer-reviewed research on club-based EE programs that also encourage PYD in indigenous communities is discussed.

2.1. History of Environmental Education

Appealing to the atemporal and, consequently, aberrantly educated imagination only multiplies industrialized humanity's largest ever ecological footprint. Making sense with nature returns mind to the fabulous where it is at its happiest and is safe from harming its surroundings and itself (Sheridan & Longboat, 2006).

In 1998, Joy Palmer wrote that Environmental Education (EE) is “a relatively young, dynamic and immensely complex field of study and interpretation” (p. ix), but that the field is not as young as it is commonly thought to be (p. 4). Knowing the history of EE helps researchers and practitioners avoid “re-inventing the wheel,” and helps us learn from previous successes and errors (Palmer, 1998, p.3). Similarly, Chapman writes “without knowledge of this history [of EE] we are simply ignorant and risk trivialising important ideas, or wasting energy reinventing them” (Chapman, 2011). As we shall see, however, the history Palmer and many others present³⁰ is not a complete history of EE, but a history of Western³¹ EE. The omission of the history of

³⁰ In the Wikipedia entry, the first, and, often, only source of information for many, the history of EE describes the main international charters and declarations since Stockholm, as if EE started in the 1970s.

³¹ I will use the term “Western” in this dissertation, yet draw on Wilson (2008)’s definition for “Dominant”: an adjective to describe aspects of European-descended and Eurocentric, Christian, heterosexist, male-dominated former colonial culture. See **Appendix A** for more details.

Indigenous and other non-Western forms of EE will be taken up following a brief description of selected key points in the typical historical narrative on EE.

2.1.1. Early Western EE period, 1948-1969: Silent Spring wake-up call

The term “Environmental Education” was first used in English³² at the International Union for the Conservation of Nature and Natural Resources (IUCN, often called The World Conservation Union) Conference in 1948 (IUCN was formally founded in 1949). According to Palmer (1998, p.4), the words 'environment' and 'education' were not commonly used together until the mid-1960s. However, she writes the ideas that underpin contemporary EE can be traced back to some of the “great” thinkers, writers, and educators of the 18th and 19th century. Palmer's list of notables includes Goethe, Rousseau, Humbolt, Haeckel, Froebel, Dewey, and Montessori. Notably absent are any Indigenous people (or sources of collective philosophy and knowledge from Indigenous cultures). Rachel Carson's *Silent Spring*, published in 1962, was a rallying point for environmentalists and helped to galvanize public interest in the health of the environment, and in the need to protect and preserve the environment. While Carson's book was science-based, her work helped popularized the understanding that human health was interconnected with the environment.

2.1.2. The 1970s: defining EE and laying foundations

The 1970s saw a surge in the development of and interest in EE, fuelled in part by the 1973 oil embargo and 1979 energy crisis. These events caused North Americans to try harder to conserve energy, to search for alternatives to gasoline, and contributed to the heightened profile of EE. This was marked by several key international conferences, declarations, and work to define EE in the 1970s. The first Earth Day was celebrated in 1970, spurred in response to

³² I am specifying the language used in the mainstream sources I have on the history of EE to further emphasize the point that these historical accounts neglect the history of EE in non-Western cultures.

concerns about pollution and overall environmental quality. A series of international conferences and workshops on EE were held, and the Environmental Education Act passed in the USA that year was a welcome stimulus for promoting environmental awareness there (Palmer, 1998, p.7). Also in 1970, a “classic” definition of EE was formulated, adopted, and later promoted worldwide by IUCN:

Environmental Education is the process of recognizing values and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the inter-relatedness among man, his culture, and his biophysical surroundings. Environmental education also entails practice in decision-making and self-formulation of a code of behaviour about issues concerning environmental quality (IUCN, 1970, in Palmer, 1998, p.7).

The profile of EE continued to be raised by support of key international institutions, leading to increased agreement on the aims, objectives, and approaches to Western EE. In 1972, the United Nations Conference on Human Environment was held in Stockholm. The Stockholm Declaration argued it was important to “inspire and guide the peoples of the world in the preservation and enhancement of the human environment.” Principle 19 of the Declaration called for “education in environmental matters for the younger generation as well as adults ...giving due consideration for the underprivileged is essential” (Palmer, 1998, p.7).

The 1975 Belgrade Charter was the outcome of the International Workshop on Environmental Education held in Belgrade, Yugoslavia, and built upon the Stockholm Declaration. It added goals, objectives, and guiding principles of environmental education programs. This declaration was further developed and clarified with the 1977 Tbilisi Declaration, which “noted the unanimous accord in the important role of environmental education in the preservation and improvement of the world's environment, as well as in the sound and balanced development of the world's communities.” It states the goals of EE are:

(a) to foster clear awareness of, and concern about, economic, social, political and ecological interdependence in urban and rural areas;

(b) to provide every person with opportunities to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment;

(c) to create new patterns of behaviour of individuals, groups and society as a whole towards the environment (UNESCO, 1977, p.26)

Here the target population for EE is clear: everyone. These seminal documents on EE encourage using both formal and non-formal education to deliver EE. These key documents represent significant advances in promoting the importance of EE and in promoting the idea of interconnectedness between health, well-being and the environment. Given the terrible harm to the environment being wrought by human attitudes and activities at the time, it is understandable that mainstream Westerners would assume that the status quo human behaviour needed to change. It can be argued that the error in thinking is the conclusion that the need for typical Western behaviour to change must mean that *new* behaviours have to be adopted. Sustainable, environmentally responsible behaviour is only new to mainstream Westerners; it is old news to many Indigenous societies (Cajete, 2000; Longboat, Kulineks, & Young 2009).

At least two influential books aimed at the general public, however, challenged the science-based ideas underlying the mainstream work on developing EE. Schumacher's 1973 *Small is Beautiful* was a blistering critique of contemporary economics and its effects on the environment and on human well-being and equity, foreshadowing some of today's activist movements, such as the "Autistic Economics" movement in France. The gist of the critique points to the wisdom of non-Western cultures, notably Buddhist culture. However, Schumacher also continued to write about the need to adopt "new" behaviour:

Ever bigger machines, entailing ever bigger concentrations of economic power and exerting ever greater violence against the environment, do not represent progress: they are a denial of wisdom. Wisdom demands a new orientation of science and technology towards the organic, the gentle, the non-violent, the elegant and beautiful.

Otherwise, the above passage is congruent with Indigenous beliefs. Haudenosaunee thinker John Mohawk's (1978) *Basic Call to Consciousness* is one of the first publications to identify the need to involve Indigenous Knowledge (IK) in considering future generations in day-to-day environmental decision-making (Longboat, Kulnieks, & Young, 2009).

2.1.3. The 1980s consolidation on EE and the birth of 'Education for Sustainability'

A key document launched in 1980 was the *World Conservation Strategy* (Palmer, 1998, p.15). The essence of the *World Conservation Strategy* was reinforced and expanded in the 1987 *Brundtland Report*, also known as *Our Common Future* and officially called the *Report of the World Commission on Environment and Development* (Brundtland, 1987). The report introduced the idea of sustainable development in which environmental protection and economic growth are viewed as interdependent concepts (Palmer, 1998, p.62). Critics (e.g., Selby, 2006) claim the terms were conflated, to the detriment of achieving environmental goals. The definition of sustainable development in the *Brundtland Report* sounds very positive: “development that meets the needs of the present without compromising the ability of future generations to meet their needs” (1987, p. 43), but the ascension of education for sustainability (ESD) has been considered a highly problematic trend by many, as shall be discussed later. Work on EE/ESD progressed throughout the 1980s, and public support was re-invigorated with each new environmental

disaster (such as the 1984 Bhopal disaster in India³³, Chernobyl, the world's worst nuclear power accident, in 1986, and the 1989 Exxon Valdez oil spill).

2.1.4. 1990s: Rio, and the shift from EE to ESD

Another high point in the history of Western EE was the flurry of activity in 1992. The United Nations held the Conference on Environment and Development in Rio de Janeiro, Brazil. Chapter 36 of Agenda 21 focuses on “reorienting education towards sustainable development; increasing public awareness; and promoting training.” In principle 4 of the Rio Declaration, the environment became construed as a subset of development (Selby, 2006). However, as Selby (2006) notes, this was not the case at the parallel Rio International NGO Forum where representatives of NGOs and educators from around the world produced 16 guiding principles for a holistic, socially critical and transformative definition of EE, which included the following principles:

Principle 1: Environmental education is not neutral but is value-based. It is an act of social transformation.

Principle 9: **Environmental education must recover, reflect and utilize indigenous history and local cultures.**

Principle 16: Education must develop an ethical awareness of all forms of life with which humans share this planet, respect all life cycles and impose limits on humans’ exploitation of other forms of life. (UNCED, 1992b, emphasis added).

2.1.5. 2000 until now

In 2002, the United Nations General Assembly adopted resolution 57/254 to enact a United Nations “Decade of Education for Sustainable Development (DESD)” to span from 2005

³³ This methyl isocyanate leak killed 8-10,000 within the first 72 hours, and thousands more died later of the toxic effects.

to 2014, further demonstrating how ESD was eclipsing EE. According to UNESCO, the founding value of ESD is respect: “respect for others, respect in the present and for future generations, respect for the planet and what it provides to us (resources, fauna and flora)” (UNESCO, n.d.). Interestingly, the UNESCO document calls upon humanity to “adopt new behaviours and practices to secure our future”, echoing the language of the Belgrade Charter and Tbilisi Declaration on EE and the idea that only new knowledge can save us from ourselves. This ignores the 1992 call from the Rio NGO forum to “recover, reflect and utilize indigenous history and local cultures” (UNCED, 1992b), to consider the value of the “old” knowledge of Indigenous peoples, passed down through generations of living sustainably on their land. On the other hand, the document identifies mainstream formal education as part of the problem. Instead, the DESD promotes alternative and non-formal types of learning – environmental clubs, for example.

In 2007, the 4th International Conference on Environment Education (AKA Tbilisi + 30) was held at the Centre for Environment Education (CEE) in Ahmedabad, India. Charles Hopkins, UNESCO Chair of Reorienting Teacher Education based at York University, remarked that there was a greater sense of urgency at this third conference since Tbilisi because of recent dire warnings from the Intergovernmental Panel on Climate Change (IPCC, <http://www.ipcc.ch/>) scientists about the effects of climate change, and that concern had spread from the environmental community to public discourse around the world. This sense of a new urgency was echoed by other speakers and attendees (Paden, 2008) and in the conference documents (Recommendations from the 4th International Conference on Environmental Education, Ahmedabad, India, 2008). Conference participants produced the Ahmedabad Declaration (The Ahmedabad Declaration 2007: A Call to Action, 2008).

The 2009 Bonn Declaration on ESD appears to respond to some of the above concerns. It states that ESD should involve “formal, non-formal and informal education contexts, and all sectors of society in a lifelong learning process” (UNESCO, 2009) (UNESCO, 2009) (UNESCO, 2009). And, unlike previous declarations that focused only on using new technology to solve our global ecological crisis, and more like the 1992 Rio International NGO Forum’s guiding principle 9 for EE, the Bonn Declaration states that ESD is “Linked to different needs and the concrete living conditions of people, ESD provides the skills to find solutions and draws on practices and knowledge embedded in local cultures as well as in new ideas and technologies” (UNESCO, 2009).

2.1.6. Current trends, challenges and shortcomings within the field of EE

The previous section described a brief history of EE, including the factors that influenced the prominence, delivery, and goals of EE over time. My critique of the typical presentation of the history of EE is that it is not, in fact, a full history of EE, but tends to be the history of *Western* EE. A complete history would include Indigenous and other non-Western forms of EE, which would reveal a far longer, richer, and complex history (Longboat, Kulnieks, & Young, 2009). Knowing a more complete history of EE would help EE researchers and educators to understand that we work within a broader context and that IK, Traditional Ecological Knowledge (TEK), and indigenous perspectives are important.

What are the current trends within the realm of EE? Given the subject of this PhD research, which is a Western-style EE program via non-formal Clubs in indigenous (Makushi) communities in Guyana, I will focus on two areas: problems and opportunities of the trend of using non-formal education to deliver EE; and the trend towards acknowledging and incorporating Indigenous Knowledge (IK) and Indigenous Education methods into EE. To help

situate my stance on these issues, my own personal definition of EE is education that inspires humans to view themselves as an integral part of their local and the global ecosystem, that promotes reverence and respect for all life, encourages environmentally responsible behaviour, and equips learners with the skills and knowledge to act at the individual, community, national, and international level. This definition draws on the above history of EE, and from my personal experience. I also believe, due to my experience with the humanitarian and environmental education program R&S, that a person needs both a warm heart and a sharp mind in order to actually act in an environmentally responsible way.

NFE to deliver EE. An important trend is the widespread use of non-formal education (NFE)³⁴ to deliver EE. Although NFE versus Formal Education may be a false dichotomy (Singh, 2013; Steenekamp & Singh, 2012), it is a useful distinction here because a significant part of EE takes place outside of formal schooling, including the NRWC program, the subject of this study. Before considering the use of NFE for delivering EE, it is important to note the critique of mainstream schooling (formal education) in general. Gatto (2003; 2009), Gatto and Moore (2005), Hern (2003; 1996; 2008), and Illich (1983) argue against formal education (often referred to as “compulsory mainstream schooling”), period. Some argue the current formal education system in many Nations does not support the goals of EE and can contribute to environmentally destructive attitudes and behaviours (e.g., Stevenson, 2007), an idea also taken up in the above DESD document, and in the 2007 Ahmedabad Declaration.

One argument for delivering EE through NFE is because this is more consistent with the philosophy of EE, therefore the pedagogy is coherent with its content. The related argument is that it is therefore more effective than formal schooling for achieving the goals of EE (Gough,

³⁴ In this dissertation, NFE is defined as instruction that is not obligatory and structured and the learning takes place outside the context of a formal school. The key components of NFE: it is not compulsory, it does not lead to formal certification, and it may be state-supported, but does not have to be. See **Appendix A**.

Walker, & Scott, 2001b). Stevenson (2007) argues that the socially critical and transformative ideals expressed in the policy documents of the 1970s and 1980s conflicted with the role of schools for the social reproduction of status quo treatment of the environment, and with the dominant curriculum and pedagogical practices of transmitting discrete disciplinary-derived factual information and unproblematic “truths.” Therefore, he did not recommend that formal education as the right mode of delivery for EE, which he argued should be transformative, critical, and emancipatory. Whether NFE is indeed more effective for delivering EE depends on the specific educational approach being used, since different kinds of educational approaches are used in NFE. Commonly used educational approaches to deliver EE through NFE are service learning, experiential learning, and outdoor education. EE is also delivered in informal settings like nature centres, museums, parks, and zoos. This is typically considered to be free-choice learning, and will not be touched upon here.

The first problem with using NFE to deliver EE is that some kinds of NFE have been claimed to be ineffective. Kirschner, Sweller, and Clark (2006) claim that the forms of alternative education classified as “minimal instruction” do not work well for learners having little previous experience with the material. He asserts that the advantages of direct instruction only begin to recede when learners have sufficiently high prior knowledge to provide “internal” guidance. Their provocative title identifies the specific pedagogical approaches they critique: *Why Minimal Guidance During Instruction Does Not Work: An Analysis of the Failure of Constructivist, Discovery, Problem-Based, Experiential, and Inquiry-Based Teaching*. The point is not to engage in this debate here, but to emphasize the need to continually question the educational methods used in EE (and ESD).

The second main problem is that *if* NFE is indeed a good delivery method, it is unlikely to reach as many children as formal education can. And since NFE is by definition voluntary, there is the problem of self-selection: those already interested in the environment will participate in these programs, whereas those who are not interested – likely the ones whose behaviours may most need to change – are less likely to participate.³⁵ This is why it should not be relied upon as the sole educational approach, but as advocated in many international declarations (e.g., Ahmedabad, 2007), should be part of an integrated EE delivery system to reach diverse groups of learners throughout their lives. NFE can reach people who are outside the formal education system, such as adults (who can then engage in lifelong learning) (Steenekamp & Singh, 2012), and disadvantaged or marginalized youth who may have been denied access to formal education.

Indigenizing EE. Another trend with profound possibilities but also potential problems is bringing the spiral of the evolution of Western EE back to Indigenous EE. As noted above, the typical historical account of EE fails to give a full history and context because it ignores Indigenous EE. Just because it was not called “environmental education” does not mean it did not exist. In many Indigenous societies, what Westerners would call EE was integral, inseparable, and crucial to children's education (Cajete, 1994a; 1994b; 2005). If one only considers the history of EE as starting in 1948, then interest and support for EE has increased relative to 1948. However, when we look at the grander sweep of time, I argue that the forces of globalization have *reduced* the amount of EE because Indigenous peoples, their languages, and their Indigenous Knowledge (IK) have been decimated, and so, too, their holistic forms of EE.

Along with growing appreciation for the benefits that incorporating IK into Western EE could bring, it is also interesting that there are many aspects of the evolution of the pedagogy and curriculum of Western EE that show convergence with Indigenous worldviews in general, and

³⁵ On the bright side, self-selected learners would also tend to be more motivated to learn!

education about the environment in particular. For example, Tbilisi, the Belgrade Charter, the Brundtland Report, and the Ahmedabad Declaration all called for EE to be integrated across the curriculum, and not be treated as a separate subject. This is consistent with the tendency for EE to be interwoven throughout Indigenous Education, rather than be treated as a separate subject. In the 1970s, the importance of immersing children in their local environments, and bringing them on field trips to nature reserves, was recognized. This convergence is despite most EE being Western science-based (Longboat, Kulnieks, & Young, 2009).

Western EE could benefit greatly from Indigenous EE. However, there is a risk of shallow appropriation of Indigenous ideas and methods, and then incorporating these inauthentic representations into EE. For example, the Greening Education Conference used the saying “We do not inherit the earth from our ancestors, we borrow it from our children” in its online brochure to promote the conference, and cites it as a 'Native American Proverb.'³⁶ There are *hundreds* of Indigenous tribes in North America, yet the specific source is not identified. The actual source is environmentalist David Brower, founder of Friends of the Earth (who claims it was upon the operation of a third martini that he said it to a reporter in a North Carolina bar).³⁷ It is good to attribute value to Indigenous Knowledge, and the organizers of this conference surely meant well, and perhaps thought displaying the feel-good quote so prominently would not only market their conference but would highlight the importance of Native Americans as sources of wisdom about EE. The result, however, falls along the lines of the all too common representations of Indigenous people, inaccurate reports *about* them, and not having Indigenous peoples speak for

³⁶ See <http://www.etechgermany.com/GreeningEducationEvent.pdf>. A little research determined that it is difficult to correctly attribute this quote because like the beautiful “Chief Seattle Speech”, it is not an authentic Indigenous quote at all. It has also been called a Chinese or African proverb.

³⁷ See (http://www.relocalize.net/david_brower_the_man_who_saved_nature); Apparently the sentiments he wished to be remembered by were characteristically more extreme: “We’re not just borrowing from our children, we’re stealing from them – and it’s not even considered to be a crime.”

themselves. Indigenous ideas, knowledge, and methods ought to be properly, completely, and respectfully attributed to avoid misrepresentation.

Correctly attributing Indigenous ideas is important, but does not completely remove another danger: of appropriating Indigenous ideas and knowledge. Colonialists used to extract resources, now neo-colonial transnational corporations steal IK to make a profit.³⁸

Environmentalists and EE researchers and educators, in contrast, are not seeking IK in order to turn a profit from this indigenous wisdom. Instead they are trying to achieve goals that are consistent with Indigenous values, needs, and hopes: to preserve the biodiversity and vitality of Earth for present and future generations.

Thus despite the above concerns, such as those of Longboat, Kulnieks, and Young (2009) and the 2007 Ahmedabad Declaration, I believe it is crucial to broaden and enrich the foundation of contemporary EE, which is still primarily based in a Western science model, with IK. Just as we learn more and more of the importance of biodiversity, so too we learn the importance of linguistic diversity and the knowledge each language encodes. EE will benefit from diversifying its ontological and epistemological foundations. The evolutionary journey of the meaning of EE seems to resemble a spiral, resonating with Kuhn's cycles of scientific paradigm shifts and with certain indigenous traditions of circular storytelling. Deep Ecology, Ecojustice, and other progressive Western movements share characteristics with Indigenous Epistemology. It seems like a convergent evolution, which may now converge and enrich each other. Aldo Leopold's life and work appears to me to be evidence that non-indigenous people can overcome what Sheridan and Longboat (2006) call "the settler mentality." Leopold's Land Ethic (and the profound Round River essays that predate and inform it) come from a genuine, deep, and loving relationship with

³⁸ Indeed, the Makushi have conducted extensive ethnobotanical research, but have not disseminated the results beyond their territory for fear that Trans National Corporations might try to exploit the resources they have identified (S. James, personal communication, March 2009).

the land near Leopold's Madison, Wisconsin home. The detailed descriptions of the environment and metaphors he uses resonate, to me, with those used by Indigenous peoples. The imagery and ideas in his essay *Thinking Like a Mountain*, resonates with those in Cajete's *Look to the Mountain*. Like Barbara Kingslover and her family (*Animal Vegetable, Miracle: A year of food life*, 2007), Leopold appears to be a settler who became indigenous to the land he calls home. And yet there is still something lacking in the writings of these two indigenous-like-settlers. Perhaps there still isn't quite the depth, layering and richness that comes from generations and generations of being indigenous and belonging to a specific land. Leopold's landscape is alive, vital, with humans as card-carrying members of the biotic community. But the Haudenosaunee landscape described by Sheridan and Longboat (2006) is more than alive and vital, it is inspirited, pulsing with luminous and numinous intelligence and meaning. It embraces Leopold's Land Ethic and Deep Ecology, but goes beyond them.

Here in Canada, Sheridan and Longboat (2014) argue that though “environmental studies has grown consistently over the past 50 years in Canada, it still remains distanced from Indigenous cultures, resulting in a lopsided and biased understanding of Indigenous knowledges.” Researchers and educators are closing this gap between EE and the benefits IK could bring to it. McKeon (2012) writes that now “is a synergistic moment when the field of environmental education can benefit enormously from the accumulated wisdom, research, and inspiration of Indigenous education through the indigenizing of environmental education.”

There is more and more scholarship on incorporating indigenous perspectives and ontologies into EE, often via land-based education. For example, a recent special issue of *Decolonization: Indigeneity, Education & Society* was on land-based education (Wildcat, McDonald, Irlbacher-Fox, & Coulthard, 2014) . And a recent special issue of *Environmental*

Education Research titled “Land education: Indigenous, post-colonial, and decolonizing perspectives on place and environmental education research” delved into the building momentum of place-based education, including how it has been mobilized within the field of environmental education (Tuck, McKenzie, & McCoy, 2014) . “Bridging fields and considerations of settler colonial studies, Indigenous studies, and environmental education is a challenging but necessary task,” notes Tuck, McKenzie, and McCoy (2014). Calderon (2014) observes that the intersections of environmental responsibility and Indigenous rights have long been articulated by Indigenous communities, scholars, activists, and allies, and that recent global Indigenous social movements are demanding meaningful dialog and effective action on these intersections. These are the intersections that North Rupununi indigenous communities must navigate.

2.2. Club-Based Non-Formal Education Approach to Environmental Education

An important trend in EE, briefly touched upon above, is the widespread use of non-formal education (NFE) to deliver EE (see definition of terms in **Appendix A**). Environmental clubs are a form of NFE and often use an Experiential Learning and/or a Service Learning approach. Clubs illustrate the grey area between NFE and formal education, because even within the same programs some clubs form from a classroom, some have a teacher as the adult responsible for the club but are otherwise not attached to a school or classroom, and some are community-based. However, the typical club, even when formed from a school class, holds activities, events, and meetings outside of class time (Adepoju, 2007; L. R. Johnson & Johnson-Pynn, 2007; Johnson-Pynn & Johnson, 2005; McDuff, 2000).

Two club programs will be described to generate a working definition of what an environmental club is. The Wildlife Clubs of Kenya (WCK) is the oldest Wildlife Club program.

WCK was founded in 1968 (McDuff, 2000) but not formally evaluated until 2001 (McDuff & Jacobson, 2001). Its main activities include visits to National Parks, assisting park wardens, activism in the form of petitions, rallies, and marches, and youth workshops. Roots&Shoots (R&S) is the Jane Goodall Institute's humane education program, and it is the largest and most widespread Club-based approach to humanitarian and environmental education (Johnson-Pynn & Johnson, 2005).³⁹ This flexible, service learning based program originated in Tanzania in 1991 and has spread to 104 countries to date. R&S groups can be either school-based or community-based, but like most other programs, the activities, meetings, and events tend to occur outside of class time. Like WCK, R&S activities tend to be hands-on, but take a project-based approach grounded on a community needs assessment (L. R. Johnson & Johnson-Pynn, 2007; L. R. Johnson, Johnson-Pynn, & Pynn, 2007).

Like WCK and R&S, the North Rupununi Wildlife Club (NRWC) program uses an Experiential Learning approach to EE. Regular Club activities tend to be hands-on, such as bird watching, cleaning up litter, and creating songs, banners, and skits for the Annual Wildlife Festival. However, Iwokrama's outreach team, which visits the Clubs (and also a specific grade in the primary school) once or twice a year, employs a mixture of lecture format, videos, and hands-on activities. Although this outreach is not via Guyana's Ministry of Education, Iwokrama seeks to tailor the school meetings to the curriculum. How closely the outreach presentations track Guyana's public school curriculum (and the actual material taught) has not been formally evaluated.⁴⁰

³⁹ I have experience with the program through volunteering with R&S in Dar es Salaam, Tanzania, in 2007.

⁴⁰ From my own experience observing the Iwokrama Outreach team's work during m 2010 Reconnaissance, how well their presentation tracked what students actually had learned varied because of the variability in the quality of the education from village to village. One "tree activity" for the grade 4-5 classes, for example, was designed for students who already knew about photosynthesis. By grade 4-5, students were supposed to have learned

From the above, a working definition of an environmental club program for children and youth is an EE program that is composed of children and /or youth members who choose to join and to stay in the Club (voluntary participation), is a form of NFE (even if school-based, activities occur outside of school time), and follows an experiential learning model, with hands-on outdoor activities in the Club's immediate or nearby environment. Clubs composed of children also have at least one adult designated as responsible for the Club. Some ideals that Club programs strive for are: engaging Club members in their community with hands on projects based on the community's needs; promoting positive youth development through EE; and fostering a "think globally, act locally" approach (a neologism which means teaching or research that has implications worldwide but is rooted empirically in the community).

Two key goals of Club approaches to EE which emerge from the above description are that they seek to promote pro-environmental behaviour and positive youth development (PYD). The following literature review discusses pro-environmental behaviour and then PYD.

2.3. Pro-Environmental Behaviour

As Leeming, Dwyer, Porter, & Cobern (1993) clearly articulate, "ultimately it is behaviour change that is required to preserve environmental quality." Of course, environmental educators are interested in promoting positive behaviour towards the environment. But before defining positive behaviour with respect the environment, it is useful to discuss what Stern (2000) calls "environmentally significant behaviour." He describes two ways to define environmentally significant behaviour: by its impact, and by the actor's intent. The former is defined as behaviour that "changes the availability of materials or energy from the environment or alters the structure and dynamics of ecosystems or the biosphere itself" (Stern, 2000; note Steg

photosynthesis according to the official Guyanese curriculum. But it was clear many of the students did not understand photosynthesis, so either had not been taught photosynthesis, had not learned it, or misunderstood it.

and Vlek (2009) use his definition as well). Stern (2000) goes on to explain that some behaviour directly or proximally causes environmental change, “such as clearing forest or disposing of household waste.” Other behaviours have an indirect impact on the environment by shaping the context in which the choices that directly impact the environment are made (e.g., Rosa & Dietz, 1998; Walters & Vayda, 2009). Stern (2000) points out that these indirectly environmentally significant behaviours can have greater environmental impact than behaviours that directly change the environment. His examples of indirect behaviour with dramatic impact on the environment are those that affect “international development policies, commodity prices on world markets, and national environmental and tax policies” (Stern, 2000).

Stern (2000) asserts a second meaning for environmentally significant behaviour. From the actor’s standpoint, it is a behaviour undertaken with the *intention* to change the environment. The intent-oriented definition differs from the impact-oriented definition in two important ways: environmental intent is an independent cause of behaviour, and it is possible that environmental intent may fail to result in environmental impact. Stern (2000) gives the example (circa 2000) that “many people in the United States believe that avoiding the use of spray cans protects the ozone layer, even though ozone-destroying substances have been banned from spray cans for two decades.”

Both definitions of environmentally significant behaviour are important, but serve different purposes in research. The impact-oriented definition is necessary to identify and target behaviours that can have a large impact on the environment (Stern & Gardner, 1981), which is critical for making research useful to the environmental problems we currently face. The intent-oriented definition that focuses on people’s beliefs, motives, etc., is necessary to understand and change targeted behaviours to achieve the above impacts (Stern, 2000).

Turning to the positive kind of environmentally significant behaviour, there are several terms used in both the literature and in common parlance. In English, these include: various spelling of “pro-environmental behaviour,” “ecological behaviour,” “green behaviour,” “environmentally responsible behaviour,” and “environmentally-friendly behaviour.” I will use the term pro-environmental behaviour in this dissertation (though I tended to the term use environmentally-friendly behaviour in the field). Steg and Vlek (2009) use the impact-oriented meaning to define pro-environmental behaviour as “behaviour that harms the environment as little as possible, or even benefits the environment.” Kollmuss and Agyeman (2002)’s definition of pro-environmental behaviour is both intent and action-oriented: behaviour that consciously seeks to minimize the negative impact of one’s actions on the natural and built world. For the purpose of this literature review, I will use a modified version of Kollmuss and Agyeman (2002)’s definition for pro-environmental behaviour: behaviour that intends to minimize negative impacts or to have positive impacts on the environment. As per Stern (2000), these impacts change the availability of materials or energy from the environment or can alter the structure and dynamics of ecosystems or the biosphere.

Stern (2000) also distinguished between different types of pro-environmental behaviour, which broadly fall under the categories public-sphere behaviour and private-sphere behaviour. Public-sphere pro-environmental behaviour includes environmental activism (e.g., active involvement in environmental organizations and actions) and non-activist behaviours (e.g., writing letters and signing petitions on environmental issues, contributing to environmental organizations). The other type, private-sphere pro-environmental behaviour, has tended to be the focus of consumer researchers and psychologists. In Western contexts, research tends to focus on the purchase, use, and disposal of personal and household products. Unlike private-sphere

environmental behaviours, public-sphere environmental behaviours have an indirect environmental consequences. And, as stated earlier, indirect behaviour may have more impact, since “the environmental impact of any individual’s personal behaviour...is small. Such individual behaviors have environmentally significant impact only in the aggregate, when many people independently do the same things.” (Stern, 2000, p.410). Another category of behaviour is influencing the actions of organizations to which a person belongs (as an employee or decision-maker). Behaviours that influence organizations can have a large environmental impact because organizational actions are the greatest direct sources of many environmental problems (Stern, 2000).

Throughout the 1970s and 1980s, a vast amount of work within cognitive, social and environmental psychology developed models of individuals’ environmental behaviour that built upon an essentially economic understanding of human behaviour based on linear, rational choice theory (Kollmuss & Agyeman, 2002). The earliest pro-environmental behaviour models were based on a linear progression of environmental knowledge leading to environmental awareness and concern (environmental attitudes), which in turn was thought to lead to pro-environmental behaviour. These rationalist models assumed that educating people about environmental issues would automatically result in more pro-environmental behaviour, and have been called “information deficit” models by Burgess, Harrison, and Filius (1998).⁴¹

From research on the impact of EE on pro-environmental behaviour, we now know that there is considerable variability in the effectiveness of EE, and that, contrary to the “information deficit model,” knowledge about the environment and pro-environmental attitudes and beliefs do

⁴¹ I think this “information-deficit model” is analogous to what Freire called the “banking model” of education, in which the student is viewed as an empty account to be filled by the teacher with information. Freire argues “[the banking model] transforms students into receiving objects. It attempts to control thinking and action, leads men and women to adjust to the world, and inhibits their creative power” (Freire, 2000, p.77).

not necessarily ensure pro-environmental behaviour (Kollmuss & Agyeman, 2002; Leeming et al., 1993). This is a serious concern, since those concerned about environmental issues tend to focus on education as the key to improving environmental behaviour. However, Hungerford, Tomera, Wilson, and Sachs (1983, p.187) assert that, "By and large, researchers are not studying behavior as it relates to remediation of environmental issues. Although this is a difficult research arena, it should undoubtedly receive much greater attention than some of the topics traditionally researched in EE." Since then, researchers have focused more on studying the link between educational interventions and pro-environmental behaviour, rather than only on changes in attitude and belief.

For example, studies have analysed the role of problem awareness/knowledge, attitude, perceived behavioural control (also called locus of control), social norm, moral norm, and intention as behavioural predictors (e.g., J. Asch & Shore, 1975; Bamberg & Moser, 2007; Bickman, 1972; Chu & Chiu, 2003; Hines, Hungerford, & Tomera, 1987; Ramsey, 1993). To determine factors that are correlated with pro-environmental behaviour, Hines, Hungerford, and Tomera (1987) performed a meta-analysis and found the following variables to be associated with pro-environmental behaviour: knowledge of issues, knowledge of action strategies, locus of control (whether the person believes in personal versus external control of one's actions), attitudes, verbal commitment, and an individual's sense of responsibility. While results were inconclusive about the effectiveness of EE interventions (with short-term interventions appearing to be ineffective), behavioural interventions appeared to be effective, but the studies included in the meta-analysis do not report if these positive effects persisted (Hines, Hungerford, & Tomera, 1987). They propose a Model for Responsible Environmental Behaviour, which draws on rationalistic models like the Theory of Reasoned Action (Ajzen & Fishbein, 1980; Fishbein &

Ajzen, 1975).⁴² In brief, they argue personality factors, knowledge of the issues, knowledge of action strategies, and action skills mediate a person's intention to act, which mediate pro-environmental behaviour. Though they note situational factors also affect pro-environmental behaviour, this is not emphasized in their model, nor do they include the role of education or behavioural interventions in their model.

Shortly after the above meta-analysis, Leeming et al.'s 1993 critical review analyzed environmental education studies (published between 1974 and their review in 1993) that attempted to demonstrate changes in environmentally relevant knowledge, attitudes, or behaviours. Of the 34 studies that met their criterion for inclusion, 14 reported positive findings, 6 reported mixed findings, and the remaining 14 studies either reported negative findings or the authors judged the study's methodology to be too weak to allow any conclusions (Leeming et al., 1993). In addition, they found the majority of the work reviewed (28 of 34) focused on the effects of educational interventions on people's knowledge and attitudes about the environment, rather than on effects on behaviour towards the environment (six of 34).

By the time that Zelezny (1999) performed her meta-analysis, there was more research on the impact of educational interventions specifically on pro-environmental behaviour. Thus she reviewed educational interventions that aimed to improve environmental behaviour. She identified 22 studies published in peer-reviewed journals between 1971 and 1996, obtained 21 of them, and excluded three "because they did not report sufficient information about their research methods or statistical findings" (Zelezny, 1999). She did not include unpublished manuscripts or books. Of the 18 studies that met the inclusion criteria, nine were on educational interventions

⁴² The theory of reasoned action is a well-known social-psychological attitude-behaviour model and incorporates external factors (normative social influences) on behavioural intention (Ajzen and Fishbein, 1980). Ajzen (1991) later adjusted the original theory to incorporate the actor's perceived control over the outcome of his/her behaviour. (AKA locus of control), and called this the theory of planned behaviour. "The underlying assumption is that humans are rational and make systematic use of available information" (Prager, 2012, p.9).

within a classroom setting, and nine were in “non-traditional” settings (these included workshops, nature camps, and field studies).⁴³ At the time, and since, some have argued that EE in non-traditional settings (what would more likely be called non-formal education settings today) might be more effective (e.g., Disinger, 1982; Gough et al., 2001b; Stevenson, 2007). However, her review found that classroom interventions improved environmental behaviour more effectively than interventions in non-traditional settings. She found EE that most effectively improved pro-environmental behaviour actively involved participants and was with younger children (primary school students). Interestingly, active participation was more likely with EE in classrooms than in non-traditional settings. However, Zelezny (1999) cautioned that few of the studies measured actual behaviour. Most (16 of 18) measured self-reported or inferred environmental behaviour, not observed environmental behaviour. Like Leeming et al. (1993), she found shortcomings in the methods of the many of the studies she reviewed.

Also in 1999, Stern, Dietz, Abel, Guagnano, and Kalof (1999) argued that the value-belief-norm (VBN) theory of pro-environmental behaviour was the best explanatory account of a variety of behavioural indicators of non-activist pro-environmental behaviour (Stern et al., 1999). Stern’s VBN model starts from values, which form the basis for beliefs, which in turn underlie norms, which in turn direct behaviour. This means that depending on a person’s values (e.g., altruistic, biospheric, egoistic) the person is more or less likely to accept that his/her behaviour impacts the environment, and depending on her/his beliefs about the impact of his/her behaviour, forms a personal norm which then determines her/his behaviour.

⁴³ Zelezny acknowledged that an issue for review papers is the “file drawer problem,” the non-publishing of non-significant results, which means studies published in journals may be a biased sample (McNemar, 1960). To check for this bias, she used Rosenthal (1979)’s method, and concluded “the sample for this review was not seriously biased” (Zelezny, 1999).

Rickinson (2001)'s review was of empirical studies on learning and learners in school-based EE published between 1993 and 1999. Inclusion criteria were: participants were primary and secondary age students; the location was anywhere (but only articles published in English); sources were published articles, books and monographs, and government/international publications (not PhD or Masters Theses). One area of interest in Rickinson (2001)'s review was the impact of EE on environmental behaviour, however, none of the papers reviewed measured actual behaviour, they used self-reported behaviour. These studies also had secondary school aged participants, not younger participants in primary school (while Zelezny (1999) found EE's impact on younger, primary school aged students appeared more effective). He concluded that certain program characteristics appear to facilitate positive outcomes: role modeling, direct experiences in the outdoors (in contrast to Zelezny (1999) finding that classroom interventions were more effective than the outdoor interventions reviewed), collaborative group discussion, longer duration, and preparation and/or follow-up work.

Shortly after, Gralton, Sinclair, and Purnell (2004)'s review supports the conclusions of the previous reviews. They found some evidence that EE is associated with changes in beliefs and attitudes, but this was mostly assessed in the short-term. The authors claim there is little evidence from existing research that EE leads to behaviour change, especially in the long-term. They note several issues with how behaviour change was measured, as well: a) a number of studies measured behaviour via self-reported accounts or reports from teachers and/or parents, but there is reason to believe these accounts may conflict with actual behaviours; b) some studies measure change in intended behaviour, but intended behaviour is not an effective indication of actual behaviour. Only one study in the review reported on changes in observed behaviour, which the authors note is a stronger indicator of behavioural change. Therefore, the authors state

that “this review indicates that EE programs can develop positive environmental behaviours but there is a shortage of "hard" evidence to this effect” (Gralton, Sinclair, & Purnell, 2004). The authors therefore recommend research to produce more and better research evidence that behavioural change in learners follows from EE (Gralton, Sinclair, & Purnell, 2004).

Bamberg and Möser (2007) sought to replicate and extend upon the Hines, Hungerford, and Tomera (1987) meta-analysis. Unlike Gralton, Sinclair, and Purnell (2004), who recommended more focus on empirical impacts of EE programs rather than on the theoretical models of why the programs might impact attitudes and behaviour, Bamberg and Möser (2007) sought to consider the factors of a theoretical model for pro-environmental behaviour. Overall, their newer meta-analysis confirms Hines, Hungerford, and Tomera (1987), but their own model for factors that lead to pro-environmental behaviour includes only the psycho-social factors (the situational factors from Hines, Hungerford, & Tomera (1987) are dropped). The effects of the psycho-social factors that Bamberger and Möser (2007) include are all mediated by intention. They do not include the impact of behavioural or education intervention on pro-environmental behaviour. In their up-dated model to explain pro-environmental behaviour, EE could act on all or some of the factors that in turn contribute to pro-environmental behaviour.

Clearly, the simplistic idea that increased environmental awareness will lead to increased pro-environmental behaviour is (unfortunately) wrong (Finger, 1994; Gralton et al., 2004; Hungerford & Volk, 1990; Kollmuss & Agyeman, 2002). Common-sense observation, confirmed by the literature, is that knowledge is a necessary, however not a sufficient precondition for developing pro-environmental moral norms and attitudes which in turn contribute to pro-environmental behaviour (e.g., Bamberg & Moser 2007, Kollmuss & Agyeman, 2002; Leeming et al., 1993). Yet well into the 2000s, environmental educators and

policy makers continued to base their interventions on more sophisticated versions of Fishbein and Ajzen's theory of reasoned action (Hargreaves, 2008).

A few years later, Stern, Powell, and Hill (2014) conducted a review that starts where Rickinson (2001) left off, reviewing 66 articles published between 1999 and 2010. Like Rickinson (2001) their goal was to be systematic, comprehensive, and analytical. In contrast to the above prior reviews, they sought to review research on the empirical evidence associated with consensus-based best practices in EE. They write that the field of EE has developed consensus-based guidelines, summarized most comprehensively in the North American Association for Environmental Education's (NAAEE) *Guidelines for Excellence* publications (NAAEE, 2012). "These guidelines are based on the opinions of hundreds of researchers, theorists, and practitioners about what works in EE. As such, they provide lists and explanations of what might be considered generally agreed upon 'best practices' in the field" (Stern, Powell, & Hill, 2014).

Overall, they concluded that the NAAEE's consensus-based best practices in EE were broadly, but only circumstantially, supported in their literature review (Stern, Powell, & Hill, 2014). The review suggests a number of program elements that may positively influence outcomes of EE programs:

First, *active and experiential engagement* in real-world environmental problems appears to be in favor with EE researchers and empirically supported. In particular, *issue-based, project-based, and investigation-focused* programs in *real-world nature settings* (place-based) commonly achieved desired outcomes, and authors commonly attributed positive outcomes to these particular program attributes (Stern, Powell, & Hill, 2014, italics in original).

They also note empowerment and student-centered learning to develop skills and perceptions of self-efficacy in the above types of EE programs appeared helpful. Other program characteristics that the authors reported to increase EE success: various forms of social engagement, most commonly in the form of cooperative group work amongst students involving intergenerational communication within a program and certain forms of teacher engagement; holistic experience-making; affective (emotional) messaging; and passionate, confident, caring, and sincere delivery. However, few studies attempted to empirically isolate the characteristics of programs responsible for measured outcomes.

Given the importance of encouraging pro-environmental behaviour, another issue identified by the reviewers, as in other reviews cited above (e.g. Gralton, Sinclair, & Purnell, 2004; Zelezny 1999) was the relative lack of measuring the impact of the EE program on behaviour: only 19 of 66 programs measured impact on behaviour. Of these 19 programs, 11% had null effect, 74% had mixed effect, and 16% had a positive effect. As mentioned previously, decades of research on human behaviour demonstrates that knowledge gain is not typically a direct cause of behaviour changes (Hines et al., 1987; Hungerford & Volk, 1990). Therefore, programs that focus on providing new knowledge may not necessarily change behavioural outcomes, even though they may measure them (Jacobson, McDuff, & Monroe, 2007; Stern et al., 2014). Similarly, there is a tenuous relationship between attitudes and behaviours, especially in the environmental domain (Heimlich and Ardoin, 2008; Jacobs et al. 2012). Since an important goal of EE is to increase pro-environmental behaviours of participants (Heimlich 2010; Hungerford & Volk 1990; UNESCO 1978), the prevalence of knowledge as the most commonly measured outcome across the studies in this review raises questions about why researchers have measured knowledge instead of behaviour.

One point about the purpose of EE that is not covered in any of the above reviews is made by Chawla and Cushing (2007). They build on the idea that the goal of EE is to increase pro-environmental behaviour, but they argue that an analysis of the world's most serious environmental problems suggests that the effect of private actions (the focus of previous EE practice and research) is limited unless it is combined with equipping people to organize for collective, systematic change: "If environmental educators confine themselves to fostering private sphere environmentalism, they may in fact be leading students astray" (Chawla & Cushing, 2007).

On a similar tack, Hargreaves (2008)'s research suggests that pro-environmental behaviour demands fundamental changes to the social order and everyday life that is not captured by a focus on individual behaviour change.

Finally, most of the above research has been in Western contexts, and have not asked questions such as what do indigenous people need to protect their ecosystems? How do indigenous people define pro-environmental behaviour, and how do they encourage pro-environmental behaviour in their communities?

2.4. Positive Youth Development (PYD)

Here the literature review moves from one desired goal of EE (increased pro-environmental behaviour) to another: positive impact on the EE learners' personal and social development. NRWC, like most Environmental Clubs, targets children and youth, thus this review focuses on youth development. According to Lerner and Steinberg (2004), most early researchers in the field of adolescent development viewed adolescents in terms of what they lacked when compared to mature adults (e.g., G. S. Hall, 1904). Thus early researchers and clinicians based their observations and theories on the assumption that adolescents were

inherently “at risk” for behaving in uncivilized or problematic ways, that they were “broken” and in need of repair (Benson, 2003). Young people were “problems to be managed” (J. Roth, Brooks-Gunn, Murray, & Foster, 1998). For decades this perspective influenced how researchers, teachers, parents, youth workers, and public policy makers regarded this stage of human development (Lerner, 2006).

According to Benson (2003), the use in the United States of a vocabulary that stresses the risks and dangers of young people is intertwined with the “deficit-reduction paradigm.” In this paradigm, “research and practice are steered to naming, counting, and reducing the incidence of environmental risks (e.g., family violence, poverty...) and health compromising behaviours (e.g., substance use, adolescent pregnancy, interpersonal violence, school dropout)” (Benson, 2003, p. 24).

This deficit reduction model appears to have been exported through community development programs, however well-intentioned, into other countries and into indigenous communities, which may conflict with local indigenous constructions of adolescence.⁴⁴

In the early 1990s, growing numbers of researchers began to view adolescence through the lens of systems theories, and saw development throughout the life span as a product of relations between individuals and their world (Lerner, 2005). Integrating theory about the plasticity of adolescent development and the empirical findings about the multiple pathways children take through adolescence led to the field now known as Positive Youth Development (PYD). This field views young people as resources to be developed rather than as problems to be managed (Damon & Gregory, 2003; Lerner, 2005). The PYD approach promotes the “Five Cs”:

⁴⁴ In my opinion, this is what happened in the North Rupununi of Guyana. When I volunteered with YCG there in 2006, the workshops we did for youth were targeted at preventing unwanted behaviour and to reduce risks (topics included domestic violence, safer sex, HIV/AIDS, etc.) while workshops for adults were to promote leadership skills and positive change.

Competence, Confidence, Connection, Character, and Caring (Lerner, 2005; Lerner, 2006; Theokas et al., 2005). See more details on each of the 5Cs in **Table 1**, below. Researchers speculate that young people whose lives demonstrate these Five C's are on a developmental path towards expressing a "Sixth C": contribution to self, family, community, and the institutions of a civil society (Lerner, 2006).

Table 1 – Definitions of the 5Cs of Positive Youth Development (from Lerner (2004) and Roth & Brooks Gunn (2003)).

5 Cs	Definition
Competence	Positive view of one's actions in domain specific areas including social, academic, cognitive, and vocational. Social competence pertains to interpersonal skills (e.g., conflict resolution). Cognitive competence pertains to cognitive abilities (e.g., decision making). School grades, attendance, and test scores are part of academic competence. Vocational competence involves work habits and career choice explorations.
Confidence	An internal sense of overall positive self-worth and self-efficacy; one's global self-regard, as opposed to domain specific beliefs.
Connection	Positive bonds with people and institutions that are reflected in bidirectional exchanges between the individual and peers, family, school, and community in which both parties contribute to the relationship.
Character	Respect for societal and cultural rules, possession of standards for correct behaviours, a sense of right and wrong (morality), and integrity.
Caring and Compassion	A sense of sympathy and empathy for others.

Positive Youth Development (PYD) is defined as the intentional efforts of other youths, adults, communities, government agencies, and schools to provide opportunities for youth to enhance their interests, skills, and abilities (the "5Cs") into their adulthoods. PYD programs endeavour to create supportive communities for all young people to nurture the 5Cs, and

simultaneously engage youth to contribute (sixth C) to the well-being of the larger community (Lerner, 2006).

2.5. The Convergence of Pro-Environmental Behaviour and PYD: Wildlife Clubs

Studies support the role of youth conservation organizations in providing significant life experiences that develop positive environmental attitudes (Chawla, 1998; Palmer, 1998). Adult pro-environmental attitudes appear to be influenced differently at different life stages. In childhood, the most influential experiences are of natural areas and family; during adolescence and early adulthood, education and friends are more influential; and during adulthood, it is pro-environmental organizations (Chawla, 1999). NRWC provides children with experience in natural areas, and provides youth with education and influence from friends who are likely to be environmentally-concerned. Granted, due to the rural environment and that the lack of after-school programs in the North Rupununi, most children play outside. And their “outside,” unlike children in urban centers, is they have free-range of the spectacular biodiversity of the local rainforest, savannah, and riverine ecosystems. What NRWC offers is opportunities to explore that environment with knowledgeable adults for an educative purpose.

As per the above review, what is not as clearly established is the impact of Clubs on youth’s environmental behaviour. Some previous research on Wildlife Clubs lends modest support to the argument that participation in these programs increases pro-environmental behaviour (Adepoju, 2007; Johnson et al., 2007; McDuff & Jacobson, 2001). But as pointed out earlier, striving for individual behaviour change is not enough (Chawla & Cushing, 2007), and more research is needed on effective strategies in specific contexts (Hargreaves, 2008).

With respect to the second stream of literature and practice, there has been some previous research on the role Environmental Clubs can play in supporting PYD (Johnson & Johnson-

Pynn, 2007; Johnson-Pynn & Johnson, 2005). There is anecdotal evidence that participation in NRWC has a positive impact on members' social and leadership skills, and (like with WCK) that former members tend to get jobs in the conservation and ecotourism fields. This perception was supported by a survey conducted by Iwokrama in 2011 (James, n.d.).

The evolution of the PYD field towards a more holistic, asset-based view of adolescence may bring the field more in line with Indigenous perspectives on youth and human development. An integrated moral and civic identity and a commitment to society beyond the limits of one's own existence enable thriving youth to be agents both in their own, healthy development and in making positive contributions to their community. Thriving youth become generative adults through the progressive enhancement of behaviours valued in their specific culture and consistent with the universally held value of contributing to society (Lerner, Dowling, & Anderson, 2003).

2.6. Gaps in previous research and opportunities for further research

The meaning of pro-environmental behaviour has been explored in Western/Dominant contexts, but not as much in indigenous contexts, and not at all with indigenous people in the North Rupununi. In Western contexts, the expression of private-sphere (personal actions) pro-environmental behaviour by individuals would include minimizing resource and energy consumption, the use of non-toxic substances, and reducing waste production, much of which is mediated by conscientious consumer choices. Public-sphere (organized or collective action) could include advocating for changes to legislation that would require more pro-environmental behaviour from corporations, participating in a campaign to improve waste-reduction, or participating in a direct action to protect a forest from development. In the North Rupununi where this research took place, private-sphere pro-environmental behaviour by individuals

includes direct natural resource use (e.g. sustainable hunting, fishing, and subsistence farming), and public-sphere pro-environmental behaviour includes the ability to exert political instruments to regain or maintain control over ancestral lands.

To turn to Positive Youth Development (PYD), there is a lack of research on: Club approaches to promote PYD in indigenous contexts, the meaning of PYD in these contexts, and on indigenous approaches to promoting the flourishing of youth. The “Big Three” features of effective youth development programs in Western contexts are thought to be that the programs provide: 1. Positive and sustained relationships between youth and adults; 2. Activities that build important life skills; and 3. Opportunities for children/youth to use these life skills as both participants and as leaders in valued community activities (Blum, 2003; Brooks-Gunn, 2003; Lerner & Steinberg, 2004). These features should be explored in indigenous settings. Indigenous cultures have their own understanding of the different stages of human life, and have rites of passage for these different stages of life, including for adolescence (Wexler, 2009). It is possible that PYD may have a different meaning in indigenous contexts. For example, the transmission of IK to youth is essential to a youth’s identity within their on culture (Wexler, 2009). Therefore, knowing IK could be considered a competence under the 5C’s category of Competence that is specific to indigenous youth. Hence point 2., “Activities that build important life skills” may be true in indigenous contexts, but the type of life skills and activities may be different than in Western contexts.

In addition to the above general gaps, a specific gap in the literature is the lack of peer-reviewed research studies on the impact the club-based EE program NRWC has on Club members’ environmental attitudes and behaviour, or on their personal and social development. Iwokrama performed a survey in 16 North Rupununi communities in 2011-12 (this was after the

fieldwork of my PhD research was completed) to “determine if there is a link between Iwokrama’s capacity building programmes and the development of members into conservation leaders” (James, n.d.). These Iwokrama programs were NRWC (the subject of this research), the Community Environmental Workers program, and the Makushi Research Unit (MRU). The only documentation of the survey I was able to obtain was the slides of a presentation about the findings by Samantha James, Iwokrama’s Community Outreach Manager, retrieved online (James, n.d.). The survey was funded by the Forestry Research Network (FORENET). The presentation contains slides that show the survey responses of former Club member compared to non-former Club members, and the presentation states that former members reported benefits from Club membership on their environmental knowledge and vocational skills, but it is not possible to conclude what impact NRWC had without access to details about the methodology and survey instrument.

Mulder, Schacht, Caro, Schacht, and Caro (2009) did include membership in a Wildlife Club as a yes/no item in their questionnaire on environmental attitudes and beliefs of Amerindian children in the Rupununi, and concluded that there was no statistical difference in the attitudes and beliefs about the environment in Wildlife Club members compared to non-members. They did not assess pro-environmental behaviour. Mulder et al. (2009) did not investigate the NRWC program specifically, and did not ask students questions about their Club experience. Also, they did not complement the survey with other methods, such as interviews, that may have shed more light into the impact the Clubs have on individual members as well as the wider community. Asking the students a yes/no question about Club membership does not reveal what *kind* of experience they had with the Club. As with any educational intervention, to determine its effectiveness, we need to know if the learner actually participated and engaged in learning within

the program, and also if the learner benefitted (or not) from the experience. Former Wildlife Club members should be asked how long they were Club members, and how active they were in the Club.

In addition, research on EE Clubs initiated and maintained by indigenous communities is limited, and certainly lacking on the role incorporating indigenous knowledge might play in promoting both pro-environmental behaviour and PYD in Indigenous communities. Yet there have been repeated recommendations to incorporate Indigenous Knowledges into EE programs (Charley, Dawson, Madsen, & Spykerman, 2004; Ford, 2001; Kapyrka & Dockstator, 2012; Longboat et al., 2009; Selby, 2006; Simpson, 2002). Learning more about this form of EE is important, and particularly timely given that one of the largest environmental and humane education programs in the World, R&S, recently partnered with the Ontario Federation of Indigenous Friendship Centres (OFIFC) to engage Aboriginal youth in R&R's program. The plan is for members of the OFIFC's Aboriginal Youth Council to collaborate with Elders and Jane Goodall Institute (JGI) staff to develop youth-led community action projects that integrate indigenous ways of knowing and create sustainable change for people, animals, and the environment (OFIFC & JGI, 2014).

And finally, while there has been research on the intergenerational impacts of children participating in EE, such as on their parents (Ballantyne, Connell, & Fien, 2006; Duvall & Zint, 2007) and on their parents and on the wider community (Vaughan, Gack, Solorazano, & Ray, 2003), no research on the impact of EE programs on indigenous communities was detected through literature searches.

2.7. This Doctoral Research's Potential Contributions

One of the gaps in the above literature is asking indigenous people about their own understanding of pro-environmental behaviour and PYD. This is important because the Western/Dominant definitions of pro-environmental behaviour and PYD found in most literature may not be appropriate or relevant to indigenous people within their own ecosystems. To impose these definitions on indigenous communities perpetuates colonialism and risks communities deeming the research findings irrelevant to them. Therefore, this doctoral research sought to explore local indigenous Amerindian people's meaning of pro-environmental behaviour (Research Question 1), and of PYD (Research Question 2).

Gratton, Sinclair, and Purnell (2004) recommend less focus on the theoretical models and more focus on the impacts of EE programs. There is also a lack of research on what indigenous people themselves perceive to be the impacts of EE programs on individuals and on their communities. Therefore I decided to explore what local indigenous people perceived to be the effects of participation in NRWC on Club their youth's environmental knowledge, attitudes, and behaviour (Research Question 3 a) and one their PYD (Research Question 3 b). Given the lack of research on the impact of EE programs on indigenous communities, I also asked participants what they perceived to be the effect of the presence of NRWC community in their community (Research Question 4). Finally, there is a lack of literature on indigenous people's perceptions about EE programs, therefore I asked participants about their perspectives on the NRWC program itself (vs. their perspectives about the impact of NRWC) (Research Question 5). Note the research questions are listed in **3.4**.

Below is a figure of the conceptual model of this research. This framework shows what I sought to investigate. The diagram is taken up again in **Chapter 5 – Discussion (5.6.)** to fill in

what was learned via the research about the perceived impacts of NRW and the factors that support or hinder NRW's effectiveness.

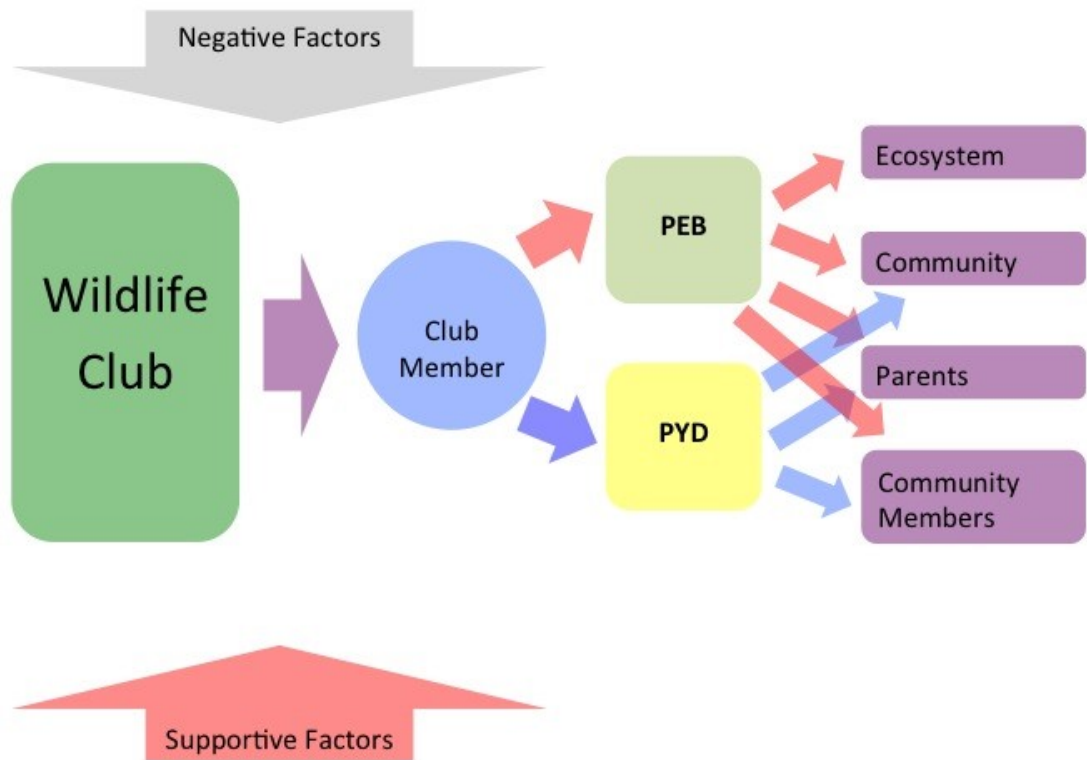


Figure 1 - Conceptual Model. This diagram shows the assumed relationship between a Wildlife Club (the local manifestation of NRW, an EE program) and a Club member. The assumption is that membership in the Club will positively impact a Club member's pro-environmental behaviour (PEB) and Positive Youth Development (PYD). The Club member's PEB can, in turn, positively impact the Club member's local ecosystem (direct impact on the local environment), and the PEB of parents and other community members (indirect impacts). Also, the Club member's supported PYD can positively impact the Club member's local community, parents, and other community members. Note there are factors that can negatively impact the Club's effectiveness (e.g., lack of volunteers or funding) and factors that can support the Club's effectiveness (e.g. engaged volunteers, appropriate programming).

Summary – Chapter 2

This literature review traced the history of environmental education (EE), including current trends. Given the subject of this PhD research, the North Rupununi Wildlife Clubs (NRWC) program, a Western-style EE program via non-formal Clubs in indigenous communities in Guyana, I then focused on two current trends in EE: problems and opportunities of using non-formal education to deliver EE; and acknowledging and incorporating Indigenous Knowledge (IK) and Indigenous Education. I then reviewed the use of club-based non-formal education approaches to EE, and described the Wildlife Clubs of Kenya (WCK), the Jane Goodall Institute's Roots and Shoots (R&S) program, and NRWC. The review moved on to literature about increasing pro-environmental behaviour, and then to how to support Positive Youth Development (PYD). I then discuss the convergence between encouraging pro-environmental behaviour and supporting PYD, which can occur in Club-based programs. Then, I discuss gaps in the literature, in particular, the lack of peer-reviewed research on programs Club-based EE programs that also encourage PYD in indigenous communities. Finally, I suggest how this doctoral research could contribute towards filling those gaps, and include a conceptual framework.

Chapter 3 - Methodology

This chapter describes the methodology used for this research, including: ethical considerations, my epistemological stance, research questions, research sites, participants, methods, and limitations. This doctoral research was a qualitative multi-site case study of the North Rupununi Wildlife Clubs (NRWC) program, in collaboration with three North Rupununi communities and with the North Rupununi District Development Board (NRDDB). The three sites with different characteristics were selected to understand the case, the NRWC program. To fulfill the ethical and procedural requirements of conducting research in Amerindian communities in Guyana, my research included assistance from a local community collaborator in each community (see **3.6. Community Collaborators**). The methods used for the case study were individual interviews, focus groups, and observations. The following section is an overview of the research process.

3.1. Narrative Overview of Research Process

In this section, I provide a narrative overview of the research process. The research journey was not neatly linear, and steps that are often discreet and linear in some research projects were not with my research. In part, this was because I chose to conduct a reconnaissance *before* my Thesis Proposal was approved, and before data collection. The reconnaissance was in some ways similar to a pilot study. However, rather than be used to refine existing instruments of a pre-determined research plan, as in most pilot studies, my reconnaissance sought feedback from community members on the research goals, questions, and instruments. This caused the research journey to be evolutionary and emergent rather than linear. The steps are listed and summarized below.

Step 1 – Initial literature review. The literature review was initiated by readings for my comprehensive exams. The two subject areas were 1) non-formal environmental education, and 2) Indigenous Knowledge and its relationship with research methods and environmental education.

Step 2 – Establishing a program to study and partner organization. As described in more detail in the **Appendix E (E.2. The Path of Engaging with Indigenous Knowledge, Ethical Space, and Allyship)**, in 2009 I was searching for an EE program to study in Guyana. I also wanted to apply for a doctoral research grant from the International Development Research Centre (IDRC) to fund my fieldwork. IDRC requires a local organization to agree to partner with the PhD researcher to help ensure the research project is locally relevant and that the researcher has the local support needed to successfully complete the proposed fieldwork. Thus, I needed a local Guyanese organization to partner with me. In my case, I needed support in the form of access to physical resources such as electricity, the internet, a printer, and a workspace (all scarce in the Rupununi). I also needed logistical support to arrange travel and accommodation within the Rupununi. And I needed a local organization's staff to assist me in contacting potential research participants. I emailed Iwokrama, found out about the NRW program, sent emails and talked with staff over the phone about my proposed research, and asked for feedback on its feasibility.

Step 3 – Drafting the Thesis Proposal. With an EE program and a partner established, I continued the literature review and developed the research questions and methods within the Thesis Proposal. During the process of developing my Thesis Proposal, which included the goal of conducting ethical research within Ethical Space (see **3.2.3.**, below), I decided the most ethical

way to obtain community feedback and input into the proposed research was to travel to the North Rupununi for a reconnaissance.

Step 4 – Reconnaissance. The reconnaissance and the support provided by Iwokrama from January to April 2010 are described in more detail in **Appendix E.3. First encounters with Wildlife Clubs, 2010**. In brief, Iwokrama provided access to a desk in Georgetown and to logistical and staff support in the Rupununi. I accompanied Iwokrama's Outreach Team as a volunteer, and so visited eight communities and their Clubs. And I volunteered at the annual Wildlife Festival. I also had opportunities to visit Surama and Yupukari and observe Club activities there. All of these visits to Clubs gave me excellent opportunities to observe some Club activities. These 2010 observations are described in **Appendix E** rather than in the data analysis chapter because they occurred before my Thesis Proposal was accepted and research questions finalized. It was not appropriate to mix these observations from this earlier time period with the data obtained during the 2011 data collection period. These 2010 observations do, however, provided valuable context and insight, and in 2011 few observations were possible because of the relative inactivity of the Clubs during data collection. Hence, the best observations were from 2010, but since they cannot be mixed with the 2011 data, they are in **Appendix E**.

During the 2010 reconnaissance I conducted many informal interviews of people involved with the Clubs, and gaffed⁴⁵ with many community members about the Clubs and my proposed research. I also worked as a substitute lecturer for the Wildlife Management stream at the Bina Hill Institute Youth Learning Centre (BHI-YLC), which gave me the opportunity to get to know former Wildlife Club members (some of the students had been active members of their Clubs until shortly before attending BHI-YLC). Although not an official partner for my research at the time, NRDDDB also provided support and assistance when I was based at Bina Hill.

⁴⁵ Term in Guyana for informally conversing; see **Appendix A: Glossary**.

Step 5 – Revision and acceptance of Thesis Proposal. The methodology proposed in my Thesis Proposal changed considerably due to my 2010 reconnaissance. Before the reconnaissance, my research questions sought to determine if the Wildlife Clubs were an effective form of environmental education in the context of rural Makushi communities. However, a theme that ran pervasively and consistently throughout the many conversations I had with members of the eight communities I visited in 2010 was that they were interested in how participating in a Club might impact a child's entire life and future. There appeared to be widespread belief that former Club members tended to "do well." This was certainly the message promoted by Iwokrama's Community Education and Awareness Manager, Ms. James (personal communications, February 2010), and there were Iwokrama posters, the "Healthy Lifestyles" notebook (*Annex 1*, 2009), and other promotional materials posted in communities that highlighted the successes of former Club members. Community members' interest in the longer-term and more holistic impacts of Club participation is what turned my attention to Positive Youth Development (PYD), to what PYD meant to local people, and to whether the Clubs supported PYD. Therefore, I added a literature review of PYD via EE to my Thesis Proposal. I also realized through these conversations how important it was for communities to "buy-into" and support a program like NRWC, which is consistent with the literature (for e.g., Larson, Measham, & Williams, 2010). Thus, I became interested in the impact of the Club on the community, in addition to on individual Club members. My research questions evolved to investigate the perceived impact of Clubs on: i) Club members' environmental knowledge, attitudes and behaviour; ii) On Club members' PYD; and iii) on the Club's community (see **3.4. Research Questions**).

Before the reconnaissance, I was proposing a survey, interviews, and observations as my data collection methods. After the reconnaissance, I added focus groups and dropped the survey for data collection. I added focus groups because when I asked community members what they thought would be a good way to investigate the Clubs, many suggested focus groups and were enthusiastic about this method. I realized focus groups would be a good complement to the individual interviews. And I decided not to conduct a quantitative survey because I thought the meaning of the two key constructs, pro-environmental behaviour and PYD, were not sufficiently defined in the mostly Makushi North Rupununi communities. While on my reconnaissance, I was told about a paper based on research in nearby communities, which I then read (Mulder, Schacht, Caro, Schacht, & Caro, 2009). Local stakeholders did not appear interested in implementing the findings because they did not agree with the interpretation of these findings. This paper is discussed further in **Section 5.1**. The paper was a cautionary tale for me, and rather than attempt to determine the effectiveness of the Clubs with a survey evaluating constructs that might not be locally relevant, I sought to investigate the Makushi's own meaning for the terms pro-environmental and PYD, which may be useful for future research in these communities.

I was granted an IDRC doctoral award to fund the fieldwork in November 2010. During the Thesis Proposal process in early 2011, NRDDDB became my partner for the research, and Iwokrama withdrew from partnering in the research. I successfully defended my Thesis Proposal in March 2011.

Step 6 – Ethics approval and permissions. Essentially, in this step I navigated obtaining permission to conduct my research. This required Ethics Approval from the University of Ottawa, and permission from each Amerindian community, Guyana's Environmental Protection Agency (EPA), and the Ministry of Amerindian Affairs (MoAA; see **3.2. Ethical**

Considerations). Obtaining these permissions was also part of the larger process for obtaining entry and access to the research sites, and building rapport with community members (see **3.7. Entry, Access, and Rapport**).

Step 7 – Data Collection Phase 1. Data collection was in two phases. Phase 1, from 29 May to 11 July 2011, was for the main data collection. I completed all the focus groups and the majority of the interviews. I made some observations, but there was little Club activity to observe during fieldwork. Data was collected in the three villages as follows: Surama for the first two weeks of June, 2011; Yupukari during the last two weeks of June, 2011; and Wowetta during the first two weeks of July, 2011.

Step 8 - Data Collection Phase 2. Phase 2 was from 10 September to 30 October 2011. Two more interviews were conducted in September 2011 in Wowetta. Some observations were also made during this phase, but as in Phase 1, there was little Club activity to observe. The main goal of Phase 2 was to conduct follow-up meetings with the assistance of my community collaborators in each community. In the meetings, I presented preliminary findings, requested feedback about the preliminary findings, asked if community members thought more research was needed (such as more interviews), and invited community members to decide how the research findings would be disseminated within the communities. See **3.10.** for more details on the meetings.

Step 9 – Data analysis and interpretation. Interview and focus group audio recordings were transcribed, then read to develop initial themes for coding. The transcripts were uploaded into Dedoose, a qualitative data analysis software program available by subscription online (www.dedoose.com). Transcripts were then coded to identify recurrent themes for thematic content analysis. See **3.11. Data Analysis and Presentation.**

Step 10 – Synthesis. Once coding was completed, the excerpts for the themes were organized into tables to assist in data synthesis to generate findings (**Chapter 4 – Data Analysis**). These findings were then interpreted (**Chapter 5 – Discussion**), which in turn yielded recommendations (**Chapter 6 – Implications for Practice**).

Step 11 – Dissemination of findings in communities and academia. Though not described in detail in this Dissertation, an important part of conducting ethical research within these Makushi communities was to disseminate the findings and recommendations through videos, the creative and culturally appropriate way chosen by the communities in the community meetings described in Step 8. Findings and recommendations were and will continue to be disseminated in the usual academic forums of conferences and peer-reviewed papers.

3.2. Ethical Considerations

I undertook my research with an indigenous people, the Makushi in the North Rupununi of Guyana. This necessitated a high ethical standard for the research due to the problematic nature of research with Indigenous peoples in general, and *by* non-Indigenous researchers *on* Indigenous people in particular (see, for e.g., Schnarch, 2004). Therefore, I am situating ethical considerations about the study before describing other aspects of the methodology.

As a non-Indigenous researcher, an important ethical step is for the researcher to situate herself within the research context (Kovach, 2009: 110-113; Steinhauer, 2001; Wilson, 2008: 32). I describe this in **1.3.**; here I reiterate only that I am a Canadian woman with deep, life-long connections to Guyana, seeking to help protect the vibrant ecosystems and culture in the North Rupununi.

3.2.1. Ethics Approval

Ethics approval for this research was granted by the University of Ottawa's Social Sciences and Humanities Research Committee. I returned to Guyana in April 2011. While I waited for Ethics approval from the University of Ottawa, I navigated the paperwork to get letters of permission from the three communities that had agreed to participate in my research, a permit from the EPA, and permission from the Ministry of Amerindian Affairs (MoAA). I had to change my consent letters when I discovered that MoAA required that I leave copies of the audio recordings of the interviews and focus groups with MoAA before leaving Guyana after the data collection. I was very concerned about this because there was a risk that participants could be identified by their voice should someone listen to the audio recordings. Since I was required by Guyanese law to leave the audio recordings, the University of Ottawa's Office of Research Ethics and Integrity told me to comply, and accepted my updated consent forms that alerted participants that the audio recordings would be submitted to MoAA and hence there was a risk that those who wished to remain anonymous could be identified. See **Appendices I, J, and Q** for interview and focus group consent forms.

3.2.2. Research Framework: A Journey with Heart

I sought to conduct this research with a good heart and an open mind. I explored the idea of the importance of the intent of the researcher when working through my comprehensive exams. I came to believe that researchers should approach research with Indigenous peoples with good intentions (a good heart) and with the ability to respect and, when appropriate, employ indigenous research methods (an open mind); this is echoed in Kovach (2009, p.29) and Wilson (2008: 60). Weber-Pillwax (2003, p.49) wrote in her dissertation that “‘checking your heart’ is a critical element in the research process...A ‘good heart’ guarantees a good motive, and good

motives benefit everyone involved.” Reading Chambers (2004) pushed this ideal for my location and stance as a non-Indigenous researcher further by prompting me to realize having a “good heart” is more than having good intentions, it is about finding a meaningful research path, a “path with heart,” and having the courage to choose and to walk this path. These readings about the research journey resonated with how I felt about my relationship to the physical and metaphorical versions of The Road we must travel in the Rupununi.

3.2.3. Research Framework: Ethical Space

Along with following a good and ethical research path (a path with heart), I also needed to find a good and ethical space in which to work with the Makushi communities. We needed a common ground within which to situate the research. I came upon the idea of “Ethical Space,” first described by Roger Poole (1972), and further developed for conceptualizing research between Indigenous and Non-Indigenous people by Willie Ermine, a Cree researcher. For Ermine (2007), Ethical Space is the space between two entities, the Indigenous and Western thought-worlds. The space is initially conceptualized by the unwavering construction of difference and diversity between human communities (Ermine, 2007). At the confluence of these two⁴⁶ disparate ontological and epistemological worlds is a space of rich possibilities for mutually-beneficial relationships between cultures, a space where people from “disparate cultures, worldviews, and knowledge systems can engage in an ethical/moral manner” (Ermine, Sinclair, & Jeffery, 2004, p.20).

Ethical Space: Two-Row Wampum and the Hyphen.

⁴⁶ Ermine (2007) and other writers refer to Ethical Space as an area of encounter between two different cultures, but I suggest it could be between more than two cultures. Guyana is “The Land of Six Peoples” (Amerindian, Afro-Guyanese, Indo-Guyanese, Chinese-Guyanese, “European”, and Portuguese) and could potentially be seen as a multi-encounter Ethical Space. In my own research, the encounter is more complex than between “Makushi Communities” and a “Canadian Researcher”. There are not only Makushi people involved in NRWC but also some Wapishana and non-Indigenous people.

The idea of Ethical Space dovetails with the Haudenosaunee's⁴⁷ Gus-wen-tah (or Kaswentha, meaning "River of Life"), known in English as the Two-Row Wampum Belt. The Two-Row Wampum Belt is a visual representation of an important covenant between the Haudenosaunee and Dutch Settlers in 1613 (Ransom & Ettenger, 2001; RCAP, 1996, p.103; Turner, 2006, p.46-48). Grand Chief Michael Mitchell of Akwesasne explains:

When the Haudenosaunee first came into contact with the European nations, treaties of peace and friendship were made. Each was symbolized by the Gus-Wen-Tah or Two Row Wampum. There is a bed of white wampum which symbolizes the purity of the agreement. There are two rows of purple, and those two rows have the spirit of your ancestors and mine. There are three beads of wampum separating the two rows and they symbolize peace, friendship and respect.

These two rows will symbolize two paths or two vessels, travelling down the same river together. One, a birch bark canoe, will be for the Indian people, their laws, their customs and their ways. The other, a ship, will be for the white people and their laws, their customs and their ways. We shall each travel the river together, side by side, but in our own boat. Neither of us will try to steer the other's vessel. (Mitchell, 1989, p.109-110)

As much as the three rows were to keep the two nations separate, they also bound them together: "We'll connect our two boats...with what we'll call the covenant chain of peace." (Lyons, 2008, p.59)⁴⁸ The idea was that the occupants in both vessels would be able to see each other (transparency) and assist each other. But otherwise the two Peoples were to go along their own journeys without interfering with each other (Non-Interference). The principles of Friendship, Peace, Respect, Non-Interference, and Transparency are still important, and there is

⁴⁷ Haudenosaunee are the "People of the Long Rafters" or "Longhouse", also called the Iroquois Confederacy. Originally this was a coalition of five nations: Seneca, Cayuga, Onondaga, Oneida, and Mohawk. The sixth nation, Tuscarora, joined in 1722 (Saunders, 2004).

⁴⁸ Chief Oren Lyon's account of the Two Row Wampum belt differs from other accounts about the significance of the third row of white beads between the two purple lines. He writes that Haudenosaunee negotiators said that the covenant chain of peace would be "made of three links, the first link is peace, the second link is friendship, and the third link is how long it will last" (Lyons, 2008, p.59). I will follow the interpretation of other authors that the third link represents Respect (Ransom & Ettenger, 2001; RCAP, 1996, p.103; Turner, 2006, p.46-48) for my research framework since I believe that respect is a key component of Ethical Space.

much wisdom to gain from reflecting upon this metaphor, which is still used today by Haudenosaunee people and by theorists on Indigenous understandings of proper relationships between cultures (e.g., Barker, 2010; Hallenbeck, 2015; McGregor, 2009; McLeod et al., 2015; Turner, 2006).⁴⁹

While the Two-Row Wampum is an important metaphor, and is helpful for thinking about the qualities Ethical Space should have, the metaphor is problematic for my purpose. I need a space to work *in*, not a space *between*. Therefore the idea about the space between the two vessels being a space of engagement – an Ethical Space for inter-cultural collaboration between occupants of different vessels – is my way of thinking about the space between vessels/cultures.

Ethical Space is no utopia. It is a contested and difficult space. Jones (with Jenkins,⁵⁰ 2008, p.471-86) calls the ongoing collaboration between a Maori researcher (Jenkins; this work is “with Jenkins”) and her, a Pakeha researcher (Maori word for someone of Settler ancestry in New Zealand), “working the indigene-colonizer hyphen.” This hyphen seems analogous to the concept of Ethical Space, or what could *be* an Ethical Space. Even the English way of writing “indigene-colonizer” looks like the hyphen is joining and yet keeping space between two vessels. Their work on this idea, following Fine (1994, p.70-82) on the complex gap at the Self-Other border, is relevant to what could be called “working the Ethical Space.” According to Jones

⁴⁹ One group of scholars claim the “Treaty of Tawagonshi”, Dutch documentation of the 1613 treaty found by Dr. Van Loon, is a fake (Gehring & Starna, 2012). However, as explained on the website of the recent 2013 celebration of the 400th anniversary of the Two-Row Wampum: “The status of that document [Treaty of Tawagonshi] is irrelevant. The agreement with the Dutch and the subsequent resulting treaties are recorded in the wampum belts of the Haudenosaunee and their meanings have been passed down generation to generation through speakers trained in the oral tradition” (Historic Controversy?, 2013).

⁵⁰ This chapter in the *Handbook of Critical and Indigenous Methodologies* was written by Jones with Jenkins (see p. 471), and it appears Jones is distinguishing between co-authorship (she and Jenkins have co-authored works) versus this situation where she is writing alone, but the work is influenced by Jenkins. According to APA Style, the proper in-text citation is (Jones, 2008), and in the reference list, one includes “(with Jenkins, K.)”. Here I would just like to note that Jenkins is prominent within the text, and the views expressed by Jones on the topic of “working the hyphen” appear to have developed over the course of a long period of collaboration with Jenkins (see p. 471). This particular case illustrates the difficulties of attempting to acknowledge a type of writing collaboration that does not fit neatly in APA’s style “box”.

(2008, p.472), there is never anything simple or settled about collaboration between Indigenous and Colonizer (Western) researchers. Consequently, thinking about this space is crucial: “For those of us engaged in postcolonial cross-cultural collaborative inquiry, this hyphen, mapped onto the indigene-colonizer relationship, straddles a space of intense interest” (2008, p.473). As a marker of the relationship between two generalized groups, Jones (2008, p.473) notes the discursive hyphen has been “erased, softened, denied, consumed, expanded, homogenized, and romanticized.” And she warns: “To those colonizer researchers who would dissolve/consume/soften/erase the indigene-colonizer hyphen into a sharing collaborative engagement between “us,” there is one, harshly pragmatic, response: *It does not work*” (2008, p.475). Therefore, like Ermine (2007), she stresses that the space is an encounter between two different entities, and the hyphen cannot and should not be erased: “Indeed, in indigene-colonizer research and teaching work, the hyphen is to be protected and asserted as a positive site of productive methodological *work*” (Jones, 2008, p.475).

The toolmaker and collaborators: Ethical Space, and roles in the Rupununi. My interpretation of Ethical Space for my research framework is informed by the work of Ermine (2006, 2007) and others (Barker, 2010; Chung Tiam Fook, 2010, 2011; Jones, 2008), and by the Two-Row Wampum. I see a map, and Ethical Space is the space in the overlapping territory between the Indigenous and Western thought-worlds. However, Western and Indigenous are broad territories which contain many heterogeneous sub-territories. The Makushi, like any other specific indigenous people, occupy their own distinct territory within the term “Indigenous.” And individuals might be hybrids across territories. The larger backdrop to our collaboration is the urgent environmental crisis that affects *all* inhabitants of our Earth, which this research is intended to help alleviate.

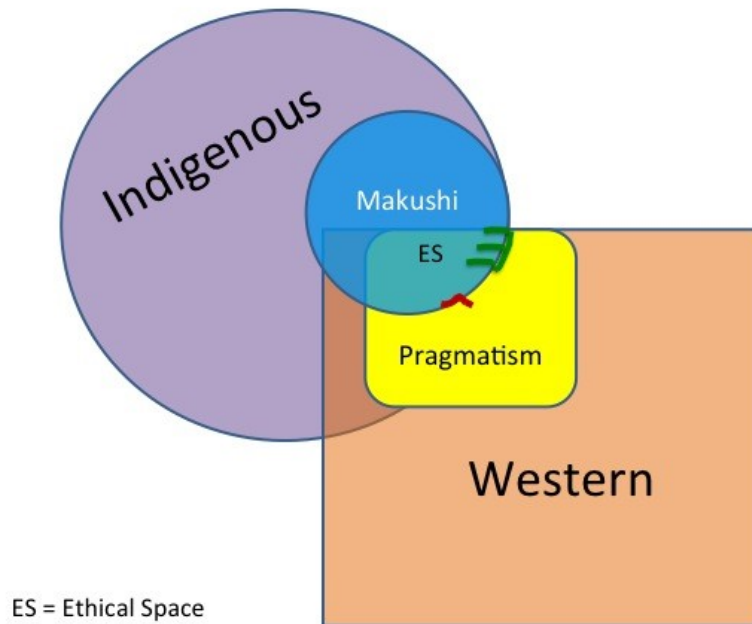


Figure 2. Ethical Space

There is overlap between the categories of Indigenous and Western Worldviews, as illustrated in 21, above. The Makushi worldview is a subset of the Indigenous worldview, it occupies its own distinct territory within this category. Similarly, my pragmatic worldview as the researcher occupies a distinct territory within the Western worldview. There is overlap between the Makushi and Pragmatic worldviews, and this overlapping territory has the potential to be an Ethical Space. This Ethical Space is an area of neutral and common ground between these two distinct worldviews. In order for me to access this space, there were four official sets of gates I had to receive permission to pass through. These gates were ethical and practical. In Canada, I secured permission from the University of Ottawa (approval of the Thesis Proposal and then Ethics Approval from the University's Research Ethics Board (REB)); this is represented by the red gate in **Figure 2**. In Guyana, I secured permission from each individual village that agreed to

participate, permission form the MoAA (contingent on the permission letters from the villages), and a permit from the EPA. These three gates are shown in green in **Figure 2**.⁵¹

For the research to be ethical, useful, and meaningful, all parties wishing to collaborate within Ethical Space should, ideally, enter the Ethical Space of their own free will, for an agreed purpose, and negotiate the terms of the work together. The Makushi community and me as researcher brought what we wished to the Ethical Space to collaborate on this specific research project. Our agreed purpose was to study NRWC. As per the Two-Row Wampum, this space of engagement had and still has the qualities of the three rows of white beads, Friendship, Peace, and Respect, and as per the two vessels treading parallel, Transparency. To that I add Relational Accountability, following Wilson's description (2008, p.58) of relationality: "All things are related and therefore relevant" and his description of the meaning of relational accountability as "the methodology needs to be based in a community context (be relational) and has to demonstrate respect, reciprocity and responsibility (be accountable as it is put into action)" (2008, p.99). Here, Wilson is alluding to the "3Rs" of Indigenous research that Evelyn Steinhauer and Cora Weber-Pillwax discuss in his research (Wilson, 2008, p.58): Respect, Reciprocity, and Relationality. According to Wilson (2008, p.107), relational accountability is put into practice in four ways: how the research project is chosen, the selection and execution of the research methods, the method of data analysis, and finally in the presentation of findings. Relational accountability also means the researcher is accountable to the community and to the relationships formed with participants as well as to the University. The researcher is hence not only accountable to her advisor and University administration (vertical accountability to

⁵¹ I realize there may be barriers to Makushi people entering this Ethical Space, such as lack of education and experience in this specific research field. The concept could be further refined to ensure inclusion of participants, community collaborators, and other stakeholders have access to Ethical Space.

superiors) but is accountable horizontally and “360 degrees”, which means horizontal responsibility towards stakeholders, not just vertical responsibility to superiors (Warah, 2004).⁵²

Approached in this way, the egregious “Smash and Grab” research conducted in the past (Barry & Molyneux, 1992; Cleary, 2013; Emanuel, Wendler, Killen, & Grady, 2004; Kovach, 2009, p.36; Wilmshurst, 1997) looks more like raids by non-indigenous researchers into Indigenous Knowledge territory, and stealing information overtly or covertly. In contrast, in my framework for research, both parties come to neutral ground, and the Indigenous participants can bring what they wish with them into the Ethical Space, or if they choose, allow researchers into their Knowledge Territory. Therefore I respectfully disagree with Ermine (2007) that it is necessary (or possible) to be “two solitudes.” My research journey and what I learned from community members (the findings) impacted and changed me. I was open with my collaborators (transparency) about the impact of the research on me, and the potential for the research to have an impact on them. From personal communications, I feel the research process may indeed have impacted some participants and community collaborators in a good way.

Part of working within Ethical Space was to define and clarify our roles. I thought about and wrote about some aspects of our roles to help craft my Thesis Proposal. As part of situating myself as the researcher, I explored my re/searcher identity. In brief, my role as a researcher was to obtain high quality findings that would be relevant to the Makushi communities as well as be useful to other communities and to the field of Environmental Education. I also brought to the Ethical Space the resources to achieve the research goals (funding, my labour, previous education, and experience). My role as a Toolmaker was to offer Makushi community members

⁵²In an online paper, Dr. Warah wrote “I propose that organizations committed to higher ethical and performance standards need to complement vertical forms of accountability [i.e., to superiors] with relational, 360 degree accountability” (Warah, 2004). For me, relational accountability meant I was not only accountable to my supervisory committee and University of Ottawa Ethics Review Board, but also to my community collaborators, research participants, the communities that participated, and to the “more than human world” (Abram, 1996).

the opportunity to gain experience using research tools, which could generate interest in the communities generating their own research tools. In this research project, community collaborators gained experience in conducting interviews and focus groups, actively co-managed the logistics of achieving the required research activities within the tight timeframes we had in each village, and learned about the informed consent process. In **Chapter 6 - Implications for Practice**, I discuss the possibility of communities engaging in their own continuous formative evaluation of programs like NRWC.

I call this role “Toolmaker” to signal my own modification to the Smith (blacksmith) identity, a term coined by Day (2005) and explored by Barker (2010). The reason that I strove for a modified version of this role is because I believe the Toolmaker should not only be helpful, but should help people help themselves (i.e., not fish for others but teach others to fish). This means the Toolmaker should not only create high-quality research tools, she should also try to increase local capacity to create research tools.⁵³

As per the above, community members who participate in the research as participants or as community collaborators had their own essential and important roles in the research. They shaped the research process, and participants were the source of the findings. The role of community collaborators is described in **3.6. Community Collaborators**. They were the experts on NRWC and had Indigenous knowledge on the local environment and NRWC’s role in the community and ecosystem. I brought financial resources and my own labour, and community members invested time and effort into the research process and assisted me in achieving the research goals with advice on logistics.

⁵³ In other words, I hope to help people in the communities become Toolmakers so they can create, modify, and evaluate research tools for use in the community. This could help build local capacity to conduct research and hence define and refine a Makushi research paradigm. See **Chapter 7**.

3.3. Pragmatism: The Toolmaker's Research Paradigm

For my research, I use the definition of a research paradigm to be the underlying beliefs and assumptions upon which research is based (Guba & Lincoln, 2005). The paradigm is the framework guiding the researcher's actions (Wilson, 2008, p.33). The research paradigm is composed of the interrelated concepts of ontology (the nature of reality, what counts as real), epistemology (nature of thinking or thought, how we know about what is real), methodology (how knowledge is gained), and axiology (the value of knowledge). The idea of 'enabling constraints' from complexity theory is useful here. Enabling constraints provide the ground rules that allow the game to be played (Hayles, 2001). The research paradigm can be viewed as the enabling constraints that set the ground rules to enable creative and meaningful research to occur. In this research, I sought to play the research game across cultures and across paradigms, in the common ground between paradigms. Therefore my task was to use a research paradigm that resonated with me and was compatible with the Makushi worldview. This was part of finding common ground, the Ethical Space described above, within which to situate the research.

Using a research paradigm that is compatible with and respectful of the Makushi worldview was part of my commitment to performing ethical, collaborative, and reciprocal research that I hope will genuinely benefit the Makushi communities. However, given my research framework based on Ethical Space, it is understood that my research paradigm may be quite different from the Makushi worldview. This is acceptable, since the point of Ethical Space is to allow very different entities, in this case, people from different worldviews, to engage and collaborate in a respectful, reciprocal, and fruitful way.

My pragmatism follows Johnson and Onwuegbuzie (2004), based on the work of the classical Pragmatists Peirce, James, and Dewey. According to Johnson and Onwuegbuzie (2004),

one goal of pragmatism has been to find a middle ground between philosophical dogmatisms and scepticism and to find a workable solution to the lack of agreement on many longstanding philosophical dualisms. Indeed, their version of pragmatism rejects traditional dualisms, such as rationalism vs. empiricism, free will vs. determinism, facts vs. values, and subjectivism vs. objectivism, and instead tends towards a moderate and common sense versions of philosophical dualisms based on how well they work in solving problems. A distinction made by de Waal (2005, p.37-8) between James and Pierce is relevant to my work:

For James, a philosophical proposition or theory is pragmatically meaningful if it has conceivable practical consequences in the lives of those who believe in it. Many propositions that are meaningless in Peirce's maxim will make a difference in some people's lives, making them meaningful in the eyes of James.

I follow James. For example, while I may not believe in the spirits that inhabit every living and non-living entity in the Makushi world, I believe many Makushi people believe in these spirits, therefore this is important is and could be relevant to my research.

By grounding myself in the pragmatic research paradigm and engaging in this research within Ethical Space, I am being true to my own beliefs about the nature of knowledge and its acquisition, and I have the flexibility to accommodate the Makushi communities' beliefs about the nature of knowledge and its acquisition. I believe this pragmatic stance provided us with a large overlap between my worldview and the Makushi worldview, so that we had a large and rich Ethical Space within which to work collaboratively.

3.4. Research Questions

The following research questions sought to investigate the impact of NRWC on Club members and their community. They also sought to establish what the terms 'pro-environmental' and 'Positive Youth Development' (PYD) mean in North Rupununi communities. The research questions were:

1. What are participants' perceptions on the meaning of the term 'pro-environmental behaviour'?
2. What are participants' perceptions on the meaning of the term 'Positive Youth Development' (PYD)?
3. What are the perceived effects of participation in NRWC on Club members'? Specifically:
 - 3 a) How has participation in NRWC been perceived to affect Club members' environmental knowledge, attitudes and behaviour?
 - 3 b) How has participation in NRWC been perceived to affect Club members' PYD?
4. What is the perceived effect of the presence of a Wildlife Club on the Club's community?
5. What are participant's perspectives on the NRWC program?

3.5. Research Sites

The three communities that participated in this study are in the North Rupununi, which was described in section 1.4.1. **The North Rupununi.** Wowetta Village and Yupukari Village are predominantly Makushi, while Surama Village has Amerindian and non-Amerindian inhabitants. All three villages also have a steady stream of foreign volunteers who stay in the villages, with the communities' permission. They are primarily volunteers from Peace Corps or Voluntary Service Overseas (VSO), and generally stay one to three years. Youth Challenge International Guyana frequently sends short-term volunteer teams into the area as well. In Yupukari, some teachers are coastlanders (non-Amerindian people from the coast, often Afro- or Indo-Guyanese). In Surama and Wowetta, the primary school teachers are all locals. All three

Villages had Wildlife Clubs at the time of my 2010 reconnaissance, however, Wowetta's Club was inactive at the time of the 2011 data collection. Surama and Wowetta's Clubs were established when NRWC first started, in 1999, while Yupukari's Club was founded in 2005 (*Annex 1*, 2009). Other similarities and differences between the villages are discussed in the description of each individual village, below.

These villages also represent a variety of ecotones and vegetation landscapes that are typical for the region: primary rainforest, riparian forest, savannah, and riverine areas.

3.5.1. Surama

Surama village has a population of approximately 302 people in 57 households (Iwokrama, 2014) and is located on a 13km² patch of savannah in a valley surrounded by rainforest covered hills, on the border between the rainforest and the North Rupununi savannah ecosystems (Nycander et al., 2010). Surama is bounded by the Iwokrama Forest protected area, the Burro-Burro River, and the Pakaraima Mountains (see map, **Appendix C**). Surama Mountain lies just East of the village, and offers a splendid look-out over the village and surrounding landscape (see **Figure 3**, below). Surama is 29km from Annai and is not directly on The Road, it is accessed by turning off The Road at Surama Junction and travelling northwest 7km on another road that, like The Road, can be washed out in the rainy season and requires 4x4 vehicles to navigate the mud and deep potholes and puddles.



Figure 3 - View of Surama from Surama Mountain. 30 January 2010.

Surama is primarily a Makushi community with other Amerindians (Arawak (Lokono), Wapishana, and Patamona) and non-Amerindians (Indo-Guyanese, Afro-Guyanese, and people of mixed descent) dwelling there as well (NRDDB, n.d.c). Surama is close to the Iwokrama Forest and Surama villagers use areas within the Iwokrama Forest. Surama is one of the satellite villages of Annai District, thus rather than having a Toshao, it has a Senior Councillor who sits on Annai's Village Council. Regardless, this person is often referred to as Toshao within their village. Surama is recognized by the Amerindian Act and has title to 651.41km² of land (Byrne, 2013; Iwokrama, 2014). However, as is typical in other villages on titled land, people from Surama also use resources from land use areas that are not titled (Iwokrama, 2014). Villagers depend principally on hunting, fishing, and subsistence farming for their sustenance. Most homes are simple buildings with locally made mud-brick walls and Ité or Kokerite palm thatched roofs

(Nycander et al., 2010).⁵⁴ Some homes now have zinc (metal) roofs, and one family made shingles from a fallen hardwood tree. The zinc and wood-shingle roofs are less susceptible to bat infestations than palm leaf roofs.

Surama's Eco-Lodge website describes this way of life in Surama: "The life of the people is in the art and understanding of how to live with nature. It is a simple and basic way of life, living according to the laws of nature" (Surama Eco-Lodge, n.d.). Surama's villagers were mostly converted to Christianity, and there is one Anglican Church in the community. Church on Sunday mornings is an important weekly activity for most villagers, and announcements are made after the service is finished. After the announcements many people linger to socialize.

There are different stories about how Surama got its name. Note that when stories are recounted by Makushi people, there are several layers of time to consider. Thus, stories can be from recent history or from mythic times.⁵⁵ In addition, as per the oral tradition, different people tell these stories differently from different lineages, thus there is no one, authoritative version I can share here. Rather, I am including the versions of the story as shared publicly by Surama's villagers themselves. The version on Surama's Eco-Lodge website is from recent history, and says the name derived during a "conflict between the Makushi and Carib people many years ago," and it comes from the word *Shuramata* which means "the place where bar-b-que spoiled" (Surama Eco-Lodge, n.d.). The version recounted in *Makusipe Komanto Iseru* (Forte & MRU, 1996, p.43) and on the NRDDDB webpage about Surama's History (NRDDDB, n.d.c) is from mythic times, and features two brothers, Inskiran and Anekî, who are important in Makushi cosmology:

⁵⁴ One family had a roof made of shingles from a fallen hardwood tree, which the participant felt was environmentally friendly and yet more durable and less prone to bat infestations than thatched roofs (Tanager, personal communication, 6 June 2011).

⁵⁵ I am grateful to Lisa Grund for pointing this out to me.

One day Inskiran and Anekî invited the villagers to picnic by the lake called warekupî, now known as Surama Lake. They caught a lot of fishes and in the afternoon all returned home together and made a barbecue. The two brothers made their own barbecue, apart from the others. Suddenly their fire flared up and Anekî screamed, *su ra ma ta bî man*, which roughly translates as ‘barbecue is burning.’ That was the origin of the name Surama (contributed by Paulette Allicock, as told by Peter Moses, in Forte & MRU, 1996, p.43).⁵⁶

Development in Surama started in 1974 by a group of sixteen families settling there, led by two brothers, Robert Frederick Allicock (Uncle Fred) and Theophilus Vanavus Allicock (Uncle Theo) (Nycander et al., 2010). “Those first 86 souls envisioned a cooperative system which allowed better management of natural resources and harmony amongst neighbors. That system exists to this day” (Surama Eco-Lodge, n.d.).

Shortly thereafter, as recounted in **1.5. Situating the participants: The Makushi**, there were “serious social and economic difficulties triggered mainly by the decline in the main Rupununi industries (beef, tobacco and balata)” (Nycander et al., 2010). The lack of local jobs meant young people in particular “were increasingly drifting away to Brazil and other parts of Guyana” (Funnell & Bynoe, 2007). The community also recognized that resource conservation was necessary to assure local livelihoods (Funnell & Bynoe, 2007). The idea to increase agricultural development as a source of economic opportunity for Surama’s villagers was “hampered by the lack of markets and competitiveness and caused great concerns within the community” (Nycander et al., 2010). Thus other solutions were explored, and in the 1990s, private tour operators, the NRDDDB, and Iwokrama encouraged the community to consider tourism to create sustainable local livelihoods and economic opportunities for community members and reduce emigration from Surama (Funnell & Bynoe, 2007; Nycander et al., 2010, p.16). Surama’s villagers also hoped that tourism could assist with revitalising Makushi culture,

⁵⁶ This version from mythic times is also found, almost verbatim, on NRDDDB’s web page about Surama (NRDDDB, n.d.c).

which was threatened by increased visitors and changing patterns in lifestyles (Ousman, Macqueen, & Roberts, 2006, p.58).

Hence, Surama began to engage in tourism in 1998 with 47 tourists visiting in that year (Nycander et al., 2010). Surama's Eco-Lodge was formally established in 2004, the first community-based tourism enterprise in the Rupununi (Bowers, 2014, p.121). The business has continued to grow, with 535 tourists visiting in 2009 (Nycander et al., 2010).

3.5.2. Yupukari

Yupukari is further south and further off the Road than the other two communities, 59km away from Lethem (see map, **Appendix C**). It is situated on a hill located about 1.5km from the Rupununi River, and has 137.4km² of titled land (Nycander et al., 2010). As described in Nycander et al. (2010): "Stunning views of the Kanuku and Pakaraima Mountain Ranges can be seen from Yupukari. The village also provides an ideal location for river trips, to observe giant river otters, water birds, water lilies, giant river turtles and arapaimas among other aquatic wildlife." Yupukari has a larger population than Surama and Wowetta, with 548 people in 68 households (this includes inhabitants of Fly Hill, a satellite village). It is an independent village (hence the leader is the Toshao and there is a Village Council). Most villagers are Makushi, with some Wapishana people as well (NRDDB, n.d.f). Yupukari is a fairly traditional village with most of the houses constructed with handmade clay bricks and Ité palm thatched roofs. Some people still use bullock carts for transportation (Nycander et al., 2010) as well as walking, bicycles, and a few motorcycles (my observations, 2006, 2010, and 2011).

However, Yupukarians have noted that the Village is developing quickly, with people living differently than in the past, such as using modern equipment for fishing, hunting, farming, etc. (NRDDB, n.d.a). This includes more people owning and using motorcycles, while 4x4

trucks tend to be owned by local businesses, rather than individuals. Life in Yupukari has been influenced by the Caiman Project, which started in 2005 to monitor the local population of black caiman in the Rupununi River. Visitors wished to go “caiman catching,” which is the night-time excursions by boat to capture, measure, then release caiman. This led to the construction of Caiman House, an ecolodge, in 2007. The presence of the caiman researcher and his family also led to the founding of Rupununi Learners, construction of a library, and the community gaining access to solar-powered electricity, laptops, and the internet via satellite at the library, as described in **Appendix E1.2. Yupukari.**

There are different versions of the story of how Yupukari got its name. The two versions on Yupukari’s webpage on NRDDDB’s website involve tigers (local term for jaguars), and take place “long, long ago” or “many, many years ago” (NRDDDB, n.d.a). In one version, John Bull, the founder of Yupukari, went fishing and came upon two tigers fighting. He stayed very quiet, and the two tigers started talking and asked each other their names. “One of them said, “My name is Yupu” and the other said, “My name is Kari” (NRDDDB, n.d.a). John Bull went home and told a few people what he’d seen. “He said, “We will name our place Yupukari.” After a long time it became a Village... This is how we found and formed our Village Yupukari” (NRDDDB, n.d.a). In another version, long ago a tiger (jaguar) named “Ape’kari” in Makushi lived under a big rock in the area and killed and ate people. A man named Matthew Francis asked a Piamon (shaman) from the South Rupununi to come and help. The Piamon and his son managed to kill the tiger, and afterwards they decided the community should be called Ape’kari, which was also the sound the tiger made when it attacked them. Matthew Francis agreed “and that is how they named the community as “Ape’kari” in Makushi” (NRDDDB, n.d.a).

3.5.3. Wowetta

Wowetta Village is 11km northeast of Annai, and unlike Surama or Yupukari, which are some distance off The Road, The Road bisects Wowetta (see map, **Appendix C**). Wowetta has a population of 313 people in 58 households. The majority of Wowetta's villagers are Makushi, and there are also Wapishana and Arawak inhabitants (NRDDB, n.d.e). Like Surama, Wowetta was granted title to land under the Amerindian act as a satellite village of Annai. Hence, like Surama, Wowetta has a Senior Councillor on Annai's Village Council (NRDDB, n.d.d).

The Makushi name for the settlement was actually *aweta ni pi*, which means "get soft," but non-Makushi corrupted the name to Wowetta (Forte & MRU, 1996, p.43). The first Makushi who settled there were wiped out by a terrible sickness, with symptoms of fever, vomiting, and diarrhoea, which caused severe dehydration and then death. In Forte & MRU (1996, p.43), they write that the sickness made the people's flesh "get soft," meaning putrid. On NRDDB's webpage about Wowetta, they write that the people became "[v]ery soft unable to walk" and then all died (NRDDB, n.d.b), a slightly different version of the meaning "get soft." Later, other Makushi came from the south Pakaraima mountains to settle the area. The Caribs heard of their trade with the Arekuna of Roraima, and "[o]ut of envy, the Caribs killed all the men and took away the women" (Forte & MRU, 1996, p.43). A few survivors fled, and later asked for help from the Arekuna of Roraima to battle the Caribs (Forte & MRU, 1996, p.43). Eventually, the Makushi and Arekuna succeeded in driving the Caribs out and north, towards Guyana's coast (Forte & MRU, 1996, p.44).

Today, most people in Wowetta rely on fish or wild game for meat, not on domestic animals (Read, Fragoso, Luzar, & Overman, 2013). Like other villages on titled land, people from Wowetta use resources in areas outside their titled area (Iwokrama, 2014; see Read et al.,

2013 for hunting areas). Most of Wowetta's inhabitants are fluent in Makushi or Wapishana, many are fluent in English (very few people speak no English at all), and some are fluent in Portuguese (Read et al., 2013). Since Wowetta is right on the Road, the community is particularly concerned about how to adapt once the Road is paved.⁵⁷

3.6. Community Collaborators

Community collaborators (also called "local counterparts" by the EPA) were essential for the efficient, successful, and ethical data collection for this research. I was also required to hire and work with a local community collaborator in each community to fulfill the ethical and procedural requirements of conducting research in Amerindian communities in Guyana. My community collaborators were selected by each village's Village Council. The EPA determined the remuneration of my community collaborators (in 2011, \$2000GYD per day) and provided the "Local Counterpart Registration Form." Also, as per the requirements of the University of Ottawa's Office of Research Ethics and Integrity, each of my community collaborators signed a Confidentiality Agreement to ensure that they understood the importance of keeping participants' identities confidential and that they agreed to maintain this confidentiality. In Surama and Wowetta, I worked with the same community collaborator in Phase 1 and Phase 2 of data collection. In Yupukari, I was assigned a different community collaborator in Phase 2 because my original community collaborator for Phase 1 was away when I returned for Phase 2. My community collaborators were: Comacho Scipio (Sir Scipio) in Surama, a retired headmaster who had helped with the founding of the Club; Oswin Ambrose in Phase 1 and Kim Dorrick in Phase 2 in Yupukari, both young men who were former Club members; and Donna Xavier in

⁵⁷ The governments of Guyana and Brazil have agreed to pave The Road for many years, and recommitted to this goal in June 2015 (KNEWS, 2015), but as of December 2015, it has not been paved.

Wowetta, a mother with children who had been Club members. Thus, my community collaborators represented diverse stakeholder groups in the Clubs.

My community collaborators assisted with identifying and recruiting participants, providing an oral history on their local Club, and organizing interviews and focus groups. I piloted the interview questions with my community collaborator in each Village and made modifications to improve the clarity of the questions and to fine-tune the terminology I used with participants. My community collaborators travelled with me by bicycle to most of the semi-structured interviews, and assisted in facilitating some focus groups. All four community collaborators were fluent in both English and Makushi and provided translation from English to Makushi and vice versa during interviews and focus groups. Translation was helpful for interviews with some elders for whom Makushi was their first language, and in one focus group that included elder participants less fluent in English.⁵⁸ The community collaborators also debriefed with me after interviews and the focus groups, and debriefed with some participants as well (to check with the participants about how they felt about the research process, and whether they had feedback about the research process).

3.7. Entry, Access, and Rapport

Entry into the field, the selection of the environmental education program to study, and the general research topic itself was facilitated by my visits to the North Rupununi and connecting with Iwokrama and then NRDDDB before data collection. As described in **3.1.**, I lived for a month in Yupukari in 2006, and spent several weeks staying in or near Surama, Wowetta, and Yupukari (as well as other villages) from January to April of 2010. This allowed me to build rapport and trust with community members, identify key informants, and spend time observing

⁵⁸ Most people speak English, including elders. However, some topics were easier to discuss with a few of the elders if the community collaborator and the participant conversed in Makushi.

Club activities and meetings. The time invested during the reconnaissance in building rapport and trust within the communities and in modifying my research proposal to better serve the needs of the communities proved essential for data collection in 2011. After my reconnaissance, and before the acceptance of my Thesis Proposal in March 2011, Iwokrama withdrew from partnering in the research, which eliminated my access to their staff (who had previously facilitated connecting with community members), resources, documents, and logistical support. NRDDDB then partnered with me, which gave me access to the above resources that I needed. Particularly invaluable was NRDDDB's staff's expertise and local contacts, NRDDDB's Bina Hill facilities (with electricity, internet access, a printer, desk space, and a safe), and logistical support (especially helping me find affordable ways within my IDRC grant budget to travel between the communities).

In Guyana, it is the Amerindian communities themselves that are the most important gatekeepers that decide whether to accept proposed research to occur in their communities and allow entry of researchers (see **3.2.1. Ethics Approval**). Thanks to the above previous visits and time invested in building rapport, I had a strong foundation of trust and respect within the villages of Surama, Yupukari, and Wowetta. All three of these communities gave me permission to conduct my research. Thanks to strong rapport based on my previous time in the communities and excellent support from my community collaborators, we recruited participants for the individual interviews and for most focus groups easily. See **3.8.2. Focus Groups** for the challenges we had to recruit enough participants for two of the focus groups. I also held follow-up meetings within the three communities to obtain feedback on the preliminary research findings and on the research process. The feedback was positive and community members who attended the meetings appeared to be satisfied with both the interpretation of the findings and

with the research process (see **3.10. Trustworthiness**). Over the course of the fieldwork, several community members gave unsolicited positive feedback about the research process, particularly about my use of written consent forms.⁵⁹ Going over the consent forms and explaining the purpose of the research with each participant was what I felt to be the most ethical process, and it also appears to have helped build rapport. I have stayed in touch with several community members, and NRDDDB and Caiman House staff via email to continue checking-in about the interpretation of the findings and descriptions of the communities. However, email can only continue dialogue with a select few of the stakeholders in this research since many former participants do not have access to the internet or are not internet-literate.

3.8. Methods

Multiple data collection methods were used in an effort to answer the research questions (see **3.4. Research Questions**), and thus yield insight on current (2011) perceptions about the impact of participation in NRWC on Club members' environmental knowledge, attitudes, and behaviour, on their PYD, and on their community. In addition, I sought to explore the local meaning of the terms 'pro-environmental' and PYD. The main methods were semi-structured and informal interviews, focus groups, and observations. Observations were recorded as field notes in a reflective journal.

3.8.1. Individual Interviews

The main data collection method was individual interviews, a common method in education research (Hatch, 2002) and central to the case study approach (Yin, 2009, p.106-9).

⁵⁹ While I was happy to hear that community members felt I was conducting the research in a good way, I was disturbed to hear that previous researchers had not used consent forms. I heard from one other researcher in the area that they were told by their supervisor to use verbal consent because the supervisor claimed consent form could worry potential participants and interfere with recruitment. Verbal consent may be more appropriate in some indigenous communities (Baydala et al., 2013), but I do not believe this to be the case in the North Rupununi. One of my recommendations to the communities is that they establish guidelines for best practices for research and then hold researchers accountable to these guidelines.

Interviewing has several features that make it an appropriate data collection method to explore all five of the research questions (see **3.4. Research Questions**). Interviews can provide a depth of understanding not possible with surveys (Seidman, 2006). The interview can ‘go deep’, “allowing the researcher to see an event or context from the point of view of the people he or she is researching” (Hammond & Wellington, 2012, p.91). Interviews are not used for prediction, but to seek meanings from participants about their opinions and their experience of events (Patton, 2002), which was the goal of this research that focused on participants’ perceptions about their local Wildlife Club. Interviews are interactive, which allows for “clarification of questions and identification of unexpected themes” (Hammond & Wellington, 2012, p.92). Participants can also be more candid in an interview than in a written document as long as there is good rapport with the interviewer (Jorgenson, 1992).

Interviews can be formal or informal, and range along a spectrum of structured to unstructured. Formal interviews are scheduled in advance for a set duration, while informal interviews take place spontaneously when the researcher and a community member cross paths during fieldwork and are generally short but the duration is not predetermined. By their nature, informal interviews are best suited for simple questions, clarifications, and “second thoughts” of prior participants (Rubin & Rubin, 2011, p.30-31).

Structured, semi-structured, and unstructured interviews are generally formal, and were in this research. Structured interviews do not deviate from the predetermined interview guide. Unstructured interviews do not use a structured interview guide, and questions tend to be open-ended (Cohen & Crabtree, 2006). The semi-structured interview is an attractive intermediate between these extremes, “more manageable than unstructured ones, while avoiding the inflexibility of the fully structured approach” (Hammond & Wellington, 2012, p.92).

Limitations of Interviews. Interviews also have limitations. Due to social desirability, interviewees may modify their responses in an attempt to tell the interviewer what the interviewee thinks the interviewer wants to hear. This is called the Hawthorne effect (Fraenkel & Wallen, 2003). This can be mitigated by the interviewer striving to appear impartial during the interview, and being upfront in the data analysis about her/his possible impacts as an observer.⁶⁰ The process is time intensive, from the actual scheduling and administering of the interview, to transcription and analysis of the Interview (Seidman 2006). Finally, there are memory issues for interviews on past experiences (as in this research, which included adult former NRWC members being asked about their Club experiences).

Developing and Refining the Interview Guide. Before the reconnaissance, I thought I would administer a questionnaire and interviews. Therefore, I arrived to the Rupununi in 2010 with many potential questionnaire items and interview questions in tow, which I asked community members about during many conversations in the eight villages I visited. This fine-tuned the language and terminology used in the questions, and questions were added and dropped from the thematic groups of interest, and new thematic groups and questions for those groups were added. The themes added due to the reconnaissance were Club membership's impact on PYD, and local meaning for the terms "pro-environmental behaviour" and "PYD".

I returned in 2011 for data collection with interview guides tailored for five categories of participants: 1. Youth who were former Club members (**Appendix K**); 2. Youth who were not former Club members (**Appendix L**); 3. Elders (**Appendix M**); 4. Community leaders (**Appendix N**); and 5. Adult volunteers with the Club (**Appendix O**). The guides for former NRWC members and youth who were not former NRWC members were more extensive than the

⁶⁰ It is impossible for the observer to NOT affect the observed phenomenon (Wilson, 2008). However there is a qualitative difference in the impact the observer has, ranging from being overtly partisan and obvious about the responses she wants, versus striving for the appearance of impartiality.

guides for other categories since these participants were asked more questions within each of the themes explored in all participant category guides, and were asked about additional themes as well. These additional themes were about former Club members' personal experience in their Club, and they and the non-former Club members were also asked about their experiences with mentors, and to discuss two "Vignettes" (see **Appendices K and L**). The Vignettes were in the first section of the interview guide, which explores the participant's meaning of "pro-environmental behaviour". The goal was to explore how the participant thought s/he would behave in a hypothetical scenario that was highly likely to occur in the North Rupununi, modelled from actual situations Amerindian communities had faced in which their local natural resources were threatened. One scenario was about a foreign oil company wanting to drill for oil near the participant's community, and the other was what s/he would do if the community noticed a significant drop in the abundance of local wildlife.

The interview guides were piloted with my community collaborators. It became quickly clear that the former Club member guide was too long. The non-former Club member guide was a bit shorter since it did not ask about participants' experiences in the Club, but was still considered long. Therefore several items were dropped from the former Club member and non-former Club member guides. The relevance and appropriateness of the Vignettes was confirmed. Piloting of the other guides showed their length (13-14 main questions per guide taking approximately 30-45 minutes), was appropriate. Terminology was refined in all guides. Follow-up questions were discussed.

The targeted interviews were abbreviated versions of the in-depth interviews, designed to gather the views of participants who did not have time for a longer interview or who wished to be interviewed but were from a category that was already fully recruited. Thus, questions were

selected from the appropriate interview guide for the participant's category. For example, questions asked in a targeted interview with an elder were drawn from the in-depth elder interview guide.

Recruitment. Interview and focus group participants were recruited simultaneously, and presented with either option. Depending on their expressed interest, potential participants were given a recruitment letter for either the individual interview or focus group, or both. The recruitment letter for interviews is in **Appendix G**, and the recruitment poster is in **Appendix H**.

My intention was to use purposeful sampling in recruiting participants. However, as will be described below, in reality I had to rely on convenience sampling as well. In keeping with the goal of qualitative research, the logic and power of purposeful sampling lies in selecting information-rich cases to study. "Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the inquiry" (Patton, 2002, p.230). Thus, in each of the three communities, my local community collaborator and I sought to recruit a female and a male participant over the age of 18 in the five categories of stakeholders in the Club previously listed (former Club members, non-former Club members, elders, community leaders, and adult volunteers) for the in-depth interviews. This added up to 10 people per village, for a target of a total of 30 participants. Knowing that more people could want to be interviewed than required for the in-depth interviews, and that some people might not feel they had time for an in-depth interview, I also offered targeted interviews. We also wanted to recruit those with no direct involvement with the Club for the targeted interviews, to include their views (in particular, I was interested in interviewing parents whose children were not participating in the Club). The difference between the in-depth and targeted interviews was that the targeted interview was

shorter (less questions asked), and compensation for the participant's time was offered for in-depth but not for targeted interviews.

Hence in theory, my community collaborators and I intended to recruit for the in-depth interviews first, and if there was an "over-flow" of interested participants, and participants that did not fit the five categories, then two or three people per village would be given the option of participating in a targeted interview. Thus a total of six to nine targeted interviews. In practice, our recruitment did not conform to this neatly linear ideal, and was messy, complicated, and compromises were made to collect sufficient data within the short time frame of two weeks per village in Phase 1 of the research. We discovered that certain categories were easily recruited, while other categories were not. Unsurprisingly, those most involved in the Club were the most willing to participate and the most likely to be aware of and be interested in my research. Therefore, we easily recruited sufficient participants who were former Club members, and adult volunteers with the Club. It was not possible to know for sure, but it seemed like parents of Club members (who could fall into any category) were also more likely to be recruited. It became clear during data collection in the first Village, Surama, that the ideal of a male and female participant from each category would not be possible. It turned out to be exceedingly difficult to recruit youths who were non-former Club members because the vast majority of children and youth who had the opportunity had participated at some point in their lives. Only one person who was the right age to have had an opportunity to join the Club when younger, but had not, was interviewed (one male youth in Yupukari). My community collaborators and interview participants knew parents were not allowing their children to participate in the local Club, and I wanted to conduct targeted interviews with them to include their perspective. However, despite my community collaborators' efforts, none of these parents responded to our invitations to

participate. We were able to recruit some community members who were not directly involved in their local Club, particularly in Yupukari. It was also more difficult to recruit community leaders, since they were often very busy. In Wowetta I interviewed one female community leader, in Yupukari I interviewed two male community leaders, and in Surama, none.

In contrast, there was an excess of participants in other categories, especially in Yupukari. I anticipated that some people might wish to be interviewed in a fully recruited category, hence the targeted interview option. I did not anticipate so many people coming to us to volunteer to be interviewed, and it wasn't clear at the time how to tactfully decline to interview people.⁶¹ In addition, since there was a lack of participants in certain categories, and I was already noting early in data collection that there did not appear to be much difference in participant responses based on the categories I had classified them in, I felt it was acceptable to interview more people from the well-represented categories. Thus convenience sampling was used along with purposive sampling. Since Yupukari had a larger population than Surama or Wowetta, and our outreach to invite participation seemed particularly effective in this community, it was Yupukari that accounted for so many extra targeted interviews (12 of the 19 targeted interviews were in Yupukari).

The basic recruitment strategy was similar in each community: announcements after Sunday Church services, direct requests, posting posters, and announcements at community meetings. By far the easiest way to reach the most community members is to be given the opportunity to make an announcement during a Village General Meeting (VGM). However, only Yupukari had a VGM scheduled during my fieldwork. I knew from past experience (in 2006 and 2010) and from correspondence with community members before my arrival in 2011, that the next best opportunity to inform many community members at once is the informal period of

⁶¹ I did not want to offend anyone or risk people feeling I was ungrateful by not interviewing them.

announcements after the Sunday church service. I arrived in each community at least two days before Sunday, and then met with my community collaborator that day to plan our recruitment and schedule for the two-weeks of data collection in their community. Arrival at least two days ahead of Sunday was to ensure I could then announce the research and invite participation after Church service on the Sunday. It was important, given such a short data-collection period per village, to make the announcement as early as possible in the two-week data collection period. The other key way we recruited was through direct requests, particularly with those I had previously identified during my 2010 reconnaissance or whom my community collaborators suggested. I also used snowball sampling by asking participants to suggest other participants. Potential participants were usually invited to participate in person. This was time consuming but very effective. We had recruitment letters (see **Appendix G**) with us, which we brought to potential participants and then read over with them. With a few people, my community collaborator translated some parts of the letter verbally into Makushi to help comprehension. Some people decided immediately, while others wanted to think it over. In both cases, we left the potential participant with the recruitment letter to refer to. For those who needed time to decide, we returned at a specified time for their response. In a few cases, we left recruitment letters for potential participants at their homes if they were not there when we visited, then we returned later. I also created posters to invite participation in the interviews (see **Appendix H**), which my community collaborators and I posted at places where people congregate, such as at the village office, shops, churches, community centers, football fields, and schools.

There was some variation in the recruitment strategy between the villages. In Surama, the first opportunity to announce the research and invite people to participate after Church⁶² on Sunday 29 May 2011 failed because it rained and no one came to Church. The second

⁶² Surama has only one church, an Anglican Church.

opportunity (June 5th) was near the end of data collection. There were two Community Work Days, and I was given the opportunity to invite community members during a break on 30 May.

Yupukari had three churches. Two of the churches had simultaneous services on Sunday mornings, therefore my community collaborator made the announcement at his church while I attended the other church on my two Sundays there (12 and 19 June). I then attended the third church's service, which was later in the day. In this way, between the two of us we covered all three churches. There was a VGM on 18 June 2011, and I was given an opportunity to speak and invite participation in my research.

In Wowetta there were two Churches. I was too ill at this point in the fieldwork to attend church services on the two possible Sundays (26 June and 3 July), but my community collaborator made announcements about the research after her Church's services. There was no VGM scheduled during data collection, but Wowetta's Village Council organized a community meeting early in the afternoon of the 26th of June about my research, which was an excellent opportunity to invite participation. Still, far fewer participants were interviewed in Wowetta due to my ill health and the tragic death of a child in the community. See **3.12. Limitations**.

Collection of Interview Data. I was accompanied by my local community collaborator to most of the in-depth and targeted semi-structured interviews, particularly if I knew in advance the participant might prefer to communicate in Makushi. Like in previous visits to the Rupununi, my main mode of transportation within the villages was by bicycle. Most interviews were conducted at the participant's home. Some participants preferred to be interviewed where I was staying in the village: four in Surama, three in Yupukari, and two in Wowetta. Three participants in Yupukari were teachers and preferred to be interviewed at the school where they worked.

The in-depth interviews usually took 30 to 60 minutes depending on which interview guide was used. Most interviews using the elder, community leader, or adult volunteer interview guide took around 30 minutes or less, and only one participant, a teacher, required the interview to be ended early (and then be completed later that day) because her lunch break was short. Interviews using the former Club member and non-former Club member guides were longer (see above), and despite eliminating some questions during piloting, the full interview tended to take at least 45 minutes, and could take over an hour. Some participants appeared to become restless and less engaged after 30 minutes, while others appeared relaxed and engaged throughout the interview. With those who appeared to be less engaged during the longer former-Club member interviews, I dropped questions from the themes to shorten the interview, thus there are less responses to some questions. The categories of participants are described in **3.9. Participants**.

Delivery of the interview guide (especially how to offer clarification of questions, how to request clarification, and what follow-up questions to ask) was also continually refined and informed by reflection on the interviews and debriefing with my community collaborators.

I found informal interviews particularly useful since the participant was then possibly part of a Club activity (such as a Club meeting or birdwatching), thus the person could be asked about the phenomenon as it occurred versus from memory when interviewed in their home. Simply a different setting seemed to prompt the participant to say more about some topics. Responses in these informal interviews supported the data collected from the formal interviews.

Interviews were audio recorded whenever possible, with participants' permission. As explained in **3.2.1. Ethics Approval**, I was required by Guyanese law to leave copies of the raw audio recordings with MoAA. I made sure to go over the part of the consent form that alerted participants about this very carefully with participants. I was surprised that only four of the 43

interview participants refused to be audio recorded. I took notes at each interview regardless of whether it was audio recorded. If the interview was recorded, the notes were a backup. Which was important because there were numerous technical difficulties when the H4N Zoom audio recorder which did result in some partial and complete loss of audio recordings of interviews (see **3.12. Limitations**). Some audio recordings were made with Garage Band on my MacBook Pro laptop when the H4N Zoom's batteries were dead. Audio recording certainly allowed me and my collaborator to be more attentive to the dialogue with the participant. If a participant refused to be recorded, then detailed notes were taken of the interview.

This study took place in a naturalistic setting (the three villages), therefore informal interviews also occurred spontaneously during both Phase 1 and 2 of data collection. These informal interviews were with any interested person encountered during data collection, but particularly occurred when I attended Club activities. Informal interviews were also an opportunity to follow-up with former participants for clarification or additional questions. A few participants sought me out in order to clarify or elaborate on their comments. The informal interviews were flexible and tended to be short, which allowed more people to share their views. Informal interviews were not audio recorded (notes were taken during or immediately after the conversation), and consent was verbal. The informal interviews were part of an iterative process of the researcher reflecting upon the data and data collection process.

Participant Compensation. Participants of the targeted interviews were not compensated for their time. Compensation for in-depth interview participants was set at \$1000GYD (approximately \$5CAD). The individual villages determined how this compensation was to be offered. Surama's Village Council decided that compensation would be in the form of a "hamper" of "provisions" worth \$1000GYD: a pound of flour, pound of sugar, and a bar of

soap. Senior Councillor Jacqueline Allicock explained to me that it was important to make sure that benefits that came to the community due to my research were fairly shared amongst community members. It could cause conflict if some community members received large cash compensation. And the Village Council wanted male participants with families, in particular, to be compensated with the hamper instead of cash so that their whole family would benefit. She said that some men, if given cash, would spend it on themselves instead of on their family (J. Allicock, personal communication, 29 May 2011). Similarly, in Yupukari, the Village Council also decided the compensation should be with a hamper. I met with Toshao R. Anthony Roberts Jr. to talk about the research. He confirmed that in-depth individual interview participants were to receive a hamper of provisions. Further, the items (like in Surama, flour, sugar, and soap) were to be purchased as evenly as possible from the three stores in the community to “spread the benefits around” (R.A. Roberts, personal communication, 14 June 2011). He said it was acceptable to provide a participant with cash compensation if there was good reason to do so (for example, one participant had to walk two hours to return to his home, therefore he preferred cash over the heavy hamper). Compensation in Wowetta was also flexible, as long as the goods or cash were worth \$1000GYD.

3.8.2. Focus Groups

The focus group is “a research technique that collects data through group interaction on a topic determined by the researcher” (Morgan, 1996, p.130). This form of qualitative research convenes a group of people to discuss their attitudes, beliefs, and opinions about a theme, phenomenon, product, concept, idea, etc. There is a moderator or facilitator who asks questions, and participants are free to talk with peers. Indeed, participants are encouraged to discuss the questions, since the “hallmark of focus groups is their explicit use of group interaction to

produce data and insights that would be less accessible without the interaction found in a group” (Morgan, 1997, p.2). In other words, it is argued focus groups can reveal insights that individual interviews cannot, though this is debated (Fern, 1982). The focus group method was used during World War II to assess the impact of pro-military propaganda, began to be used in marketing research in the 1950s, and became popular in qualitative research in the 1990's (Collis & Hussey, 2013).

The focus group method was selected to be an adjunctive data collection method to the main data collection method (individual interviews). The idea to add focus groups came from community members during my reconnaissance, as described previously. Several community members told me that holding focus groups would be a good approach to learn about NRWC. Indeed, I was surprised by how enthusiastic community members were about this method, and confirmed previous researchers had used this data collection method in the region. Community members told me they felt focus groups were less intimidating than one-on-one interviews (although community members readily accept invitations to be interviewed individually and appeared comfortable with this method, too). Focus groups are a good method to understand a community's shared values on a topic (Kitzinger, 1994), and are effective for exploring meaning and context from multiple perspectives in an interactive way (Fontana & Frey, 1994). Thus, I thought focus groups would be appropriate to answer the research questions that explored local community members' perspectives on the meaning of pro-environmental behaviour and PYD. There is also evidence that focus groups may be valuable to study issues in socially marginalized groups (Kitzinger, 1994; Madriz, 1998). The Makushi are a marginalized people in Guyana (Bulkan, 2013; Wihak, 2009). I also thought the focus groups could help triangulate the individual interview findings.

Limitations of Focus Groups. There are several limitations to focus groups. First, some individuals can dominate the discussion. Attentive facilitation is important to help minimize this issue, encourage participation by all participants, and keep the discussion on track (Kidd & Parshall, 2000; Morgan, 1996; Hollander, 2004; Vogt, King, & King, 2004). During data collection, I facilitated the focus groups, and my community collaborator helped the focus groups run smoothly, and provided translation as needed. Five of the six focus groups were audio recorded, which allowed me to be fully present to focus on the dynamics of the conversation, encourage those who had not contributed to speak, and to offer or request clarification. Another strategy to avoid the conversation being dominated, which was not possible in this study (see **3.12. Limitations**), is to recruit a homogenous group of participants who are peers, versus having a group of participants with varying degrees of power and social status. Those with lower social status or power within the group could be silenced, which Hollander (2004) calls “problematic silences.” Another issue with focus groups is the pressure to conform to the group, which may lead participants to adjust the expression of their opinions to match those of others in the group (Asch, 1956). Similarly, social pressure to conform may lead to “groupthink,” which is when people in a group agree with more extreme ideas than they would in a one-to-one interview (Janis, 1972). These issues are not readily mitigated, thus triangulation with another data collection method is recommended (Fontana & Frey, 1994). There is some evidence that participants perceive focus group to be more dynamic and stimulating than some other data collection (Bristol & Fern, 1996), but when tested experimentally, there is no evidence that focus groups are superior to either un-moderated (nominal) groups or individual interviews of equivalent numbers of subjects in terms of number or quality of ideas generated (Fern, 1982).

Finally, it can be difficult to “make sense out of data that are complex and messy” (Kidd & Parshall, 2000).

Developing and Refining the Focus Group Guide. The interview guide for the focus groups was developed at the same time as the guide for the individual interviews. Both data collection methods were intended to answer the five research questions, hence the questions in the focus group guide are very similar to the questions in the shorter elder, community leader, and adult volunteer individual interview guides. There were stakeholders from all five groups in the focus groups, therefore the focus groups were not asked questions from the former club member guide that were about personal experience with the Club since the majority of focus group participants had not been Club members. Rather, the first part of the focus group encouraged discussion about the current state of the Club and what impact they perceived the program to have on their youth, and the second part encouraged discussion about what the Club could be like in the future. Many questions were the same as in the interview guides, but were phrased differently to encourage discussion, such as beginning with “Can you describe for me...” See **Appendix R- Focus Group Guide**. As with the individual interview guides, the focus group guides were piloted with my community collaborators, and the wording was tweaked for each community to increase clarity and to stimulate discussion.

Recruitment. There were two focus groups conducted in each Village, one for women, and one for men. The goal was to recruit 8-10 participants per focus group, and to have 1-2 participants from the five categories (see **3.9. Participants**), as well as include community members who did not fall into those categories. The focus group recruitment letter is in **Appendix P**.

The efforts described to recruit for interviews were used to simultaneously recruit for the focus groups. Potential participants were informed about the research (individually, through announcements, or through posters) and were then told of the two options for participation (individual interviews and focus groups). Before encountering the on-the-ground realities of the short data collection period, my intent was to recruit different participants for each data collection method, hence individual interview participants would not participate in the focus group, and vice versa. However, this was not possible in practice.⁶³ It was not possible to control who decided to participate in the focus groups. Had I turned away those who had previously been interviewed, I would not have had enough participants in the focus groups. And had I declined to interview those who had participated in the focus group, I would not have recruited sufficient participants in most categories. As it was, no one from the non-former Club member category participated in the focus groups. Other categories were well represented in each focus group. Community members who did not fall into the five categories also participated.

As with the individual interviews, the intent was purposive sampling, but in practice the focus groups were more of a convenience sample because I accepted the participation of all those who showed up to the focus group. Given the time limitation, and the lack of an appropriate way to turn away would-be participants who had travelled to the focus group without causing offence, I had to “take what I could get” (see **3.1.2. Limitations**).

Given the above, it was not possible to tightly control the actual number of participants in the focus groups. Thus the number of participants ranged from five to 14 per focus group. The recommended number of participants per group is six to ten (MacIntosh, 1993), but some researchers have had up to 15 participants (Goss & Leinbach, 1996) or as few as four (Kitzinger,

⁶³ This may not have been a better approach; see **3.12.1.** for the advantages of participants experiencing both methods.

1994). Thus five participants is a bit low but acceptable. I was concerned that if there were more than ten participants it would be more likely that some participants would not speak. Only one focus group had over ten people (14), and indeed, a few participants did not speak despite efforts to engage them. Two groups had less than six people, but the conversations were engaged and rich. The other three focus groups had the ideal of six to 10 participants.

Collection of Focus Group Data. I facilitated each focus group, and my community collaborator helped monitor participant's comfort and engagement, provided translation when needed, and attended to logistics (such as checking on preparation of the collective meal). At the beginning, I presented to the group of potential participants the goal of the research, described focus groups, and described the agenda for our time together. I emphasized to these potential participants that they could decide not to participate, and if they did choose to participate, they could withdraw at any time. Next, the consent form was explained, particularly the ramifications of audio-recording the focus group (as explained previously, Guyanese law requires that copies of audio recordings be submitted to MoAA, EPA, and the Village Council). Thus, it was explained that the decision to allow audio recording had to be unanimous, otherwise, notes would be taken. Participants then signed their consent forms (see **Appendix Q - Focus Group Consent Form**), which included ticking off their choice about audio recording. All but one focus group was audio recorded and transcribed. A few participants in the women's focus group in Yupukari declined to be audio recorded, therefore I took notes during that focus group instead of audio recording it.

Ground rules to facilitate a positive and respectful space for the discussion were established for the group. This included discussion about confidentiality. I explained that because each participant was in a group, they knew who else had participated in this part of the research,

and they would hear things that other people contributed in the focus group. Therefore, I asked that participants make two agreements. First, to not disclose the identity of fellow participants to people who were not part of the focus group (unless they obtained permission from the other participant(s)). And second, to agree that while everyone was welcome to share the content of the discussion, participants should refrain from identifying what a particular participant said, unless they obtained permission from this participant.

My role as facilitator and the role of my community collaborator were described, participants were reminded they could communicate in English or Makushi (if needed, the community collaborator translated), and the goals and expectations of the focus group were described. I noticed early in data collection in Surama that many community members were not familiar with the purpose and activities of their village's Wildlife Club, and so focus group participant's knowledge about the Wildlife Club varied considerably. Therefore, the history, goals, and vision of NRWC were briefly described, and recent Club activities (such as participation in Festival, birdwatching, etc.) were also described.

The focus groups took 75 to 105 minutes, with a 10 to 20 minute introduction and signing of the consent forms, an optional 10 minute break after the first hour, and a meal together afterwards that lasted as long as the participants wanted (usually 45 to 120 minutes). The focus groups were conducted at a central well-known location in each village: In Ms. Emily Allicock's outdoor benab in Surama; in the library's upstairs room in Yupukari; and in the community centre in Wowetta. The focus group discussions were generally lively, highly interactive, and a diversity of views were expressed. Some questions prompted discussion more easily than others. Like with the individual interviews, the items about discussing the local meanings of the terms "environmentally friendly" and "Positive Youth Development" required more explanation.

Participant Compensation. Focus groups were conducted previously in the three research sites, and the standard participant compensation for this (and for many other kinds of meetings as well) was to provide participants with refreshments during the focus group and a meal afterwards. Participants may need to walk up to an hour or more to reach home after the focus group, and the length and timing of focus groups can interfere with participants' usual mealtime. Snacks and beverages are not frequently carried or purchased by local people, and are not as readily available from the few stores. Ensuring that participants were comfortable during the focus group and were willing to stay for the duration of the focus group was important, as was respecting local customs. Village Councils also expected that research projects would "spread the benefits around," as Toshao Roberts put it (personal communication, 14 June 2011). Therefore, compensating participants with refreshments and a communal meal was not only considered appropriate (and enjoyable) compensation, it also provides work for local community members. Each village had community members who provide catering services. These community members were employed to prepare refreshments (usually a juice from a local fruit in season and local snacks) and a hot meal. The ingredients were purchased from local stores to further distribute funds in the local economy.

3.8.3. Field Notes And Reflective Journal

Throughout the data collection fieldwork, I wrote field notes to record observations (Bogdan & Biklen, 2007; Creswell, 2003, p.185-8; Yin, 2009, p.109-13) of Wildlife Club events and activities, about the data collection itself (e.g., the administration of interviews, recruitment, the informed consent process, etc.), about informal interviews and conversations, and about some artefacts (I was given access to hard copies of some Club records). The format was a table with a column on the left strictly for observations and facts (when, what, where, who, and how), and the

column on the right-hand side for my reflections on these observations. The right-hand side was where I also noted my personal feelings, concerns, and given my frequent illnesses, the symptoms, treatments, and impact of the symptoms on my data collection. The purpose of these notes was to facilitate continual data analysis and to keep track of the potential impact my illness could have on data collection.

The opportunities to observe Club activities were infrequent and varied from village to village. During data collection, there were no Club activities to observe in Wowetta (the club was inactive at the time), one birdwatching was observed in Yupukari and one in Surama, one Club meeting was observed in Surama, and a Club meeting and a Club Executive meeting were observed in Yupukari. Similarly, there were few artefacts and documents to record, and considerable variability in the amount and quality of the physical artefacts in each community. Therefore, observations were not systematic and were not analyzed. Rather, these field notes from the 2011 data collection periods, and from 2006 and 2010 field journals are presented in **Appendix E – Encountering the North Rupununi** to provide context for the analysis of individual interview and focus group data presented in **Chapter 5 – Data Analysis**. When appropriate, these observations provide triangulation for data from interviews and focus groups when the findings are discussed in **Chapter 6 – Discussion**.

For most of my observations of NRWC meetings, events, and other activities in 2011, I was an unobtrusive observer, with my field notes recorded as soon after the activity as possible. In 2010, I was more of a participant observer, and recorded my notes soon after the experience.

Keeping the reflective journal about these field notes was part of my commitment to ethical research with these indigenous communities. Self-awareness in research is integral to issues of accountability to the community and for identifying our location and its associated

baggage (biases, assumptions, perspectives) from which we study, write and participate in knowledge creation (Said, 1994; Schram, 2003, p.100-103; Tierney, 2002). Therefore, my reflective journal⁶⁴ helped keep me aware of my role as a non-indigenous researcher/Ally in these Makushi communities, and was part of my commitment to locating the research within Ethical Space.

3.9. Participants

To determine the sample for this qualitative research, I identified five social and thematic groups of people that could provide the most relevant perspectives on the research questions. Thus in each of the three communities, my local community collaborator and I sought to recruit participants over the age of 18 in the following categories of stakeholders in the Club: former Club members, non-former Club members, elders, community leaders, and adult volunteers.

Former Club Members. This category was for youth over the age of 18 who were former Club members. This inclusion criteria did not distinguish between those who had been engaged in their Club versus those who had been members but were not very engaged, nor how long the participant had been a member. Thus the Former Club Member Interview Guide (**Appendix K**) had questions about the participant's engagement and the length of their Club membership.

Non-Former Club Members. This category was for youth over the age of 18 who could have been Club members, but had not been. This meant they also had to be less than 30 years old to have been young enough to be a Club member when the Clubs were established in 1999 (I.e., less than 18 years old in 1999).

⁶⁴ During my 2010 reconnaissance, I kept field notes and some of my reflections worked themselves out in blog posts, which evolved from descriptive prose to reflective free form poetry (e.g. <http://juliecomber.com/karanambu-motorbike-gold/>).

Elders. Elders are community members usually over the age of 55 who are recognized by their community to be knowledge holders. Tanya Chun Tiam Fook (2011) also used this category for her research, and I agree with her description of elders in these communities:

[Elders are] recognized and respected within their villages as those with much knowledge and a long social and environmental memory of community life, customary traditions, and environmental change within the region. Most elders possess many stories and memories pertaining to animals, animal behaviours and patterns, place names, ancestral and sacred sites, harvesting and wildlife practices, and processes of change in social life and land resource use. (Chung Tiam Fook, 2011, p.86)

Elders are essential for the transmission of their community's indigenous knowledge and traditional ecological knowledge. At this time, there has been a disruption of that knowledge transmission, and the natural resources of the North Rupununi are under increased pressure. Elders can be called upon to revitalize customary knowledge and practices that can benefit cultural and environmental conservation (Chung Tiam Fook, 2011, p.86). Elders volunteer with their local Club, particularly to assist Club members to prepare for the traditional skills contests and Culture Night performances at the Wildlife Festival, and may help with local activities and events.

Piamon (also spelled *peaimen*, the local term for shamans) are healers and after the age of 55 may take on elder responsibilities, too. "Many peaimen also claim to have relationship with animal and landscape master or guardian spirits, whereby they mediate between villagers and master spirits, negotiating the terms of harvest and use" (Chung Tiam Fook, 2011, p.86). Only one piamon was identified during data collection, and we did not succeed to recruit him.

Community Leaders. In Guyana, each community on titled Amerindian land has a Village Council, which is composed of village councillors and a *toshao* (leader) or a senior councillor. The Village Council is elected by the community every three years. Surama Village and Wowetta Village fall under the jurisdiction of Annai Village, hence Annai has an elected

toshao and council, and satellite communities have their own village council. The senior councillor from Surama and Wowetta's village councils represent their villages at Annai's Village Council. Senior councillors are often referred to as the toshao of their village. Yupukari is an independent village with a toshao and village council. For this research, the community leaders' category was for the current toshao or senior councillor and the village councillors. Some participants in the elder category were former village leaders.

Toshaos and senior councillors represent their villages at the NRDDDB and make the resource management decisions at the village level. However, "there are many points of consultation, and consensus decision-making is conducted with the entire village, during regular public meetings, including report-back of collaborative meetings and workshops with NRDDDB, IIC [Iwokrama], and other organizational partners" (Chung Tiam Fook, 2011, p.84).

Adult Volunteers. This category included adults who volunteered with their village's Wildlife Club. Each Club has an adult Coordinator, and most Clubs also have other adults who volunteer. The Coordinator is an essential role for the NRWC program. The Coordinator helps the Executive to plan activities and manage the budget. The Coordinator often hosts the Club's Executive and general Club meetings, helps organize activities, and may lead activities such as birdwatching, fundraising events, and other wildlife monitoring activities. The Coordinator also attends the quarterly Centralized Meetings (usually with the Club's president) and helps prepare the Club for the annual Wildlife Festival. In Surama and Yupukari, there were former club members who volunteered with the Clubs, including being on the Executive (generally intended to be for youths under the age of 18). Parents and elders also help the Clubs with specific activities (like birdwatching or fundraising) and to prepare for the Festival.

Community Members. As described in **3.8.1. Individual Interviews** and **3.8.2. Focus Groups**, we also attempted to recruit community members representing stakeholders who were not directly involved in their local Club for the shorter targeted interviews and for the focus groups to include their views. Their perspectives helped to understand perceived impacts of the Club on Club members and the community from those with no vested interest in the Club.

Further Considerations. The categories were not discreet, because a participant could be in several categories. For example, some adult volunteers were also former Club members, and some elders were current village leaders. For the interviews, I used the interview guide for the category that seemed most appropriate for that particular participant. Of course, the participant shared their knowledge drawn from their different roles within their community. Parents of Club members could have been another category, but since most adults were parents, I opted to have being a parent of current or former Club members to be a variable, and each participant was asked if they were a parent and, if so, if their children were Club members. In addition, like Chung Tiam Fook (2011, p.87), I attempted to recruit and include the perspectives of those from social groups traditionally marginalized from institutional and research conversations in this area: women, youth, and elders (Colchester et al., 2002). This was achieved with the categories specifically for youth (former Club members and non-Former Club members) and many adult volunteer were also youths; with the category specifically for elders; and with the goal to recruit a male and female from each category, as well as have focus groups for women (which were well attended). In all, there were slightly more women interviewed in Surama (seven women, six men) and Wowetta (five women, four men), but more men were interviewed in Yupukari (seven women, 13 men), for a total of 19 women and 23 men. Thus, 45% of interview participants were female.

3.10. Trustworthiness

Rigour is important in all research, whether qualitative or quantitative. Guba and Lincoln's seminal work in the 1980s for determining if qualitative research findings are "worth paying attention to" (1985, p.290) replaced reliability and validity, used in quantitative research, with the parallel concept of "trustworthiness," which contains four constructs: credibility, transferability, dependability, and confirmability.

The paradigm for my research was pragmatism. The intent of a pragmatic research is "to be helpful to the world" (Goldkuhl, 2012). To uphold this value, and ensure the trustworthiness of my research, I used the following approaches.

Credibility. Lincoln and Guba (1985) define credibility as the degree to which the data collected accurately represents the multiple realities of the phenomenon under investigation. Several approaches are recommended to help ensure credibility of qualitative research. The following are the approaches I used.

Member checks. I conducted three types of member checks: with my community collaborators, with individual participants, and through community meetings. One of my community collaborators accompanied me to most interviews and all focus groups. I debriefed with my community collaborator after each interview and focus group to check my interpretation of what was said and to seek clarification on anything that seemed unclear. There were a few interviews I conducted alone, in which case I talked with my community collaborator about the interview the next time we met.

Informal member checks were conducted throughout Phase 1 and Phase 2 with participants. After each interview and each focus group (during Phase 1), I invited participants to meet with me again to discuss the interview or to add anything, and told them where they could

find we, and the dates I would be in their community. I also reminded them that my email address was on the consent form, and they were welcome to email me (though few people had access to email). No one took me up on the offer to follow-up on their interview or focus group experience. However, a few participants I encountered later in my fieldwork did talk with me about their interviews. No one asked for anything to be changed or to retract anything they had said, but a few people offered more detail on something they had shared. Only one participant added a significant comment. Given their opinion was critical of the way a local organization portrayed NRWC's history, my impression was they had not been willing to share this opinion during their audio-recorded interview, but at this later opportunity that was "off the record" (not audio-recorded) they felt more comfortable speaking up. I also sought out a few participants to request clarification (which was sometimes due to technical issues with the recordings), but was unable to perform as many self-initiated individual member checks as anticipated due to ill-health in Phase 2 of the fieldwork. In those I did conduct, participants concurred with my summary of their interview.

The third kind of member check was community meetings, which were held in each community in Phase 2 of the research (Sept-Oct 2011) to obtain feedback on the preliminary findings (and for community members to choose the preferred medium to share the research findings within their communities). During the meetings, I presented the main preliminary findings, sought feedback, and encouraged discussion about the findings. Feedback was positive and indicated satisfaction with my interpretation of the data in all three villages. However, very little feedback and discussion were generated during these meetings (see 3.12.).

Triangulation of data sources. This type of triangulation checks for consistency of different data sources from within the same method. I gathered data from multiple data sources

(39 interview participants, and participants from the focus groups), which yielded a range of perceptions about NRW.

Methodological triangulation. The credibility of the findings was also ensured through employing multiple methods: individual interviews, focus groups, and observations. These are main data collection strategies for much qualitative research (Shenton, 2004). The use of different methods together compensates for their individual limitations and benefits from their respective strengths (Guba, 1981). Interviews and focus groups have similar limitations, which is why observations and background information on the program via documents was important (Shenton, 2004).

Transferability. Transferability is the degree to which the findings of a study can be applied to another setting. Transferability is important in pragmatist research, because it is considered valuable if research in one setting can help inform practice in other settings (Goldkuhl, 2008; Mathiassen, 2002). For example, findings about this Wildlife Club program in the North Rupununi could be relevant for similar programs in similar contexts.

Bassey (1981) proposed that it is the readers of the research report, not the researcher, who determine if their context is similar to the one described in the study, and thus if the study's findings are relevant to their own situation. Lincoln and Guba (1985) and Firestone (1993) suggest that it is therefore the responsibility of the investigator to ensure that sufficient contextual information about the fieldwork sites is provided to enable the reader to determine transferability to their situation. They argue that the researcher knows only the "sending context", thus cannot make transferability inferences. Therefore, transferability is a collaborative enterprise. The researcher's job is to provide the detailed description that allows readers to make inferences about extrapolating the findings to other settings (Polit & Beck, 2010).

To enable readers of my Dissertation to assess for themselves whether the findings are transferable to other settings or relevant to their own experience, I provide detailed context and background about the communities (section 3.5.) and the program (section 4.4.), and a thick description via narrative in **Appendix E**.

Dependability. Dependability is when findings are consistent and can be repeated (Lincoln & Guba, 1985), a parallel concept to replicability in quantitative research. Lincoln and Guba (1985) emphasize the close relationship between credibility and dependability, and argue that, in practice, strategies to ensure credibility also helps ensure dependability. In particular, employing multiple methods is recommended; as per above, I used focus groups, individual interviews, and observation. I also have carefully described my methods in this chapter so that the study could be repeated (Shenton, 2004).

Confirmability. This refers to the researcher striving for a degree of neutrality so that the findings of a study are based on the respondents' experiences and ideas and are not shaped by the researcher's bias, motivation, or interest (Lincoln & Guba, 1985; Shenton, 2004). Triangulation of sources (which I also used to uphold credibility, see above) can help to reduce effect of investigator bias and promote neutrality (Shenton, 2004). Another way to enhance confirmability is for the researcher to be upfront about *not* being perfectly neutral, and instead describe her or his preconceptions, beliefs, values, assumptions, and position (Malterud, 2001; Miles & Huberman, 1994). This is why I carefully situate myself in section 1.3., and describe my ethical considerations (section 3.2.) and my paradigm (pragmatism; section 3.3.). Keeping a reflexive journal during the research process is also helpful (Shenton, 2004). The method I used for keeping field notes, which included ongoing reflective commentary, is described in 3.8.3. The detailed methodological description required for showing dependability, above, also enables the

reader to determine the confirmability of the data (Shenton, 2004). Finally, it is important to identify limitations in the study's methods and their potential effects (Guba & Lincoln, 1985; Shenton, 2004). This is covered in section **3.12**.

3.11. Data Analysis and Presentation

Interview and focus group audio recordings were transcribed, then read to develop initial themes for coding. Each session of transcription (or review of typed notes) was a ceremony. Before beginning, I would mentally thank the participant for sharing their time and knowledge with me, and smudge (to purify my own intentions). After each transcription was complete, I wrote my own reflections about the interview. I also wrote two lines of song lyrics after each interview transcription was complete, a personal creative process that crystalized my interpretation of the meaning of what the participant shared with me. These lyrics were woven together into a song after the Dissertation was drafted. I did this in part because transcription was a time-consuming and tedious process for me because I am a slow typist. I am a songwriter, so those few lines of song were a reward that helped motivate me to keep going. At first it was just something I was doing for myself, like the poems I wrote and posted on my website during my reconnaissance. But I came to realize it was a valuable part of me engaging with and making sense of the data. Though I did not find any published papers about using song-writing in qualitative data analysis, I did find papers about the use of poetry. Lahman, Geist, Rodriguez, Graglia, Richard, and Schendel (2009) examined the use of poetry in qualitative research, and found the following of uses of poetry: poetic allusions, cultural poetry research, participants' poetry as data, data poems, research experience poems or poems from the field, and autoethnographic poetry. My poems during my reconnaissance were poems from the field, and the songwriting after transcription was similar to creating data poems. However, my method was

different from that described by Glesne (1997) as “poetic transcription.” She did her poetic transcription after coding, and created the following rules for her own process: the words in the poetic transcriptions would be the participant’s, not hers; she could pull phrases from anywhere in the transcript and juxtapose them; finally, she kept enough of the participant’s words together to re-present the participant’s speaking rhythm and speech mannerism. Glesne (1997) notes that “the process described here, therefore, is not *the* way to do poetic transcription; rather it is one way.” In my process, the song lines were written after the reflective piece about the transcript, and before coding. They are in my words, and are extremely short, crystalizing the essence of what I found most compelling about the interview. In addition, weaving together all the lines to form a (not so coherent) song was a form of creative synthesis, and the melody that came was intended to convey the emotion behind the words.

I also experimented with voice recognition software (Dragon Dictate 2.5.2 for Mac) to attempt to improve my transcription efficiency. This was an interesting experience because I listened and then spoke participants’ words, and so experienced their speech viscerally, rather than listening and typing. One third of the transcriptions were transcribed in this way, while the rest were more traditionally transcribed through listening and typing.

The qualitative data analysis followed the usual three steps: reduction (selecting, focusing, simplifying, abstracting, transforming), data display (organizing and compressing), and conclusion drawing/meaning-making (noting irregularities, patterns, and explanations) (Miles & Huberman, 1994). The interview transcripts and focus group transcripts were analyzed separately. Transcripts were read and re-read, which generated a first-pass of themes. The transcripts were then uploaded into Dedoose, a qualitative data analysis software program

available by subscription online (www.dedoose.com). Themes were refined and added during the coding via Dedoose.

The results of the analysis are presented in **Chapter 5 – Data Analysis. Appendix E** provides a thick description of the context based on field notes, a reflective journal, some documents, and oral histories about the NRWC program.

3.12. Limitations

Part of upholding the confirmability aspect of trustworthiness is listing the limitations of the study and their potential effects (Guba & Lincoln, 1985; Shenton, 2004). This honesty allows the reader to determine how these limitations affect their use of the findings.

3.12.1. Methodological Issues

Interviews and focus groups were selected because they were appropriate methods to explore the research questions. However, both methods have potential limitations, which were described in **3.8.1.** and **3.8.2.** Here I describe which limitations actually occurred in this study, and my efforts to mitigate these limitations.

One of the most important limitations of the study was the relatively short data collection period. This impacted all aspects of data collection, and particularly recruitment. Issues with recruitment were detailed in **3.8.1.** and **3.8.2.** Here I wish to note that the main impact was that I was not able to be as selective as I would have liked in screening participants. My intention was purposive sampling, but I had to settle with more of a convenience sample. My community collaborators and I did the best we could to recruit “information rich cases” (Patton, 2005), people who knew a lot about their local Club, and ideally, about environmental and youth development issues as well. We also were seeking to recruit enough participants in the five categories (elders, community leaders, adult volunteers, former Club members, non-former Club

members). We succeeded in interviewing adult volunteers in each community, former club members, and quite a few elders. However, the non-former Club member and community leader categories were under-represented. During Phase 1, I thought Phase 2 would be an opportunity to interview more people from these under-represented categories. However, this did not happen. I had to contend with an excess of participants who were not in the five categories, particularly in Yupukari.

The intention had been 10 in-depth interviews per community for a total of 30, and two or three shorter targeted interviews per community to include perspectives from people who were not as involved in the Club, for a total of nine. Thus a maximum of 39. By the end of Phase 1 in July 2011, I had completed 40 interviews, and far more than anticipated were the targeted interviews – 19 instead of nine. It appeared hopeless to recruit more non-former Club members (we had recruited only one of the intended 6), and unlikely to recruit more community leaders. And it was clear I had reached saturation for most themes (by around the 20th interview, there were no longer new perspectives being revealed for most questions). In September 2011 of Phase 2, I was managing escalating illness and infections while working to get enough preliminary data analysis complete to be able to share preliminary findings in the community meetings scheduled for October. Awash in a large amount of audio recordings and transcripts, knowing it was unlikely I could recruit in the under-represented categories, I made the decision to only conduct two more interviews in Wowetta, because far fewer interviews had been conducted there due to the death of a child there and my illness and injury.

Had the data collection period been longer, this would have permitted me to stay closer to the ideal recruitment scenario, since there would have been less pressure to get the interviews done, and more time to wait for the categories to be fully recruited. And more time to seek

advice on how to tactfully decline to interview people. And the pause in data collection in Wowetta to respect the mourning for Alianna would have had less impact on the number of interviews conducted if the data collection period had been longer.

Another methodological issue was that a community collaborator was not present at all the interviews I conducted. A community collaborator did accompany me to every interview in which translation could have been required. There did not appear to be any difference in the participants' candour and comfort with or without the community collaborator present. However, some of the most negative comments about identifiable individuals were made in interviews I conducted alone. Another issue was that I had only one community collaborator in each community, a woman in Wowetta, and men in Surama and Yupukari. It is possible that some participants would have preferred to be interviewed by a woman or a man, and with a female or male community collaborator. Unfortunately, providing options for the gender of the interviewer was not possible for me as a solo graduate student researcher.

Another issue was that I interviewed participants once, whereas perhaps Seidman's (2006) in-depth interviewing technique would have been more appropriate. Seidman's three-interview technique entails conducting a series of three 60 to 90 minute interviews with each participant (Seidman, 2006). There were several instances during the interviews when participants were clearly interested in the question and subject matter, but had not been asked before to articulate their opinions on the topic. Elders in particular sometimes felt they would have more to say if they'd been asked the questions, and then I had returned a day or two later for their replies. For example, Uncle Hiawa said during his interview that this would have been better because his "old brain" needed more time to think about his responses.

On the other hand, conducting a single interview gives a snapshot of what participants think about something *without* mulling it over and possibly seeking input from others. In other words, a one-shot interview in this research gave a snapshot of what participants thought about their local Club, which in fact revealed some had not thought very much about certain aspects of the Club and its potential impacts (a finding in itself). In this situation, in which community members' support of their local Club influences the success of the Clubs, it was useful to assess what participants views were of the Club (in 2011). Had a research question been how to improve the program, then reflecting on the present to come up with recommendations would have been important. As it was, community members still had a lot of recommendations to share.

Another important limitation of the interviews was that I did not interview children to get their own views about their Club. I hope there will be research in future to hear children's voices about this program, and understand more empirically how the program impacted them.

To turn to the issues with the focus groups, a potential limitation identified in **3.8.2.** is that conformity pressures may lead participants to adjust the expression of their opinions to match those of others (Asch, 1956). This did indeed appear to be an issue. For example, Whatover participated in a focus group and then later in an individual interview. In the interview she stated that she disagreed with what participants in the focus group had said, that parents had not been helpful with the local Club. She did not contest what other participants said in the focus group itself, but did in the interview. This demonstrates the importance of using multiple methods, because they can indeed compensate for each other's weaknesses. It also shows the interesting way that two methods can interact with each other and elicit richer data when a participant experiences both. Had Whatover only participated in the focus group, I would not have known her perspective on parental support (because she remained silent). Had she only

participated in the individual interview, she would not have heard the opinion of the other participants, and may not have expressed her dissenting opinion on parental support. Many focus group participants were not individually interviewed. This is unfortunate, since another issue with the focus group was that some participants did not speak. My community collaborators debriefed with many focus group participants, and the three main reasons they told me that participants did not speak were: they felt they did not know enough about the Club to comment; they were not comfortable speaking in English; they agreed with what other participants were saying and so did not feel they needed to say the same thing. The issue of not knowing enough about the Club reveals one of the issues we had with recruiting the focus groups. As described in **3.8.2.**, the focus group was more of a convenience sample than a purposive sample because I had to accept anyone who showed up. Therefore, some people were not very knowledgeable about the Club and were not the “information-rich cases” Patton (2005) recommends focusing on. With respect to being uncomfortable speaking in English, participants were told they could speak Makushi if they preferred (all community collaborators were fluent in Makushi and English). However, few did. It was not clear why. Finally, with respect to feeling that others had expressed their views, this seemed more likely to occur with elders and those more comfortable in Makushi. While I was concerned they were not expressing their opinion, what they told my community collaborators suggests that the views expressed by the group were consistent with those held by the participants who stayed silent.

Another issue is that homogenous sampling was not possible. For focus groups, homogenous sampling is used to “bring focus to a sample, reduce variation, simplify analysis, and facilitate group interviewing” (Patton, 2005). A homogenous group can also help reduce within-group inequalities that can cause problematic silences (Hollander, 2004). There were

separate focus groups for women and men to reduce the risk of women not speaking candidly when men (particularly male elders) were present.⁶⁵ This was the only homogenization measure possible at the time. Having separate focus groups for each of the five categories, or at least by age (for e.g., youth, adults, elders) may have been more ideal, but this was not possible given the time and budget limitations of this research.

Another methodological issue was that the categories I used were not discreet, a participant could fall into more than one category. Therefore, I decided which category was most appropriate, if, for example, the person was an elder and a community leader and an adult volunteer. In retrospect, I would have changed the interview protocol so that the participant chose which category they wished to be in for the purpose of the research, and to identify other categories that were appropriate for them. Perhaps I also could have gotten more demographic information to see if there were differences between people of different ages, females compared to males, parents versus non-parents. I did categorize participants in the categories youth, adult, and elder. However I did not detect significant differences in their responses, and so analyzed everything together.

Another methodological issue was that one third of the transcriptions were transcribed using voice recognition software (Dragon Dictate 2.5.2 for Mac), while the rest were more traditionally transcribed through listening and typing. This may have affected my engagement with some of the data. Speaking participants' words was a profound and intimate experience, a more embodied way to engage with the data than typing. It could be argued typing is also an embodied way to engage with the data, but it certainly felt different to me to speak the data. Regardless of whether it was typed or dictated, the final versions of the transcripts appeared to be

⁶⁵ This was recommended by other researchers and then confirmed by community leaders in 2011.

of the same quality, since the typed or dictated draft was just the first pass, and then was edited and corrected by listening to the interview again.

3.12.2. Logistical Issues

Despite the rural conditions, shortage of transport, lack of reliable access to electricity, and occasional lack of communication access (phone or email), travel between villages went smoothly. The only difficulty with lodgings was in Wowetta. The room I was renting in the community centre had insecticide-impregnated mosquito netting on the bed, which caused a severe rash. I then had to commute between Bina Hill and Wowetta for three days (30 minutes by bicycle one way) until I was moved to a room at a friend's home in Wowetta. This slowed down scheduling and conducting interviews for the first 5 days. Then, on 3 July 2011, just before the men's focus group was scheduled, the 3-year old niece of a key informant and village leader fell into a well and drowned. This tragedy combined with the fact I was quite ill and injured meant I did not collect data for four days. This meant there were less interviews in Wowetta. See

3.12.4. Personal Issues, below.

Another logistical issue was that the first attempt at the men's focus group in Yupukari was not successful because only one participant showed up. He agreed to an individual interview instead, and the rescheduled men's focus group went well.

3.12.3. Technical Issues

I had technical difficulties with my audio-recording equipment, an H4N Zoom. I selected this audio-recording device because it was capable of recording at a high enough quality for use on radio or to used to create high-quality audio given my digital camcorder was not very high quality (the audio recorded in the video could be replaced with the audio from the H4N). This was in anticipation of using radio or video to share the research findings. Unfortunately, the H4N

was not ideal for the field conditions in the Rupununi. The main problem was that most interviews needed to be conducted where there was no electricity available. Thus it was rare that I could plug in the H4N, and had to rely on batteries. I had two sets of rechargeable batteries that I could charge where I was staying in all three of the villages. However, the H4N turned out to be incredibly energy inefficient, and wore down batteries so quickly that at least 10 interviews were fragmented when the H4N shut off during the interview. This interrupted the flow of the interview as I changed batteries and started recording again. I had not intended to bring disposable batteries into the field to be as environmentally responsible as possible, but due to the chronic issue of the batteries wearing down, I did purchase some more batteries mid-way through Phase 1 of data collection (and disposed of the used batteries in Georgetown, not in the Rupununi where there are not suitable garbage disposal services). Thus the above 10 interviews were recorded in two parts (or more), with some loss of the interview. Gaps were covered with the notes taken during the interview. On some days, when multiple interviews were conducted at participants' homes with no time to return to my lodgings between interviews, both sets of batteries would wear out and I would record with Garage Band on my Mac laptop. Given the field conditions, I was not able to use two recording devices to have a backup recording, thus there was some data loss despite note-taking.

Another technical difficulty was the poor quality of some sections of a few of the audio recordings. I checked the sound quality at the beginning of each recording with earphones, however, weather conditions sometimes changed suddenly in the midst of the interview. In three instances, a torrential downpour suddenly began in the midst of an interview in a dwelling with a tin roof. I did not realize until later that although I could hear the participant despite the loud sound of rain on the tin roof, in the recording they were difficult to hear. Similarly, in three

instances in Wowetta (during two interviews and one focus group) when the interview or focus group occurred outside on the steps of the community centre (a convenient place to meet participants), the wind picked up during the recording session, and blew on the microphone in such a way that in some sections of the audio recording the participant(s) cannot be heard. This issue was unexpected and would not have been improved by having a second audio-recording device since both would likely have been affected in the same way. This issue with sound quality caused some data loss despite note-taking.

Finally, when I was transcribing, I discovered that three audio files (including backups) were corrupted. Through various efforts, I finally managed to open two of them with the program VLC. Data for one interview was lost.

3.12.4. Personal Issues

I was ill for much of the fieldwork, and injured during the last weeks of fieldwork in both Phase 1 and 2. Community members were very helpful and hospitable so that sufficient data was collected. However, the infections and injuries did impact some aspects of data collection. It was particularly difficult to keep a detailed reflective journal (to record both my observations and reflections on the observations and the on the process of data collection). On 28 June, I found out a friend in the Rupununi had died a few months before. Then I found out a colleague's 5-month-old baby had died of pneumonia, and went to the wake. When I returned from the wake, I received an email that my grandfather had died. I considered returning to Canada 12 days early to attend the funeral, but family members convinced me to stay and complete phase one of data collection. It was a difficulty decision. Then the above-mentioned death of Alliana on July 3rd caused me to stop data collection for four days. This was also extremely difficult, I was staying with my friend when his niece (Alliana) died and have vivid memories of her tiny still form in

the living room and listening to her mother's inconsolable sobbing. It made me question my reason for being there, and whether I was having any kind of positive impact or was just draining people's time. I wrote about this on my blog (<http://juliecomber.com/for-alianna-part-1-well-of-sorrow/> and <http://juliecomber.com/for-alianna-part-2-a-childs-funeral-flowers/>). Due to this and the second-degree burns on my feet and rashes, I conducted less interviews in Wowetta.

In Phase 2, I also sustained infections and rashes, and then an injury on my knee from a bicycle accident in Yupukari became so severely infected I could not walk, and the only doctor in the region advised me to leave early so that I could get adequate care in Georgetown. He was concerned he did not have the facilities to adequately cope with the infection, and I was risking complications. And given the other infections and rash I had, he also thought it would be best if I returned to Canada as soon as possible. Thus I returned to Canada on October 31, instead of staying until the end of November, as planned. I had not been completely satisfied with the community meetings, and this early departure meant I was not able to conduct more.

Thus, I had an ideal for "ethical research," but given the above, all I could actually do was my best, which did not meet my own expectations for ethical research. It was a deeply humbling experience to set out to do my fieldwork with such high expectations and standards, and to not achieve them. I feel I experienced moral distress, a term most often used in the nursing literature: Jameton (2013; 1993) defined "moral distress" as a phenomenon in which one knows the right action to take, but is constrained from taking it.

Summary – Chapter 3

This chapter described the methodology used for this doctoral research, which was a qualitative multi-site case study of the North Rupununi Wildlife Club (NRWC) program, in collaboration with three North Rupununi communities and with the North Rupununi District

Development Board (NRDDB). The chapter began with a narrative overview of the research steps. Next, ethical considerations were discussed, including: obtaining ethics approval from the university of Ottawa, permission from the three North Rupununi communities, and permission from Guyana's Environmental Protection Agency and Ministry of Amerindian Affairs; considerations about research with indigenous communities and the use of Ethical Space (Ermine, 2007). My epistemological stance, pragmatism, was described. Next, the research questions were listed. I then described the research sites, community collaborators, and entry into the field. The methods were detailed, which were individual interviews, focus groups and field notes. I then described the participants, and my efforts to ensure trustworthiness, and the data analysis and presentation. Finally, I described the limitations of this research.

Chapter 4 – Analysis and Findings

The sources of data employed in this study were 39 individual interviews and six focus groups held in three research sites, Surama, Yupukari, and Wowetta. Field notes were recorded in a reflective journal throughout the 2010 Reconnaissance and 2011 Data collection. The intention was to record observations systematically of key Club activities, such as birdwatching, Club meetings, and fundraisers. However, during both phases of data collection, there were very few activities to observe in Surama and Yupukari, and no activities to observe in Wowetta because the Club had become dormant. The few opportunities to observe activities the 2010 reconnaissance and 2011 data collection are presented in **Appendix E** within a narrative to give the context. In a few instances, observations are also included here as further evidence.

The method used to analyze the data, thematic content analysis, is described in **3.11**.

Data Analysis. There was variation in the number of responses per question for the individual interviews. In most cases, this was because the participant said they did not know, or declined to respond for some other reason. Sometimes a question was not asked because the interview was cut short, particularly with the shorter, targeted interviews. Due to low response rates on some questions (for example, the question about perceptions on PYD), I report participants' responses when three or more participants reported similar views, and in a few cases, report a few views from one or two people. Responses were pooled across the three villages, since early in the data analysis, I determined little variation in the responses based on the participant's village. There were a few cases in which a perspective came up in only one of the villages, in which case, I report the views of as few as two participants. The few differences in responses based on village will be discussed in **Chapter 5 – Discussion**. Some, but not all, of the same questions used in individual interviews were asked in the six focus groups conducted in Surama, Yupukari, and

Wowetta (one in each village for women and men). Each focus group's conversations were also more fruitful or in depth on some questions than on others. This means that fewer themes and sub-themes were analyzed than with the interviews. All the relevant data for each finding – from individual interviews, focus groups, or observations – are grouped under the respective finding.

Pseudonyms were used. Participants from Surama were given local bird names, from Yupukari local tree names, and from Wowetta local wildlife names. Elders are indicated by calling them “Auntie” or “Uncle,” which is the way elders in the Rupununi and the rest of Guyana are referred to as a form of respect and affection. Hence, “Auntie Tanager” is a female elder from Surama, while “Greenheart” is an adult from Yupukari.

4.1. Research Question 1 – Local Meaning of Pro-Environmental Behaviour

Thirty-nine individual interview participants, and participants in six focus groups, were asked to define pro-environmental behaviour. Based on pilot testing, the term used in the questions to explore environmental behaviour in the interviews was “being environmentally responsible,” which usually required some further explanation by encouraging participants to think about “what it looked like” to them to “take good care of your environment” and to be “environmentally friendly.” Within the context of this study in the Rupununi, participants said “environmental responsibility” means not littering; responsible direct resource use (burning the savannah was a complex local issue); and educating others.

4.1.1. Finding 1 – Local Meaning of Pro-Environmental Behaviour

Not Littering. All 39 individual interview participants, except two, stated that a key indicator for whether a person is environmentally friendly was a person's attitude and behaviour about littering or “keeping the place clean.” Littering also came up frequently in all three Villages as an environmental concern. Those who explained why littering was a concern said

reducing littering and keeping the Village common areas and villagers' individual compounds clean and tidy was important for the aesthetics of the Village, and many said specifically to help make a good impression on visiting tourists. Cleanliness was also associated with better health for everyone in the Village. Participant's perceptions about littering were similar in all three Villages.

In all focus groups, the first thing discussed as a key indicator for whether a person is environmentally friendly was also a person's behaviour about littering. All participants would then agree that not littering was considered to be evidence the person was environmentally friendly.

Direct Resource Use. The next most commonly identified indicator of environmental responsibility in individual interviews was whether a person's direct resource use was sustainable. Examples of direct resource use in the Rupununi are: hunting, fishing, lumbering, harvesting leaves for benab roofs, and harvesting fruit and nuts. This indicator was important in all three villages, but the type of resource discussed varied from village to village. In all three villages, most (over 75% of participants) said that it was wrong to kill wildlife, especially birds, for no reason. The importance of protecting birds came up often, and as in the focus groups, participants noted that since the Wildlife Clubs started, there was a drastic reduction in the frequency of boys killing birds with slingshots (see **4.3.1. Finding 3**). A related concern that came up with a few participants in Yupukari and Surama was the trapping of birds for the wildlife trade and for keeping them locally as pets. Two people interviewed had previously trapped birds, then came to feel it was unsustainable and cruel, and now speak out against it. And one man said he frees any birds he finds trapped by others!

Most participants agreed that sustainable hunting for sustenance was acceptable, but were against wasteful practices, unsustainable harvesting, and hunting commercially. Many participants described changes in their own hunting practices, or those of a family member, towards being more sustainable.

Another resource use issue identified in all three villages was harvesting leaves, fruits, and nuts from trees. Participants indicated that many people used to cut down the whole tree to harvest leaves, nuts, and fruits. Since public education about harvesting from trees in the villages, participants said people were less likely to cut down the tree, and knew the sustainable method was to cut leaves and fruits and nuts down with a long stick and cutlass, or by climbing to the fruits, nuts, or leaves and cutting them down from there.

In Surama, sustainable lumbering was discussed by several participants, but did not come up frequently with participants in Yupukari and Wowetta. Noise pollution was also discussed by a few participants in Surama. Villagers complained about noisy gasoline powered generators, and about loud motorbikes.

In both Surama and Yupukari, most participants talked about sustainable fishing. All participants who mentioned seine nets⁶⁶ felt they could cause overharvesting and harm to fish stocks. Many participants thought they should be banned, and everyone agreed that if they were to be used, the nets must be checked very frequently so that fish would not be wasted. In Yupukari, over half of the participants spoke of the need to reduce fishing during spawning season. Most people advocated not harvesting a species at all when it is spawning. Ekki noted it was harder to encourage sustainable use when impacts are only seen long-term, such as it can

⁶⁶ A seine net is a fishing net that hangs vertically in the water with its bottom edge held down by weights and its top edge buoyed by floats. Seine nets can be deployed from the shore or from a boat. In the Rupununi, they tend to be set across rivers and creeks and left unattended for a few hours. If left for more than a few hours, the fish in the nets die, which means non-target fish that could be released die instead.

take generations to see the impact of overfishing. Tatabu spoke at length about the wasteful use of fish, especially at spawning time. He spoke of conserving resources for future generations:

It's for everybody, for my children, everybody, we have to take care for. Maybe we can start it early, showing them about taking care of the environment because it's everybody's, not only those who live here, there are many more coming up behind, future generations.

Unlike in the focus groups (see below), few individuals mentioned a need to have resource management plans for the villages to help prevent overusing local natural resources (birds, fish, trees, etc.). Martin credited Iwokrama for the change to more sustainable resource use in hunting, fishing, and lumbering.

When prompted about direct resource use (hunting, fishing, lumbering, harvesting leaves for benab roofs, harvesting fruit and nuts) during the focus groups, some focus group members spoke about sustainable versus unsustainable practices, and traditional versus modern practices, especially with respect to fishing, hunting, farming, and the use of Ité palm leaves for roofs. The men's focus group in Surama, for example, debated the use of sein nets, such as if it was possible to use them sustainably, which individual interviewees also spoke about. The men in Wowetta's focus group said that to care for the environment, communities need to know about their natural resources (where, what, how much, the health of the resource, etc.): "you have to understand what you have, to be better able to plan," such as for zoning. Other focus groups, as well, discussed the need for individuals and communities to document and understand the status of their local natural resources, especially those used the most by local people, such as the forest (lumber, fruit, nut, and fibre trees and other plants used for food, fibre, and medicine), wildlife (animals hunted for food and wildlife particularly attractive to tourists), birds (those particularly attractive to tourists, as well as birds hunted for food), fish (mostly for food, also some tourism), and any oil or mining deposits.

A woman in Surama's focus group added that along with documenting local natural resources, "we should have a plan for the area about how to use our resources. We talk about it, and we still talk about it, but it's not fully implemented. This is being environmentally friendly: being responsible for all these things." The women in Wowetta gave specific examples of resource use that changed to be more environmentally responsible: "People used to cut down the Kokrite palm to get the fruit. Now they trim the trees, not just cut them down. This is because of Iwokrama and the Wildlife Clubs." Also, one woman in the Wowetta focus group said:

I used to enjoy the poisoning of fish.⁶⁷ But the last poisoning was 20 years ago. If we don't do it, our grandchildren will have fish. Now that we don't poison the fish, we have many more. We have learned, and now have lots of Hassa.

A Surama men's focus group participant noted "years ago we also used to shoot a bird, not like we want to use it. Just wanted shoot at the bird for fun. That's all." And similarly, if an animal, like a giant anteater was seen on the savannah, "a whole bunch of guys would be running behind it with bow" to kill it. One man speculated "but I think also in those times, they [wildlife] were more in abundance. [We] had more animals, and everything else. Getting into these times things are scarce now." The Surama men noted that when they see someone killing wildlife just for fun "you definitely know he doesn't care about the environment."

One woman in Surama's focus group said that for a village to act responsibly toward the environment, it needs community members to learn about current environmental practices by attending meetings and training at the regional and national level, and then "pass it around to us here in the community. They go to higher levels like NRDDDB, then they come back and pass it around to us here in the community."

⁶⁷ One traditional way to harvest fish was to poison an entire pond, an indiscriminate method, versus another traditional method of fishing with a bow and arrow, which is very targeted.

Burning the savannah. A person's attitude and behaviour about burning the savannah came up with over half the interview participants, in all three villages. In both individual interviews and focus groups, participants' view demonstrated the complexity of this issue. Burning the savannah is a practice that is discouraged by environmental NGOs working in the area, but viewed as necessary by many local people. Participants said some locals do it to clear out poisonous snakes. Others said locals burn the savannah to cause regrowth of the tough savannah grasses, because locals believe the new tender shoots make better eating for cattle, horses, and goats. However, participants felt that the savannah must be burned responsibly to avoid the fire getting out of control and destroying habitat and villager's homes. And several participants explained that burning the savannah could kill birds and wildlife, and they thought that this should be avoided.

A woman in the Wowetta focus group explained the complexities of managing the savannah with periodic burning:

Traditionally, we burn [the savannah] to get rid of rattlers and the grass looks nice when it grows back. Nice and fresh and green. But one year we lost control. Savannah fire – very bad. Because of that we know not to leave the savannah for a long time. We can't leave it too long because the grass is too thick and it can be easy, then, to lose control of the fire.

The above illustrates why there was little consensus in most focus groups about whether burning the savannah was acceptable or not. The exception was the Wowetta women's focus group, in which the majority of participants agreed that a characteristic of an environmentally responsible person is someone who does not burn the savannah.

Educating others. In all three villages, participants identified educating others and speaking up at meetings about environmental concerns as an indicator of environmental responsibility. But this was especially emphasized in Surama, where two villagers were

identified as role models for being environmentally responsible. Almost every participant in Surama identified Sydney Allicock as an outspoken advocate for the environment, and many identified Glendon Allicock as well. Both men are community leaders, and were praised for their efforts to educate fellow villagers one on one and at meetings or after church. They also were praised for speaking up about environmental issues at meetings in the village and at NRDDDB, and even nationally and internationally. Educating others was important in the other villages as well. For example, YSS4, from Yupukari, said it was important to

...tell the other people, I mean the people who didn't join the Wildlife club. Sometimes I go and do this part down here [points], our conservation area where we do our birdwatching. I tell them not to carry the animals that are around here.

By “not to carry the animals”, YSS4 is using local parlance to say to not to take the wildlife away from the area by hunting or trapping them.

Educating others did not come up as an indicator of pro-environmental behaviour in the focus groups.

4.2. Research Question 2 – Local Meaning of Positive Youth Development in the Rupununi

During my reconnaissance, community members spoke of impacts the Club had on former Club members and these were seen as contributing beneficial impacts on Positive Youth Development (PYD). Therefore, as with pro-environmental behaviour, I asked participants about PYD to ascertain what this concept means to people in Surama, Yupukari, and Wowetta. Focus groups were also asked about PYD, but there was not sufficient discussion to include that data here.

4.2.1. Finding 2: Local Meaning of PYD is Mainly Vocational

First, participants were asked to describe what they felt success or having a good life “looked like” for people from their community. Of the nine people who answered this question,⁶⁸ six said having a job was important, and this was usually the first thing people spoke about. Three people said having TEK and IK, and knowing how to conserve the local environment was important. Woodpecker said traditional skills are important, and that one of his village leaders, Sydney Allicock, “always tells us our supermarket is the forest. Not a big concrete wall with things inside.” Three others said being happy was important, and YSS1 said this happiness does not depend on material wealth: “someone could be successful without anything, some could be with a lot of stuff.” And three people felt good character was important. YSS1 said he felt a young person had grown into a successful adult “when they show good manners and are generous, then I see that they’ve grown up properly,” and Anteater said his grandfather in particular taught him to “be a good person, a respectful person. To have good manners to other people. That’s what he used to tell us, to live in the right way.”

Participants were then asked what young people need in order to grow up to their full potential, be successful, and have a good life. Seventeen participants answered, and education was the most popular response (by 11 participants), and usually was their first response. Jaguar said that “without CXC’s,⁶⁹ kids can’t get further education or jobs.” Four people said that if youth don’t complete their schooling (at least complete Secondary School), then they will not secure employment. WII1 added that without a job, a person will not have enough money to be

⁶⁸ As mentioned in the introduction, response rates to some questions were lower.

⁶⁹ Like many other Anglophone countries in the Caribbean that were once British colonies, Guyana's education system is based on the British system and is affiliated to the Caribbean Examinations Council (CXC). CXC has two levels of examinations and certifications: the Caribbean Secondary Education Certification (CSEC), and the Caribbean Advanced Proficiency Examinations (CAPE). The CSEC examinations are still often called “CXC’s” since this was the only examinations offered by the CXC from 1979 until 1998. See **Appendix A**.

healthy, “so they must complete their schooling. That is the only thing that will open the way for their livelihood.” Three people spoke of the trend of youth leaving their home village to find work in Brazil, and this was more likely to happen to those who left school early. For example, Mora said “they need to further their education. Most of them leave school and they are not getting jobs. A lot of them are going down to Brazil.”

Some participants specified more about education, saying that youth need quality education. Some participants identified useful subjects (Uncle Owl said they need Math & English, YSS6 said “studying natural sciences helps get jobs”). Ekki said they need the education and the opportunity to use their education: “Some people are forced to leave here if they want to use their education; so a barrier to success is the lack of employment opportunities.” YSS1 also said youth need options in life.

Fourteen people described other things young people need to succeed. Eight people said encouragement from parents, elders, and other adults was important, especially encouragement to do well and complete school. For example, Tatabu spoke about how to support youth in their education:

We need to make every sacrifice to send our children to school, and by checking their homework and doing whatever necessary. Talk to them, encourage them. “You have an opportunity to be better than how I am,” ...if I dead or whatever it will be for them, I want them to get the opportunity, to be well educated. Education is the key.

Six participants said it was important to teach youth about their local ecosystem and wildlife, about how to conserve their natural resources, and about TEK and traditional skills. YII8 recommended “from a young age, teach them about the wildlife.”

Five participants said it was helpful for youth to have positive role models or mentors. Dan explained the need for positive mentors:

That would be the biggest thing... in terms of positive youth development. That kind of thing starts with having positive adults around that are modeling good behaviours and that are enthusiastic about things like learning. Not that everyone has to grow up and be a research scientist or an astronaut, but in terms of positive development, the adults in the village really set the tone for what kind of adults kids turn into.

Along with encouragement, four participants said adults, especially elders, need to instill values in youth about how to live a good and healthy life. Three people said youth needed exposure beyond their home village to meet people outside the village and see other ecosystems in person (see 4.3.2. for more on exposure). Dan also suggested that using the Yupukari library was a kind of virtual exposure, because “[internet] technology and books open up a whole world for you.” Bulletwood added that he thought youths should be sent as representatives to meetings outside of the village, and “should participate more in village general meetings” to help train them to be leaders.

Two people in Yupukari spoke about some of the resources youth need (such as textbooks), and Dan pointed out that Yupukari does have a lot of resources to offer youth (solar-powered computers, satellite internet, a library, staff at Caiman House), but youth need to actually take advantage of these resources. I report these two responses from Yupukari since this shows one way Yupukari’s situation is different from the other two villages. People from other villages did not bring up resources.

There was insufficient discussion in any of the focus groups on PYD to include the data here.

4.3. Research Question 3 - Perceptions of the Effect of Clubs on Club Members

Participants in individual interviews and focus groups were asked about the effect they perceived Club membership to have on individual Club members. No one mentioned any negative impacts when asked this question, but in a question about their perspectives on the

NRWC program itself, a few individuals mentioned concerns that other people had about “Wildlife” meaning “Wild Life”, and of the risk of “Festival Babies,” which were unplanned pregnancies of adolescents attending Festival. These were perceived negative impacts on Club members, but were not the participants’ own concerns. Rather, it was their explanations for why other people, having these concerns, might not support NRWC. Similarly, there were also few perceived negative impacts discussed by participants in the focus groups. The one concern identified consistently in the focus groups, again, was “Festival Babies.”

According to 34 of 39 interview participants (87%), and all focus groups, their local Club was perceived to have positive impacts on Club members. The main impacts they reported were: Club members were more likely than non-Club members to demonstrate pro-environmental knowledge, attitudes, and behaviour (Research Question 3.a.); and the vocational competence and leadership skills aspects of Club members’ PYD were supported (Research Question 3.b.).

4.3.1. Finding 3: Perceived Positive Impact on Club Member’s Pro-Environmentalism

All 27 individual interview participants⁷⁰ who were asked “do you think being part of the Wildlife Club encourages children to grow up to be environmentally friendly?” said yes. Six participants cautioned that Club participation works with many, but not all Club members. When participants in focus groups were asked this question, all focus groups said yes, with clear and unanimous agreement within the groups (although in half of the focus groups, later in the discussion some individuals also gave examples of the Club not having an impact on some members). The following are the main aspects of environmental behaviour that participants felt were impacted.

Generally more aware about and caring towards environment. Eighteen people said they felt Club members were more likely to care about their local environment, and were better

⁷⁰ Not all participants were asked this question due to time constraints on some interviews.

informed and aware of their environment. Tapir and Woodpecker said Club members are well educated about their environment because of their experience in the Wildlife Club. Several others spoke of Club members being able to identify local birds, as well as other kinds of wildlife and plants. Tatabu said his children were learning “about plants and animals; I personally don’t even know the scientific names of local birds, and I was surprised to hear my son talking about some birds and calling their scientific names. I know that they are eager to learn more about wildlife.” While Martin also thinks it is important to learn bird names, he thought the members could learn more through the birdwatching (see 4.5.3. for participants’ recommendations). This theme came up less frequently in the focus groups as evidence that Clubs increase environmentally friendly behaviour, but was discussed in three focus groups. A woman in Surama said:

With the children and my kids too, one thing I observe they learn is the different meanings of the call, or the sounds of the birds, which is very important, especially in Makushi culture. Because just listening to the birds and knowing the name is not all. When the birds starts to call or sing, they all send different messages, which connects to us humans.

The Wowetta men said that by having Clubs, “then people will better understand how to care for the environment, and understand what is sustainable use.” The men in Surama also agreed that one way to increase environmentally friendly behaviour is to have Clubs, and they felt that by having a Club, it proved a village cared about its environment. One man in Surama said: “Forming Clubs in villages, you know, that definitely shows that village cares about the environment. That's why they have the Club.”

Less killing of local birds. A specific impact on behaviour that seven interview participants reported is that Club members were far less likely to kill birds with slingshots. According to participants (and from informal interviews in 2010), before the NRWC program, it

was common for boys to kill birds with slingshots, and not use the bird for food or other purposes. Antbird said:

And [the Club] really makes a big change with the use and conservation and wildlife. Because before the children used to be full with slingshots, shooting birds, destroying homes of animals, things like that... I can see a big change in children as well as the youths. They have a different understanding about their environment. You look after it.

Similarly, three other participants expressed their approval that there was less bird-killing for fun. YSS7 noted children and youth still hunt certain species of birds for food, which he feels is acceptable.

Less killing of local birds was also the first unsolicited evidence that came up in each focus group as proof of the positive effect of the local Club on Club members and the entire community. Participants called this bird-killing “wickedness.” Focus group participants said that, after their Club began, the children and youth no longer shot birds. Participants in all focus groups were very clear and unanimous on this point. A woman in Surama said:

I remember my son, before we had this Wildlife Club, as soon as he see a little dove, “come and shoot it, we want a little meal!” But now the children are not shooting doves and things like that any longer because they are learning about how to protect the birds.

In some focus groups, participants added that Club members discourage others from killing birds. A woman in Surama said, “When they see someone with a slingshot, to shoot the bird, they say: “No! We have to protect them, we cannot shoot them.” The Wowetta women said that boys who are not in the Club still shoot birds to practice with their slingshot, but Club members do not.

A man in Surama said, “Since this junior Wildlife Club formed in Surama and they start educating about the wildlife, the little boys, they stop a lot.” He recounted that when it rains, the birds’ feathers get wet and they can't fly properly, and he used to see the boys with slingshots taking advantage of this vulnerability; but not anymore. But when he went to other villages, he

saw boys shooting birds: “And when I see them, I wonder if they really have a Wildlife Club in their village? If people educate them about the wildlife?” Other men in Surama concurred that they saw the difference between Club members in Surama compared to children from outside of Surama who come to visit. They said that the visiting boys shoot birds.

When asked more about this reduction in shooting birds, some participants said there were still a few boys doing it. One man said that it was a few boys that are not in the Club, and others agreed. However, then one of the men in Surama recounted an incident when he was at home, and saw three boys shooting at a bird on his outhouse:

The three of them with slingshots, racing to hit the bird. And I holler them up. I say, “Y’all are not in the Wildlife Club!?” They said “Yes”. So I say, “Why are y’all trying to hit the bird? Y’all stop and go home right now.” And them gone to another corner, and start again.

Less likely to litter. Five interview participants said they noticed Club members were more likely to use the bins (garbage cans) and to not litter. Participants also appreciated the Clubs’ clean-up campaigns. Auntie Heron remarked that even though most members “are small” (8-11 years old), they try to keep the environment clean and set a good example for the whole community.

In all focus groups, not littering was the other main evidence provided that the Clubs increased environmentally friendly behaviour in Club members. And Club members were perceived to educate others to not litter. For example, the Surama women felt Club members were more environmentally aware, “especially about garbage, about littering. They would say sometimes “Hey man, you go drink beer and throw ting on road,” and the children now tell you that, and you learn.” And they said Club members learn to care for the environment by not littering and by picking up litter (Surama used to have “clean-up campaigns”). A Wowetta

woman said that “at home, the club members put this into practice. They have a spot for garbage instead of having it all over. Before I joined the club I didn’t care much about the environment.”

4.3.2. Finding 4: Perceived Positive Impact on Club Member’s PYD

Interview and focus group participants’ overall perceived impacts of Clubs on PYD were positive. Interview and focus group participants said vocational competencies (bird identification, public speaking, and the ability to obtain references) and opportunities for exposure beyond their home village were supported by being a Club member. The benefits of youth gaining exposure to other places, people, and ideas beyond their village were discussed at length in the focus groups.

PYD: Vocational Competence. The principal employment opportunities in the Rupununi are in ecotourism, as teachers, as health workers, in small businesses (like shops and making crafts), working in local governance (such as the role of toshao, as a Councillor on a Village Council, and positions at NRDDDB, with possibilities of representing one’s village or Region nationally and internationally), and the occasional opportunity to work as a community collaborator for research. A component of the original goal of NRWC was to cultivate the skills that local Makushi youth needed to be competitive for the new jobs created by the emerging ecotourism industry, especially as Wildlife Rangers and birding guides.⁷¹ In focus groups, the first positive impact participants said the Club had on an aspect of Club members’ PYD is the perception that former Club members, particularly former Executive members, “do well,” and that they were more competent and successful in their adult lives. This came up in all the focus groups. Participants spoke mainly of skills and opportunities that increased former Club members’ vocational competence. One of the men in Wowetta noted that as part of encouraging

⁷¹ Other jobs that also became available due to Ecolodges, in particular jobs as cooks and cleaners, were not as competitive. Local Makushi women were already proficient in these tasks, although some cooks have received further training in Georgetown.

Youth Development, Iwokrama has an objective to empower youth throughout the Rupununi. He felt the Clubs helped achieve this objective:

You can see it, in several communities you see ex-Presidents become guides, rangers, managers, and one person from our village already went to train to be an accountant. You see the youth are empowered. These are benefits from the Wildlife Club experience.

The men gave several examples of former Club members, particularly former Presidents or other former Executive Club Members, who went on to become successful members of their communities. One is managing the records for the school meal program, some former members are Village Councillors, others are undertaking youth internships, and still others are toshaos (e.g., Anthony Roberts, AKA “Baby Toshao,” was elected toshao in Yupukari at age 18).

Gain experience for employment. Twenty-one participants said being a Club member gave children and youth experience that would help them to be employed as adults. Club members who engage in their Club’s activities have the opportunity to learn to identify and name local birds (learning the common, scientific, and Makushi names) and to learn about other types of wildlife and plant species. These were considered to be important skills for becoming tour guides, rangers, or research assistants, which are available employment opportunities and are well-regarded occupations in the Rupununi.

Eight respondents named one to three people, each, whose current employment was attributed to past membership in the Club. Three participants attributed their own current employment to the experience they gained in their Club. Woodpecker explained experience in the Clubs helps members gain skills useful to being a guide, ranger, or working with natural resources: “From the wildlife club activities, you start doing bird monitoring, and in the North Rupununi where tourism is promoted, birding is one of the key areas...it allows you to be a good tour guide or ranger.” YII5 gave two examples of local villagers who he considered to be

successful with good jobs, and attributed their employment to their participation in the Club. He noted: “It will be like that for some of the kids, just like that if they continue to go to the Club, and participate in the activities. I think they would get a job later on, as they grow older.”

Interestingly, many examples given of successful former Club members were men. However, a female community leader named three women who had been engaged leaders in their Club, and then went on to have good jobs: “Most Club members get a job... From a young age, they take up responsibility, and it helps them train to be a leader.” And two women also said their experience in the Club helped them get jobs. II3 said “I worked with the Iwokrama wetlands researcher, so being able to identify these birds and record these birds, and different animals and different seasons and all these things, it was a part of that.”

The men in Wowetta’s focus group stated that they felt participating in Club activities builds Club members’ self-esteem and helps them take advantage of other opportunities. For example, they discussed the Community Cinema Project, which trained local people to shoot and edit their own documentaries. One man said former that Club members seized this opportunity “and now you see youth who were members taking advantage, and elevating themselves.”

Bird Identification. The specific skill relevant to obtaining local employment most discussed in focus groups was bird identification. The Surama women’s focus group discussed the importance of bird identification skills for obtaining employment within the growing eco-tourism industry. One woman said:

[L]earning the names of the different animals, that can help them when they become man and woman, and when they get these jobs to be guides, and them things, really it helps them in knowing the different names. Because old as me, sometimes when I’m with a tourist, and they ask me “what is that bird’s name?” I say, well, I know it as a Kiskadee, but I don’t know the scientific name. But in the Club they learn it both ways, as others said, common and scientific names, and Makushi, which is very important.

The importance of knowing the scientific names of the birds was stressed across the focus groups since birders usually wish to know this information, and it is consistent across any language a tourist might use. “Swift,” from Surama, is a former Club member who became a guide, and he noted: “As a guide, for me, with the bird monitoring, it helps ...looking at this data, like “Commando” was saying about when the migratory species come, and what time of year you find these birds, what time of year you don't see them,” and he felt what he learned in the Club was useful for his current job. Eagle, in the Surama women’s focus group, explained being in the Club “helps to groom the young people now, from eight years up until they leave for secondary school. The communities can give them a recommendation based on their performance in the communities. This will help them to get a job, and carry them through to whatever career they might choose to do.”

Obtaining references for employment applications. Along with gaining relevant skills for locally available employment, candidates for many local jobs now require references. Four interview respondents said that being in the Club helped former Club members secure the references they needed for employment. Focus group participants also spoke of Club participation as useful for crafting references for local youth applying for jobs. Antbird explained:

But for them to go and become bird specialists, tour guides, they have to get a recommendation, and many of them were there now had to get recommendations from me as the club coordinator. So those simple activities I think pushed them far, even though they don’t have CXC⁷², their experience is what makes them become qualified guides.

YSS4 said that now, people applying to be tour guides needed to be former Club members, and that candidates need “a reference letter from the Village Council.” Dan said being

⁷² Again, local people often use the acronym “CXC” when they mean CXC’s Caribbean Secondary Education Certification (CSEC).

in the Club was a good way to get known by potential employers, and confirmed that in Yupukari, certain village leaders or staff at Caiman House would give reference letters. A former employee of Iwokrama elaborated on how being in a Club helps to gain future employment:

Because most NGOs, organizations, any job now in the area... When there is a vacancy, people look at previous leaders, how they performed at the wildlife club level. And I can speak for this because we have a couple of people who are now rangers at Iwokrama who were Wildlife Club presidents or leaders in the Club, and they were recommended through NRDDDB and Iwokrama staff as well, "this is a good candidate."

Two young men who had been Club members (but reported they had not been in their local Club for long, nor had they been engaged in the Club) said being in the Club had not helped them get their current jobs (note their jobs were not in ecotourism, conservation, or research). YII8 is an example of how being a club member could have helped him get a job or train for a job. Five years before (2006), he was with his Club for a few months when he was recruited for an ecotourism job, which he held for six months. He did not know enough bird identification and required training on the job. The training he acquired on the job is now expected to be completed before a person is employed.

Focus group participants also spoke about obtaining references. Participation in the Club was important to help increase the likelihood a Youth would secure employment because, as Eagle explained, it helps the young person "to have the village's support. Because everything today you got to have CVs and letters of support, and all these things, that is what they're asking for now." The experience in the Club gives the youth "a background in [their] community," so that these letters of support can be written for them. "So it carry them far away, if they are really serious with it and they want to be somebody of value in the community."

PYD: Public speaking and leadership skills. Sixteen participants felt that participation in the Club supported children and youth to become the leaders their community would need in

future. Eleven people highlighted improved communication skills, especially being less shy, able to interact with others (including visitors to their community) and public speaking. Tapir said few community members can speak publically, but Club members “can stand in front and speak.” Woodpecker said communication was “a factor that really hinders our Youth Development,” and that oral and written communication skills are important: “Participating in Wildlife Club activities allows you to be more interconnected with other persons, to develop your public speaking. It will make you less shy, and you would be more interactive with persons from diverse communities and Clubs.” He said in his community, it is important to be able to adjust one’s communication style for one’s audience “because not every individual understands the same way. You cannot speak to a 60 years of age as compared to 25 year-old person, you’ll have to make your speech different so that you can be understood.”

Antbird described public speaking exercises occurring at Club meetings. Some of the Club members would be asked to speak: “So you allow 30 seconds to say something, whether about yourself or your mother or your father or something.” She thinks this “braves them” (make them brave), and notes “the children used to be very shy, and now they can interact with you.” Dove got to appreciate the local Club because “I saw some children who were very shy, never used to mix with other children, [now] dancing and singing Makushi song[s]. And that is really good.” YII5 noted: “They are building up their minds for it, they are getting out talking more, they are not nervous to talk in front of a lot of people,” and are learning to be community leaders. Tapir said this ability to communicate included speaking up to educate others, such as her children encouraging others to use resources sustainably and responsibly.

The ability to represent one’s community was also identified as important in all focus groups, and a key competency to achieve this objective is public speaking. All focus groups

agreed public speaking is an important skill and many participants indicated that participation in the Wildlife Club improved public speaking. Public speaking was reported to be developed mostly by participating in Centralized Meeting and Festival activities, which are hosted at Bina Hill (near Annai; see below). Unlike in the above individual interviews, focus group participants did not indicate how public speaking skills were cultivated in the villages by the village's Club.

The Surama men specified that public speaking skills were cultivated at Festival in the following ways. One focus group member explained about giving the Club report:

You have to do your club report, and it's not just for your community's Club. There are Clubs from other parts in Guyana and then you will have the EPA, WWF, Iwokrama, CI give comments, so lots of people there, and when you go in front, you know once you develop your public speaking skills, you will be able to give a good report.

Club reports are also required at Centralized Meetings. In my 2010 observations on a Centralized Meeting, I observed a workshop on public speaking. And at the 2010 Wildlife Festival there was a speech competition. Club members who entered the competition had to talk for one minute on a topic of their choice, and were scored by volunteer judges. There were a few rounds, ending with the final.

An obstacle frequently identified for children and youth to be effective public speakers, or even to be able to carry on an informal conversation with tourists and visitors in their village, was shyness.⁷³ Women in Surama and Yupukari in particular indicated that Club participation helped children and youth gain the self-confidence needed to be speak in public. Women in Yupukari said they noticed children who had been members of the Wildlife Club were less shy than those who had not. A teacher who lived in Yupukari (which has a Club), but taught in the public school in another village that did not have a Club, noted the difference in her students, in

⁷³ Shyness was not discussed in depth during the focus groups or in interviews; however, it appeared to be a trait that many people identified as a common obstacle for future success of local youth.

general, compared to the children in her village, and the other women agreed with her observation. The problem of shyness was also raised in Surama, especially in the women's focus group. Several in the group commented that shyness is a common trait that is detrimental for young people. The men in Surama felt it is important to be able to talk to people, to "answer questions, and you ask questions."

PYD: Exposure beyond the home community through excursions. Ten interview participants said an important experience gained from being in the Club was that Club members gained exposure beyond their home community. Exposure was described as meeting people outside of the child's home village, an experience that provides the child with new ideas, skills, and knowledge. It could also mean what would typically be called a field trip or outing. These activities occur outside of the home village where young people learn about environments different from near their village. Exposure could be gained through outings to attend Wildlife Festival and Centralized Meetings (which are organized and funded by Iwokrama), through fieldtrips to local rivers and other natural areas, and through Club exchanges (when one Club visits another).⁷⁴ Local fieldtrips and exchanges are organized by the Clubs themselves, often with assistance from Village Council and/or other local organizations or interested adult volunteers. Until approximately five years ago, Iwokrama also used to organize and fund fieldtrips for nearby Clubs (like Surama) to go to Canopy Walkway where visitors can experience the Iwokrama rainforest at the canopy level by walking a trail of suspended bridges.

Tatabu, a parent, said both his children were in the Club and "I know anytime they go out on a field trip they tell me what they've learned," and this pleased him. He added more detail about the benefits of field trips:

⁷⁴ Note that birdwatching is a kind of fieldtrip, but was not a way for children to gain exposure beyond their home village. And since it was the most robust activity in all the Clubs, and the best known and most discussed activity of the Clubs, birdwatching will be further discussed in **Chapter 6- Implications for Practice**.

I think that they are gaining a lot of experience by going out to participate at Bina Hill [attending Festival]. They're learning a lot, exchanging experience; I think that is very good, because in my lifetime I never had that kind of experience. Now today I can see that some children are learning a lot from the Wildlife [Club].

Four former members (out of 10 former members in total) described how much they enjoyed outings and field trips, like YSS9 who said it was her favourite part of being in the Club: "I liked going out to other places, seeing other places. And doing the activities, like birdwatching, hiking." She felt other youths who weren't Club members wanted to join because members got to go on these outings.

When focus group participants were asked what they felt were benefits of Club membership, like interview participants, many agreed that "gaining exposure" beyond the child's home village was a valuable benefit.

In the women's and men's focus groups in Surama, participants spoke of Club members getting the chance to visit Clubs in other communities in which there was an opportunity to exchange ideas. The men also said this was an example of how Club members can gain practical experience. Members from other Clubs had also come to Surama to visit the Club. Surama's Club is recognized as one of the strongest in the NRWC program. A few participants from Surama spoke about visiting or being visited by other Clubs, and they were willing to try to help strengthen those that were struggling. They also valued what they could learn from these other Clubs. The tone in the Surama focus groups was one of pride for their own Club's relative strength and level of activity, but also humility and appreciation for what other Clubs had to teach. Despite the relative strength of their Club, participants in Surama still felt their Club needed to improve. Travelling to Wildlife Festival was also an example of exposure that participants felt gave Club members the opportunity to share their ideas with other Clubs.

Women from Wowetta's focus group suggested that an exchange program to allow their Club could visit other Clubs to learn how other Clubs do things would be helpful, although the Club did not have funds to implement this idea. A man in Yupukari who did not have much interaction with the Wildlife Club still recounted that when a friend told him her child had been chosen to go on an outing, she was hesitant until she understood the nature and reason for the outing. She then said to her child: "Okay, I see that you have the chance. Go. Take it. That is a step forward for you." And he reported he had applauded her for this, and wished all parents could do the same. This shows that even those unfamiliar with their village's Club still recognized the benefit of exposure for young people outside their own community.

The above story also, however, reveals the ambiguity parents feel about the opportunity of outings outside their child's home village. As per the **4.5.2. Negative Perceptions** section, in interviews, some parents and community members expressed ambiguity about outings, because they were concerned about whether chaperones and adult volunteers would take proper care of their children. This was also expressed in each focus group, usually when asked what were concerns or problems participants had with their village's Club. No one openly disagreed that opportunities for exposure were valuable and important for children and youth. However, as mentioned, some participants had concerns about adult supervision when children and youth went outside of their home communities and were away from their parents or caregivers. They were particularly concerned about the risk of unplanned adolescent pregnancy.

Contribution to the Community. Eight interview participants said Club members were more likely to grow up and contribute to their community, especially through becoming leaders and representatives. For example, Auntie Heron described meeting two young men at the

Wildlife Festival who spoke about how local communities could keep their communities and natural resources safe once The Road is paved.

Woodpecker said the Club teaches responsibility, and “from the Club, not only do you develop your skills for being good leaders or develop your skills for getting jobs or to excel, but also skills to be more self-confident and to build respect for yourself... the Club is part of a youth’s development process.”

Other benefits. Eight interview respondents reported other perceived benefits of Club membership. Four people said being in the Club encouraged good character, such as encouraging responsibility and encouraging the members to realize that animals have feelings and thus to be kind to them. Four participants felt being in the Club improved scholastic performance. For example, Dan said members learn skills that are helpful for science and to use new technologies:

That kind of information needs to be collected through observation, which is a cool opportunity for them to learn about science and monitoring ...And we’ve done some of that, I’ve also worked with GPS with the kids, and marking where good butterfly habitat is and where lots of plants are, and we’ve gone and put that stuff on Google maps and we’ve incorporated some tools and technology to work with them that way.

Similarly, women in Wowetta’s focus group and men in Surama’s focus group felt being in the Club helped the Club members to achieve more in school. A woman in Wowetta also added that it increased the likelihood they would seek more education: “Club members are more educated. They go on to get more education. They know more about what is going on around them.”

4.4. Research Question 4 – Perceptions on Effect of Clubs on Community

Interview participant’s perceptions about the effect of the local Club communities were very positive (**Finding 5**). Participants thought Clubs help bring recognition to the community, educate community members, and caused the aforementioned reduction in bird-killing. An

interesting benefit discussed in depth was that Clubs can help connect youth with their local elders. This is an effect on the community and on youth, and an important finding, and thus is presented separately as **Finding 6**. There was insufficient data from focus groups to report here.

4.4.1. Finding 5: Positive Perceptions about Effect of Local Club

Eleven respondents spoke about the positive impact the local Club has had on their community. No participants reported any negative impacts. Seven participants said the Club had helped make the entire village more environmentally sustainable and responsible by setting a good example and educating community members. Uncle Hiawa said the more young people in the Club, the more it would help the community. YSS4 said the community supports Club members doing clean-up: “they say we are doing something good. And they encourage us to put up signs in the forest, or somewhere we could go and do our birdwatching or hiking. I think the Club is doing a good job. Trying to do something for the village.”

The Club in Yupukari also raised the profile of the community. Jeff explained:

They’ve been successful in giving Yupukari a positive community profile, nationally, because they have got awards. And internationally, they’ve been successful in a couple of grants that had some activities attached to them. I think that creates a sense of pride.

Mora certainly expressed pride in the Club: “The minister of tourism and industry was here, and he donated a plaque, it is right there in front of the stage, you can see. “The Best Nature Club for 2009”.”

Seven people felt the Club had a positive impact on the whole community because Club members (and Club activities) educated parents. Respondents said the Club members learn, and then go home and teach their parents about environmental responsibility. Antbird said: “They go home and educate their parents. And so I find it really really working for conservation, wildlife

and environment, for these concerns in the community.” Some adult volunteers also said they learned through volunteering with the Club.

As in the section on perceived impacts on individual Club members, seven people reported a reduction in “wickedness,” that is, the reduction of wanton bird-killing. Five of those participants added that this had a positive impact on the community because it meant a corresponding increase in local bird abundance, which was important for their local ecotourism industry. The impact on the community also appears to be a shift in values with respect to birds and wildlife in general. Whereas before, parents did not worry about the bird-killing or teach their children not to kill birds without a purpose, now parents and adults in the community clearly disapprove of wanton bird-killing. Along with the economic benefit for ecotourism and therefore for the entire village, many people also appeared to care about having local biodiversity because they valued the wild birds intrinsically, not just for the extrinsic economic benefits.

Auntie Heron commented:

Parents never used to take it seriously, we just let them go. But today since the Wildlife Club has been in our community, the children care about the little birds. They would never climb and trouble the birds’ nest up on the house roof. But before, children used to just climb and take down the nest, and just throw it away. Yeah, the Club is very good.

Five people said the Club had a positive impact on the community because they noticed and overall reduction in litter in their village.

Another perceived positive impact on the community and youth as well was Clubs helping connect youth with local elders. This is an impact on the community as well as youth, and was spoken about in depth, thus it is presented as its own finding, below.

4.4.2. Finding 6: Clubs Can Connect Youth with Local Elders

All participants (unless an interview was interrupted or cut short) were asked about Traditional Ecological Knowledge (TEK), elders, and if the participant felt the Wildlife Club

program could be used to help connect youth with their local elders. All participants who responded agreed that 1. TEK is important. 2. Elders are important. 3. There has been disruption in the teaching of TEK to youth by elders, therefore many youth lack sufficient TEK, the ability to perform traditional skills, and the ability to speak Makushi. 4. It is important for elders to teach TEK to children and youth. 5. Connecting youth with elders is an important service that could be provided by the Club.

With respect to the third point, that local youth lack training in TEK, several participants felt many local youth did not know important traditional skills. For example, WIII said:

These little young ones, they need to learn something. And if we don't teach them, train them, our Culture will die. Because, know why? Little young girls, they don't know to make hammocks. Little young boys, they don't know to strip *mokru* to make *matapie*, and that is the main source of equipments [*sic*] for us to make our food, to produce cassava... The old people are going to die. And who will be there to teach them? ... So I think there should be somebody guiding them.

Woodpecker, an adult volunteer with the Club and former member, elaborated on the fourth point, that it is important for elders to teach TEK:

[Elders] are the ones who teach the cultural practices of our ancestors, and when you speak of our ancestors, you also speak of how to use and conserve the resources... For us to have information about the cultural practices and natural resource protection, it would have to be from the elders. Youths like us have to take this information and put it into practice so that future generations could be aware of how the resources are controlled, how the cultural practices came, and how the resources are managed.

Many participants said that communities were dealing with disruption of the traditional transmission of TEK from elders to youth, and many youth lacked TEK. Antbird explained that some children are fortunate to have their parents or grandparents to teach them, but some children have to learn from somebody else. And so they could learn via the Club. WIII also said that she observed many instances of Club members left on their own to do bird identification,

and she felt they wouldn't learn properly: "They just go with binoculars and...say "this is an eagle." But it's not an eagle, it's a hawk...There should be someone directing them."

There was variation in how much participants felt the Club was currently serving the purpose of connecting elders and youth. All participants who were aware of the Club's activities agreed elders assist to a certain degree, but most felt that the current involvement of elders with the local Club was insufficient. Participants in Surama reported the most current engagement of elders in the Club, and participants in Wowetta reported the least amount of elder engagement with the Club. There was more variation in the responses of participants in Yupukari, and around a quarter of participants reported they did not know if elders were involved with the Club.

Of those participants who had an opinion about the current engagement of elders with the local Club, all said that elders helped the Club members to prepare for the annual Wildlife Festival. Elders help Club members to train for the traditional skills competitions, such as cassava grating, archery, and cotton spinning. Elders also frequently helped with artistic expression opportunities at Festival. There are art, poetry and "best band" contests, as well as Culture Nights during Festival. For Culture Night, Club members, sometimes with adult volunteers, perform original and traditional songs, skits, and poetry readings. These performances are frequently in Makushi. The performances would not be possible without the guidance of elders. Many of the elders who help prepare their own village's Club members also attend Festival as judges, workshop facilitators, or volunteer in other ways.

Participants expressed pride in their village Club's performance at Festival (as well as discontent when their Club did not perform well). Placings in the various competitions were frequently mentioned. Elder participants who had volunteered to help prepare Club members for Festival all expressed pride in the results of their work. Many said they enjoyed teaching and

training the Club members, and found this volunteer work to be very worthwhile. The negative comments from some elders, and other adult and youth participants as well, were that this contribution and engagement with elders should not occur once a year but should be a regular activity. For example, WI11 said, “We need to have somebody training these little youths. Not just for Festival, but in the communities. Because they are only doing it [traditional skills] for Festival, and then they come back, and they don’t continue.” She and others thought training from the elders should continue within the community during the whole year.

Other than Festival, I was told about or observed the following contributions of elders to Club activities. One elder in Surama, Uncle Umbrella Bird, used to help frequently with birdwatching. During the data collection period, he was working and so was not overseeing birdwatching as frequently. I went on one birdwatching outing lead by Uncle Umbrella Bird during my reconnaissance, but he did not lead any birdwatching outings during the brief window of opportunity of data collection in 2011. In Surama, some participants reported the local Piamon (shaman) had taken some Club members on outings to teach them about medicinal plants, but this activity had not happened for many years. In Yupukari and Wowetta, participants reported no regular participation of elders in birdwatching, or in other Club activities besides preparation for Festival. In 4.5.5., below, participants describe the content and form that elder contribution to the Club could take.

4.5. Research Question 5 – Participants’ Perceptions about the NRW Program

Individual interview participants in the elder, adult volunteer, and community leader categories were asked an open-ended question at the beginning of their interviews: “What do you think about the Wildlife Clubs?” (For example, see **Appendix M: Interview Protocol**.) Former Club members, with the longest interview guide, were asked specifically what they liked and

disliked about their experience when they had been Club members, what they had liked and disliked about Festival, and “What would you change about Wildlife Clubs?” Regardless of the group (former Club members, elders, community leaders, etc.), all interviews also ended with the open-ended question, “Any other comments or thoughts about Wildlife Clubs?” Thus participants had multiple opportunities to voice their perceptions about the NRW program. Responses were from 35 of the 39 interview participants. Two participants were not asked the final open-ended question due to time constraints, and two others did not feel they knew enough about the Club to comment. Interestingly, despite having very positive perceptions about the impact Clubs have on individuals and communities (see findings for Research Questions 3 and 4, above), participants talked a lot about their concerns with the program, and their recommendations to improve it. Thus, the findings for this research question are on perceptions about the program itself, and in the previous sections were on perceptions about the *effects* of the program. Their perspectives fell under the categories of negative perceptions and positive perceptions. Participants also had many recommendations for improving their local Club, which are in discussed in **Chapter 5** and serve as the foundation for some of my recommendations for practice in **Chapter 6**.

4.5.1. Finding 7: Positive perceptions about the NRW Program

I love it. I support the idea very much about the Wildlife Clubs. And they should continue the work they're doing, even try to better it. Because they're the ones for tomorrow. They're the ones who are coming up. So they need to understand from very small, from a very young age, what Nature is all about. Because like I said, many of us were not able to travel abroad, we don't know what the other world is like. We just lived here, and believed the whole world is like this. – Swift.

Like the quote above, seven participants expressed general positive comments that showed approval and appreciation of the NRW program. The following are some examples of comments. An elder said “it’s a very good program,” and he applauded the annual Festival.

Martin said “it’s a good educational tool, a good way of teaching the kids.” YSS1 said “I think it’s a really good thing, just keep it up!” And one parent enthused “Wildlife clubs are great!” All parents interviewed either had children in a Club or wanted their children to join when they were old enough. Cindy said: “I think the Wildlife Club is a good thing, it’s a good thing to be happening in the village,” and that she wanted to support the Club and volunteer more.

The more specific comments about the NRWC program all involved perceived positive impacts on individual Club members (Research Question 3) and positive impacts on communities (Research Question 4), and were grouped accordingly, above.

4.5.2. Finding 8: Negative perceptions, concerns, and issues about the Club

There were so few comments about negative perceptions in the focus groups that the data are not reported here. While the above positive perceptions were general, the negative perceptions were quite specific. The following are the main concerns under Finding 8.

Problems with adult leadership and participation. Fifteen of the 35 participants (approximately 43%) identified problems and concerns about the adult leadership of their local Club, and with adult engagement. Every Wildlife Club requires adult support. A Club must have at least one adult Coordinator. Two adult chaperones (a woman and a man) are required to accompany up to 15 Club members to attend the annual Wildlife Festival. Active Clubs with frequent activities also require adults to help with these activities. The main issues or concerns were: that the current Coordinators were too busy to fulfill their role; two Coordinators (and several past Coordinators) had to deal with burn-out; one Coordinator was believed to not have distributed Festival prizes fairly; some parents were dissatisfied by the conduct of a few past chaperones at Festival; and there was a perceived lack of regular participation by dedicated adult volunteers.

Eight participants spoke about their concerns or issues with the current adult Coordinator of their Club. Two villages had the same adult Coordinator for many years, while one village experienced frequent turnover. In all three villages, the majority of current and past adult coordinators were teachers in the local Primary School. All current and former Coordinators said the workload to properly fulfill their role was heavy, and teachers found this difficult to balance with their teaching duties. In the village with frequent turnover, this was stated to be the main reason for the turnover. Y116, a parent, mentioned that he observed teachers already had heavy workloads and the additional work of being a Coordinator was difficult. All former and current coordinators expressed pride in their contribution and that they felt good to work with the Club, and one of the long-term coordinators said she felt supported and appreciated by her community. However, like the other long-term Coordinator, she felt burnt-out and wished another adult could replace her. But Antbird was reluctant to leave her role until she found a good replacement: “We do have young people [here], who I think could take on the thing, but I don't think they're ready for that.” She felt she had to continue in her role because she had heard of other villages’ Clubs failing because they did not have a strong Coordinator. Capybara felt she did not have enough time for the Club: “I don’t feel too satisfied because I never had enough time to be with the Club; but I do have this interest, regardless of the limited time I have to be with the Club.” She said she had not been able to prepare her Club for the most recent Festival, but “the kids were after me because they needed someone to go with them and they were coming to my home” so she reluctantly went with them. At the time of data collection, Yupukari had two Coordinators because of the issue of workload. One coordinator was a teacher, and the other (a young adult) was not.

Concerns were raised about the performance of two Coordinators and other adult volunteers. SS6 said that the key adult volunteers in her village needed to “pull up,” because she felt the Club could be functioning better. Tatabu claimed the Club wasn’t functioning well because “they want a vibrant, effective leader who can manage and get everything running.” Similarly, Jeff noted “you need strong individuals, people with a lot of energy.” Mora said all the adult volunteers had become busy, and this (along with relatively weak youth leadership, see below) was contributing to the Wowetta Club not functioning well at the time of data collection. One Coordinator was alleged to not have fairly distributed the prizes that Club members won during Festival. WII1 explained this was having a negative effect on Club members’ morale: “When they go to Festival, the prizes have not been given to the children to make them feel good for doing things for their Club. Things like that makes them lose interest. For example, if the Coordinator is with them, it’s only the Coordinator takes those things, and left the children without.”

A concern about adult engagement with the Club was that parents did not trust some of the adult chaperones to take care of their children and youth at Festival and on other excursions. They were especially concerned about sending their adolescent girls to activities outside the village. As with other adult volunteer roles, participants said chaperones need to be responsible and reliable. Two participants described an example to illustrate why, which was when a relatively young adult volunteer was chaperone at Festival one year, and parents were unhappy due to allegations that this person sometimes left the children alone, and there were reports of the children and youth misbehaving at Festival. This chaperone appeared to be held responsible for the misbehaviour. The “misbehaviour” parents were most concerned about was the risk of

unplanned pregnancies. The concerns about these “Festival Babies” was mentioned by two participants during interviews (and came up in informal conversations in all three villages).

Another related issue raised by participants was that Clubs needed more dedicated adult volunteers to regularly and reliably assist with Club activities. Bulletwood said his local Club really needed 3-5 adults involved, and that there was not enough adult support. And YII9 said the Club needed more mature, dedicated adults in their 40s and 50s to help (and maybe provide them with a stipend; see **5.1.5. Recommendations Section**). Many adults who were interviewed had volunteered to help with specific events or activities, but few were regular volunteers. Uncle Owl noted that the members were interested in birdwatching and other activities, but

no one comes out anymore. Umbrella Bird was one of the guides, he used to take them out, because he knows the birds, the names. That is our problem, we don't have people who really sit down and take it as a duty or their responsibility to get these kids going and keep them that way.

And similarly, Dove said sometimes members were keen to do an activity, but then no adults would show up at the appointed time, and so the planned activity would not happen. She felt this was discouraging for members.

Dan said many community members expressed interest in volunteering with the Club, and sometimes had good ideas for events and activities, but then didn't follow through. He had experienced the same problem with environmental Clubs in the USA, because “it's easy to come up with ideas; it's hard to follow through on your ideas because that's when the work part comes in.” And he noted local adults (and children and youth, too) are often busy with the tasks of subsistence living.

Perceived lack of parental support for the Club. Sixteen (46%) participants identified an interrelated issue for the Club: a perceived lack of parental support. The main issues identified under this theme were parents not allowing their children to join the Club or participate in

activities and events, parents not encouraging their children to be engaged in the Club, and parents not volunteering with the Club.

In speaking about her past role as a Club President, Laba said “I needed support from parents. Because without the parents’ support, the child would not be out there.” Similarly, a few participants said parents need to encourage kids to join and to be engaged members. And Woodpecker said it was important for village leaders to encourage parents to support the Club: “Because if you don’t have [parents’] participation, you would see the Club not functioning properly. When I go to Centralized Meeting, I hear that it [inactive Clubs] is because parents aren’t there to support.”

However, there was variation in perceptions about parental support. Fourteen of the participants were voicing their perceptions about other people’s attitudes and behaviour towards the Clubs, rather than about their own. It was mainly the Coordinators and current adult volunteers who said there was a problem with parents not allowing their children to participate in the Club. In contrast, eight participants said there was a lot of parental support for Clubs. While negative perceptions were not discussed very much in focus group (and so are not reported here), several women in the Surama women’s focus group said they felt parents were not supporting enough. A few women said they, personally, could do more to encourage their children to participate in the Club.

During this focus group, no one disagreed with what other focus group members said about the perceived lack of parental support. But later, when Whatover was interviewed individually, she said she did not agree with those in her focus group who claimed parents were not supporting the Club enough: “I volunteer... I’ve been hearing some others say, “parents don’t support the children.” But we did. We did.” And Dove appeared highly motivated to help with

her daughter's Club: "I never let her down, I give her the opportunity." The 11 parents with children in the age range eligible to be in the Club (ages 8-18) who were interviewed (four each in Surama and Yupukari, and three in Wowetta) and who spoke about their own perceptions were generally positive about the Club: only two of them said that they personally had an issue or problem with the Club. Seven of these 11 parents had volunteered with the Club at some point, and three of them were Adult Coordinators. Ten parents whose children were too young to join the Club were also interviewed (four each in Surama and Yupukari, and two in Wowetta), and all of these parents said they hoped their children would join the Club when they were old enough. Unfortunately, no parents with children in the eligible age range but who did not have children in the Club were interviewed.⁷⁵

With respect to volunteering, as described above, many parents do volunteer, such as helping with preparation for Festival, fundraising, and other activities. But few tend to commit to regularly helping or to larger tasks, like chaperoning. Since parents have been dissatisfied with chaperoning in the past, and are concerned about the risk of "Festival Babies," Coordinators seek to enlist parents to volunteer to be chaperones. However, especially in Wowetta, participants said it was difficult to get parents to volunteer to be chaperones for Festival.

A parental concern about the Clubs that may have contributed to lack of parental support when the NRWC program began, and which continues to be an issue, is the negative interpretation of the name "Wildlife Club"; see next section.

The issue of Wildlife = "Wild Life". When the NRWC program started, proponents of the Clubs, especially Iwokrama staff, did outreach within the communities to explain to community members about the Club and its goals. Early on, there appears to have been a

⁷⁵ My community collaborators and I attempted to recruit parents whose children were not in the Club because we wanted to understand why their children were not in the Club and include their voices in this research. Unfortunately we did not succeed in recruiting these parents. See **3.12. Limitations** for more details.

misunderstanding about the NRW name. Most Clubs are referred to locally as “the Wildlife Club”, “the Club,” or even “the Wildlife,” and the annual event is named the “Wildlife Festival” (although it is usually simply referred to as “Festival”). Some community members thought “Wildlife” actually meant “Wild Life,” and that the Clubs would encourage children and youth to indulge in a “wild life,” or to “be wild” (a local term for behaving immorally). While this seems a simple misunderstanding, according to Iwokrama staff and adult volunteers I spoke with during my reconnaissance and then during data collection, it caused significant initial and long lasting problems for gaining parents’ support of the program and so for recruiting members. During data collection, five participants said it was still a problem. Two of the adult volunteers in Yupukari spoke about how this problem had been addressed. YSS6 said, “it was very hard for the parents to say yes for the children to join. Sometimes they say this is Wild Life, they don’t want their children to be wild...But after we discussed everything, they allowed their children to participate and join the Club.” YSS4 also explained that “since we started reporting at the Village General Meeting around three or four years ago, they [parents] are getting to understand. The past years, we invite parents to get involved, invite them to our meetings.”

Now that more parents understand what the Club aims to do, Club volunteers said most parents do encourage their children to participate. This is consistent with the above perceptions of the parents who were interviewed. Eight people, including two of the participants who said parents are already supportive, said that their Club still needed more guidance from parents about running the Club and encouraging children to participate.

Insufficient elder participation in Clubs. Participants valued the contribution of elders to their local Club. However, many participants reported that elders were currently not engaged enough in the Club. One key barrier to engaging with the local Club was not knowing about this

opportunity. Particularly in Yupukari, in both interviews and informal conversation, many people said they did not know about the Club. This did not necessarily mean they did not know anything about the Club. Rather, my community collaborators and local friends explained that this could mean the person did not feel they had been properly invited to engage with the Club. In some cases saying “I don’t know about X,” really means “I don’t feel I have been invited to engage with X and so I don’t have an opinion to share at this time.” And sometimes it really does mean the person does not know anything about the Club. Several interviews and informal conversations in Yupukari and Wowetta included a short briefing by me and my community collaborator about the Club’s history, past, and current activities. Some elders and other participants said that many elders did not know much about the Clubs, and had not been invited to engage with the Clubs. Several elder participants who were not currently engaged with their village’s Club indicated they would be interested, but would need to be properly approached and invited by representatives from the Club.

For elders who knew about the Clubs and the possibility to volunteer with the Club, the main barrier to engaging with the Club was busy schedules, especially elders who worked, were involved in another organization in the community, or were community leaders (such as on Village Council). For example, one of the elders most in demand to work with Surama’s Club was one of the leaders of the community’s very active Culture Group. This particular Culture Group performs in and out of the village, and the Culture Group is a priority for this elder. She also works at the community’s Eco-lodge. Community members tend to work one month on, one month off, so during the months when this elder works, she is even less available to volunteer with the Club.

Another barrier cited by a few participants was that some elders did not feel their IK was valued. In brief, the values introduced by public schools and other aspects of Colonialism appear to have convinced some elders that their IK is not valuable to youth or to their communities. Therefore, as one participant put it, these elders do not feel confident to teach their IK, via the Club or in any other way.⁷⁶

Problems with youth leadership. Sixteen of 35 participants (46%) said a problem for their Club was weak youth leadership. Clubs have an Executive Body, with a President, Secretary, Treasurer, and sometimes other roles like Vice President. These roles are supposed to be filled by youth, ideally the older members, meaning adolescents around 15-18 years old. However, eight people spoke about the issue that most adolescents must leave their village at around age 12 to go to secondary school. There are only two secondary schools in the North Rupununi, at Annai and St. Ignatius (near Lethem, on the border with Brazil). For most children, this is a boarding school, and depending on the village, they might only be able to return home for Christmas, Easter, and summer holidays. Surama is close enough to the Annai Secondary school that some students return to Surama on weekends, if they can get a ride. Wowetta is close enough (30 minute bike ride, one hour or so walk) that some students commute every day. Yupukari students go to Saint Ignatius, a two hour drive away. They are less likely to come home between holidays.

The upshot is that the older youth most likely to be able to take on leadership roles in their local Club are effectively unavailable while they attend secondary school. Even children who commute to secondary school daily have a heavy enough workload that they are not expected or encouraged to take on roles in the Executive. Some continue to participate in Club

⁷⁶ However, when participants in this study were asked, they all said they felt elders and their Knowledge were valuable and important.

activities. And when they finish secondary school, eight people said very few former secondary school students re-join the Club. They said many former students no longer appear interested in the Club, or, as SS9 said, they are too busy working. “School-leavers” (local parlance for those who do not finish secondary school) also did not appear interested in their Club. Uncle Owl sums it up:

The problem we are facing here, we have some students very interested in the Club, but what happens when they leave Primary and pass their exam and gone to Secondary. The Club is left without those persons who are interested and would take the smaller ones out. And the ones that return, they look for jobs, and somehow they get disinterested and they don't bother with the children anymore. And that is one of the downfalls.

Therefore, there is a relatively small pool of youths in the ideal 15-18 age range who are interested in being on the Executive. Auntie Heron and others pointed out that they cannot expect children aged 8-11 to effectively lead the Club. In Surama at the time of data collection, and in Yupukari during my reconnaissance, this meant young adults (men in their early to mid 20s) were elected by the Club members to be President. The other Executive members were children aged 10-11. In Wowetta, the Club Executive did not appear to be functioning, but the President was, unusually, a secondary schoolboy aged 14. In Yupukari, a key young adult volunteer who was a main driver for the Club had held the positions of Treasurer in the past and was Secretary during the data collection period, but did not wish to be President.

In Yupukari and Wowetta, there was a similar narrative of a heyday for the Club when it functioned well because of a strong President, and then fell apart when a new President was weak. Yupukari had a strong President during my reconnaissance and a strong President prior to that. Both former Presidents had been young men 18-20 years old, and both went on to have jobs with Iwokrama. During the data collection period, the newly elected President was not considered to be interested or engaged in his role, which four participants said was the main

reason the Club was not functioning well. Dan said “I think another challenge with our club recently has been leadership, because we have a younger leader who is less motivated than previous leaders...people who have been Wildlife Club Presidents in the past, they really were interested in wildlife, they wanted to be guides or rangers in Iwokrama.” My observations appear to confirm participants’ concerns. On 15 June 2011 at 2:30pm, I observed a Club Executive meeting. I observed that the President appeared to be a bright young man, but was not interested in the Club. During the meeting, he was listening to an mp3 player while the Club’s Secretary and Dan (the USA volunteer) attempted to discuss upcoming activities with the Executive. Then next day (16 June), at 2:30pm, there was a general Club meeting. Once again, the President did not seem engaged and was even slightly disruptive at the meeting, along with a few of the older boys. The Treasurer and Dan facilitated the meeting.

In Wowetta, all participants referred to a time two years before (2008-9) when two young women (aged 16 and 20 at the time) worked in tandem as President and Coordinator (instead of an older adult being Coordinator). Participants said the Club had functioned well with many activities, birdwatching, and had performed well at Festival. But now, as in Yupukari, the President who was in place during the data collection period did not appear to be interested. In fact, the President was a student at St. Ignatius Secondary School, even further away than Annai Secondary School! There had been problems before, as well, and two former members said they quit the Club (approximately 5 to 6 years prior to data collection) because they were frustrated when planned activities did not occur, and they blamed the Executive at the time.

In Surama, this narrative was different. During data collection, there was an adult President. But previously and since, there were youth Presidents. The adult Coordinator was the same person during the entire span of the Club’s existence.

Critique of programming, activities, and events. Fourteen of 35 participants (40%) critiqued the Club's programming, activities, or events. The annual Wildlife Festival was the source of the most comments both highly positive and highly negative. I was alerted to the issue of "Festival Babies" during my reconnaissance, which was also described above as a very serious concern for some parents, and in section 4.3. As per above, some parents in all three villages refuse to allow their child to go to Festival, particularly teenage girls, because of the concern about "misbehaviour." Another issue about Festival was simply that for some communities it was very far away to send their children, and parents did not always trust in the ability of chaperones to care for their children and adolescents.

A problem identified by a participant from each village (three in total) was a lack of follow through on planned activities. SS6 said sometimes there had been something planned, and the Club members would go, but the adult volunteers would not show up. Caiman described participating in meetings to plan activities, and then the Executive (at that time) wouldn't actually follow through. Dan said "we spend time generating ideas of things we want to do and we agree to do things and then only five kids show up, or something will get postponed, or we want to do something and it doesn't happen. The follow through on ideas has been a challenge."

Another issue was programing that did not interest members and potential members. Birdwatching is the flagship activity for Wildlife Clubs, but in Yupukari during data collection, volunteers felt club members were not interested in birdwatching. Dan said "I've said it's not about what Surama's Club is doing or what I want to do, it's what the Club wants to do. So if they don't want to go birdwatching, we won't go birdwatching."

I observed a birdwatching outing on 18 June 2011, 6:00-7:00 a.m., which illustrates the above points in Yupukari. Despite the birdwatching plan being made at the Club meeting two

days before, turnout to the Saturday 18 June birdwatching was low. At 6:00 a.m. at the designated meeting spot at in the village's market area, it was just Dan (an adult volunteer) and I waiting for Club members. At 6:05 a.m., Dan rang the village bell (its purpose is to remind people about gatherings). By 6:15 a.m., five Club members, all boys, had appeared, so we proceeded. A sixth boy joined 10 minutes later. At first, only Dan had binoculars and a bird identification book. We went on a trail through mostly rainforest that leads to the Yupukari River and the landing where local children like to swim. This was the same trail used in the two 2010 birdwatching expeditions I observed, both times with 30+ children participating. At 6:35 a.m., a local guide and very experienced birder joined us, and his contribution was excellent. He had his own binoculars that could be shared with the Club members. Unlike in 2010, no one kept track of the birds he identified.

Others spoke about other activities the Club could organize, such as computer training, and more projects (e.g., the Butterfly Farm in Yupukari was experiencing glitches, but did appear to engage some members). Martin said the programming was not interesting or useful for older members over age 13.

Lack of funding. Nine participants of 35 (26%) said their local Club lacked funding. This of course affects a Club's ability to carry out activities. Birdwatching requires bird identification books and binoculars, and trips outside of the village require transportation by motor vehicle or motor boat, which is very costly in the Rupununi, because fuel is expensive. Insufficient funding was especially seen as an obstacle to having excursions and trips, which were highly valued by participants as opportunities for Club members. As SS5 said: "the biggest thing is finance. If you have the money you could probably do more visits. And further out."

4.5.3. Finding 9: Participants' Recommendations

Thirty-two participants spoke about their recommendations to help improve their local Wildlife Club. As explained above, most participants were asked an open-ended question about their thoughts on their local Club. Yet despite not being asked specifically for their recommendations to improve the program, many participants spoke at length about what they thought was needed to improve the program. Their main recommendations were: increase engagement of community members (especially elders) with the Club; establish stronger adult leadership; improve the youth leadership; take more control over the programming (especially offer more excursions); and undertake more fundraising to support the Club's activities and to build or maintain a clubhouse.

Increase Community Engagement. Eight participants said many community members still did not know very much about their local Club and consequently, they were not always supportive of the Club's activities, and parents were at times reluctant to allow their children to participate. Like others, Mora said it would take the involvement of the entire village to keep the Club going, and to help it get stronger. Twenty-three participants said that their local Club needed to reach out more to community members to bring attention to the local Club and distribute information about its purpose, activities, and plans. Many people suggested public meetings to educate community members about the Club. Three types meetings were suggested: community members could be invited to the Wildlife Club's meetings; the Club could host a meeting specifically to inform community members; and a Club member or volunteer could report at the Village General Meeting (VGM). Uncle Owl and Jeff specified that public meetings about the Club needed to be regular in order to keep community members up to date about its activities and plans. Jeff and Mora said the Yupukari Club should present again at VGMs (they

no longer did so⁷⁷) and at other opportunities to encourage additional community interest. Mora added that the Yupukari Club used to give an activity report not only at the VGMs, but would also “send one copy to RDC [Regional Democratic Council] through the Village Council. And to the NRDDDB.” YII3 said the Club could report at Parent Teachers Friends Association meetings, which are a few times a year.

Parents. Twelve participants said the Club needed to reach out not only to the whole community, but specifically to parents. People spoke about the relationship of parents to their local Club. As reported in Finding 8 on negative perceptions, there is variation in how much participants think parents are already engaged and helping with the Club. However, it was agreed that even more parental participation with the Club would be beneficial, and that it is important for the Club to reach out more to parents.

As with suggestions on ways to engage the general community, the main recommendation for helping to encourage parental engagement was to have meetings with parents. Six participants elaborated more on this recommendation. As discussed in the Negative Perceptions Finding, YSS6 explained that meetings had been essential in Yupukari to get parents on board to dispel the rumours that the Wildlife Club would cause children to live a “Wild Life” or “act wild.”

Two people suggested a meeting with the parents (versus inviting them to existing meetings or reporting at VGMs) to ask them to become more involved and to ask them to encourage their children to participate more. WII1 added that meetings with parents should be regular, and include troubleshooting. She said at the meeting, people volunteering with the Club should talk with parents to identify their problems and issues with the Club: “Like me, the

⁷⁷ Yupukari’s Club had in previous years but not during data collection. Surama’s Club was reporting at the VGM during data collection. Wowetta’s Club was not reporting at VGMs during data collection, and I do not know if it had previously.

previous Festival that I heard, I wouldn't allow my child to learn that again. Something like that they could discuss...I think that would function, to have a close relationship with parents." And with this closer relationship, the Club could inform parents about Club meetings in advance, in order that parents could encourage and release their children to attend.

Elders. Six participants recommended that the Club should try to engage more with elders. As discussed above, participants recognized that elders already did important work with their local Club, such as helping Club members prepare for Wildlife Festival, and teaching about local plants and animals. However, these activities with elders were not regular in any of the villages, and so participants felt that it would be beneficial to the community if elders became even more engaged with their local Club, and on a more regular basis. As with parents, participants suggested meetings specifically with the elders to inform them about the Club and invite them to help (vs. reporting to the whole community at a VGM), or to go and meet with an elder one-on-one. Participants contributed a lot of ideas about the content and method of elder's participation in the Club. These detailed recommendations about elders' potential participation in Clubs are presented in the following section.

Community Groups. Six participants spoke about strengthening the connection between the local Wildlife Club and other community groups or institutions. In all three villages, participants said there was already a connection between the Club and the Primary School. Teachers in all three villages were past and present Coordinators, and Club meetings in one village took place often in the school. However, participants said the connection could be stronger. Jeff noted that the programming of Club can complement the school's curriculum: "There is only so much time dedicated in the classroom to biological sciences, environmental sciences, and none to cultural traditions, hardly; so use the Wildlife Club for that." In Surama, there is a

Culture Group, and Woodpecker said nurturing a connection to the Culture Group helps link the Club with parents and gives older youth another program to participate in if they are not interested in the Club; “the Culture Group, now, it helps to develop the new relationship with the Wildlife Club and developing youths to leaders.” In Yupukari, there is Caiman House, and Dan emphasised the need for a stronger connection between Caiman House and the Club, and that this organization’s employees could mentor Club members: “I think that the biggest thing is to strengthen the connection between the Wildlife Club and Caiman House. For Caiman House to see the Club as a place that is training its future employees, is a big first step because then they take more interest in it, start getting more involved in it.”

Reciprocity. The above suggestions seek to encourage the entire community and some segments in particular to get more involved in their local Club. Three participants also felt the Club should get more involved in the community. Jeff said, “I think there are ways to incorporate the wildlife clubs into village traditions, like Mashmani [a local celebration].” Also, he suggested that the Club could conduct community research (such as surveys). Dan pointed out that one work day that had gone especially well, with a good turnout of community members who helped, happened when the Club needed to build and set up a water tank for the Butterfly project. This water tank was also to be used as a water source for the nearby section of the village. Therefore Dan explained it had been helpful that people in that section of the village saw it as a resource for them, too, and so they had a good turnout of people to do the work because they had a personal interest in it. “That was part of the benefit of... providing another water source for people, but also providing a water source for the butterfly garden. So that type of thing, there was wider community participation.” Woodpecker said that it was important to reciprocate so that the Club was also giving back to its community.

What elders could teach Club members. As per above, participants felt it would be beneficial to have elders engage with their local Club. The main subjects of TEK and, more broadly, of IK, that participants thought elders could teach were: the identification and behaviour of local birds, wildlife, and fish; the identification and use of medicinal plants; storytelling and traditional teachings (including the respectful use of natural resources and taboos about certain resources, and the use of binas); traditional skills, such as cotton spinning, weaving, arrow-making, archery, cassava preparation; traditional songs, dances, and skits; and, the Makushi language.

In all three communities, many participants said that an elder should accompany birdwatching outings so that Club members could learn the common, scientific, and Makushi names of birds, as well as natural history information (such as where they are found, and behaviour). Some elders would be able to teach all this themselves, while some would require another adult present to complement them. Elders frequently knew the Makushi and common (English) names of birds, but the only elder I knew of who knew the scientific names was Uncle Umbrella Bird, a birdwatching tour guide and former hunter. When I went on a birdwatching outing with Uncle Umbrella Bird in Surama, I observed that he taught the common, scientific, and Makushi names of the birds, and taught about their behaviour. These observations were confirmed by Uncle Umbrella Bird himself, and by other participants. In fact, his approach to birdwatching was described as the ideal, and in Surama, used as an example of the importance of engaging elders in Club activities.

Several participants suggested that the same comprehensive approach could be taken with plant, animal, and fish species. WIII said the same information should be taught about flora and fauna, and noted many youth don't know the common name and scientific names of important

tree species and medicinal plants, and their uses. Jaguar added many adults were lacking TEK: “Most of us, we don’t even know the forest. Much less than the children.” And she felt it would be good for the entire community to have this inter-generational learning.

Woodpecker spoke more about the IK and values elders could share, about how important it is to be grateful and respectful when using natural resources, because if people don’t give thanks to the Master of the tree for taking the tree, “sometimes they might have an accident, somebody could be harmed, because you didn’t really give the Master of the resources the praises for allowing them to extract it.” He said that the Club was an opportunity to teach the traditional customs and knowledge about local natural resources, and that “some of us say, you are going to University to learn how to conserve, but it is from our ancestors it started developing.” Learning from elders gives Club members the opportunity to be part of the oral teachings passed from the ancestors. Jeff added these fieldtrips and outings were an opportunity for “honouring the local Makushi that is still spoken far and wide...it would be great if elders were involved because then the lessons are that much greater.” Jeff also suggested that the Club could be used as a way to maintain and protect Makushi identity. The elders could offer lessons to help ground local youth’s identity as Makushi, and Jeff felt this would be valuable for all Makushis, and especially important for anyone representing their community at an international level.

How the elders could teach via the Club. Participants felt the Clubs could be a way to help connect elders with Youth, the main goal being to transmit the elder’s TEK and IK to the Club members. When asked what would be the best way for elders to share IK with young people through the Club, as within the focus groups, most participants said that first, the elder should be asked to attend a meeting with the Club. Some described a meeting set up specifically

with the elder that the Club wished to approach, and some described inviting elders to a Club Meeting. At the meeting, the elder would be briefed about the Club (its history, goals, current activities, etc.). From there, the elder could be asked if she or he would like to “work along with” (engage with) the Club.

Participants were asked how interested elders could then engage with the Club. Most participants described a combination of theory and practice for teaching youth. They said the elders could meet with the Club members and tell stories, or teach specific skills, similar to the approach taken by the IK Camps in Yupukari, described below. Auntie Tanager, who has considerable experience teaching IK, elaborated that teaching theory could occur inside/within the village, through a lesson or workshop (“you can tell them right there, in way of theory, telling them”). She also recommended field trips for certain subjects, and explained the timing of these field trips “depends on the season of the plants, the season of the animals”:

[T]hey need the practical. And to do the practical, you need the right time to do it so they can see it. Let us say you are teaching them fish. You have to find that time when [for example] the fish are spawning. And then you teach them they shouldn't use the fish eggs, because if they use the fish eggs, you can get sick with the boils all over your face,...[We] tell children and young people in our group what is used and which time it is used. It isn't that you mustn't use at all forever, but there is a time, there is a system set, you need to use [natural resources] so that it can be good for your body.

Most participants also said that the elders should “carry the children” (take the children) into the forest on fieldtrips to teach the above subjects that require hands on learning within the forest (such as the identification of medicinal (and harmful) plants and their uses and harvesting techniques; the identification of wildlife and teaching about their behaviour; or traditional skills best taught in the forest context).

Participants said these fieldtrips may require follow-up with hands-on workshops within the village. For example, the elder could carry the children out on a fieldtrip to identify medicinal

plants, and show the Club members how to harvest the plants. Then, back in the village, the elder could show how to process the plant and understand proper dosage and administration of the medicine. In Yupukari, Caiman House had hosted “IK Camps” in the summer of 2010. This was not directly connected with the Wildlife Club program, although Club members were encouraged to participate. The IK Camp was a series of workshops facilitated by local elders on various topics, mostly hands-on training in specific skills, and all Yupukarians of any age were welcome to attend. The IK camp program was spoken highly of by those in Yupukari who knew about it, and was suggested as a model that the Club could use if they got elders to teach TEK/IK.

Several participants gave suggestions about the timing and schedule for TEK training, observing that this would need to be worked out between the Club and interested elders. For example, after-school programs were a possibility to teach TEK, and YSS7, an elder in Yupukari suggested a regular schedule be made, after-school or with lessons or workshops on Saturdays for up to two hours. He also suggested the TEK/IK training could be during the school holidays, when students would have more time.

Improve adult leadership. Eighteen participants recognized the important role of adult leadership for their local Club and made recommendations to improve adult leadership. Ekki explained that “as club members are kids, adult support and guidance is important.” Participants’ main concerns were that more adult volunteers were needed, that these adult volunteers should have certain characteristics, and that more could be done to support adult volunteers.

In 4.5.2., concerning negative perception, participants spoke about the lack of sufficient adult volunteers. Consistent with this, when asked for recommendations to improve their Club, 10 people said there needed to be more adults involved with the Club. Three people said there

should be at least two adult Coordinators. Bulletwood argued for possibly even more key adult volunteers: “I say that three to five adults must be involved in the Club.”

Another concern identified within the negative perception theme was that some adult volunteers had not performed their role well. Eleven participants identified the following key characteristics required for adult volunteers to have a positive impact on their local Club:

1. Adult volunteers should be enthusiastic about the Club and encourage Club members to conserve local wildlife and other natural resources (six people).

2. Adult volunteer should be responsible, dedicated, committed, and honest (four people). For example, Uncle Owl said his Club needs “people who really sit down and take it as a duty or their responsibility to get these kids going and keep them that way.” Another participant pointed out honesty was essential since the Club has valuable resources (e.g., books, binocular, prizes from Festival).

3. Adult volunteers should have leadership skills (five people). Tatabu and others spoke about the need for leadership: “They want a vibrant, effective leader who can manage and get everything running.” Uncle Owl pointed out that the Clubs need adult leadership throughout the year, not just before Festival., and that a good leader needs to be willing to ask for help, and to listen to others.

4. An adult volunteer should have experience with young people and an interest in mentoring them (four people). Auntie Tanager spoke at length of the need to understand and meet the needs of the Club members more, which she felt was part of being an effective adult leader: “Being a leader in the Club, you need to check with the members, the children, to see their likes, and dislikes, and then you got to deal accordingly with them.” Each child is an individual, and though she/he may not want to participate in one Club activity, they might be

engaged by another activity: “So as a leader, you need to ... read their mind, or you need to look at their behaviour, and see which part they can fit into the group.”

Seven people spoke about the need to support adults who wish to volunteer with the Club. There was variation in how well supported participants felt the current and past adult Coordinators were. However, all agreed that adequate support was required in order for an adult Coordinator to be effective and continue volunteering. Antbird said she continued in the role of adult Coordinator because she felt supported by the community. And Laba said it was when she no longer felt enough community support that she finally decided to quit volunteering with her Club. Another Coordinator was also seeking to step down in part because she did not feel supported.

Ekki noted “a lot seems to fall back to teachers. But teachers here have a lot of stress. They know the kids and do a great job but it is hard on them because of the time this takes.” For example, one teacher, Tatabu, had been asked to work with the Club and had very positive views about the Club, yet did not volunteer because he did not feel he had enough time.

Some participants noted it was more difficult to get adult volunteers to commit to regularly volunteering (versus occasionally, such as helping prepare for Festival). Martin suggested the way to help adult volunteers be able to invest time in their role with the Club on a more regular basis would be to provide a stipend. He said that the Club’s clubhouse was a good example. It is was good that it was built, but it also needs to be maintained:

You need people to be there to keep things organized, you need to have your books, little library, properly secure, you need to have your little equipments [*sic*] that is being donated to you, you have your banners...So while we have a place to keep everything, there’s nobody to look after it on a daily basis, or even on a weekly basis, ’cause everything is done voluntarily and whenever they feel like it they can clean it up. But again, this is because life has become so busy, people have to do their stuff, they have to

earn a dollar to survive. I would say that if we should have, I don't call it salary, it's a little stipend, to give somebody. A little stipend to maintain the place.

He said if it was done on a voluntary basis it might get done for a couple of months, and then would stop "because you got to go and work, you have to earn a dollar." YII9 also suggested providing key adults a small stipend to encourage them to keep up their work with the Club, and that perhaps terms of reference (TOR) for volunteer positions could be useful.

Improve youth leadership. In the negative perceptions theme, participants spoke of the need for stronger Youth leadership of their local Club. In two villages, participants in individual interviews and focus groups said their local Club's President during the research period was not fulfilling the role well. One President appeared uninterested in the Club, and the other was a secondary school student away at boarding school, and so was not living in the village. In both of these villages, participants also said their Club had been much more active when there had been an effective President. Surama's Club had an adult President during the data collection period rather than a youth. Of the 25 participants in the two villages with perceived weak youth leaders, 10 participants recommended replacing the current President (generally, they said with the regular election process). Jaguar summed it up: "We need to change the President. We need youth leaders who are interested."

Three people also noted the entire Executive needs to be strong. Anteater was put off and quit his Club because of what he perceived to be a disorganized Executive that would make plans and not follow through on them. Jeff also said the local Club's Executive needed better planning, to stick to their plans, and to be persistent. He argued the Executive could implement more horizontal leadership:

So that things are not reliant on one leader who may or may not be strong.

Because that's unfair. One person gets elected as President, then they get looked

at as the sage for the group. But how are they different from any other 12 or 14 year old? They may have an ounce more experience or show a bit more confidence and they are put on too high of a pedestal, then expecting too many accomplishments, and then if they fail, it's so hard on them because it's all on them.

Not as many people spoke about characteristics of an ideal youth leader the way they did about an ideal adult volunteer. Three participants said youth leaders needed to be engaged and willing to take action on their own initiatives, such as visiting elders to learn from them, and other potential projects that could benefit their community. Three people spoke of the role older youths could play as role models and mentors for younger members. Dove said it would be good to get older youth engaged in helping with programming, and with teaching, supporting, and inspiring the younger children:

I would encourage the youths to... come together and help the small kids, especially reading and getting things in place like that... We have a lot of 16, 17 year-olds, but they don't really do anything, but I believe you encourage them, they will fit in and serve in this Wildlife Club and give more ideas.

Improve programming. Twenty-three participants spoke about improving the programming of their local Club, with recommendations mostly about improving Club activities. Participants recommended the Club have more activities in general and especially increase certain activities, like excursions and workshops with elders. Participants recommended improving the most common existing activity, birdwatching. Holding regular meetings was the way participants felt these programming changes could be supported. Some programming recommendations would also require more funding.

Increasing certain activities tailored to the needs of the Village. Participants said their local Club needed to undertake more activities in general. Uncle Owl and others noted that

having the Wildlife Festival is good, but there needs to be activities throughout the whole year. Four people said that their local Club's activities could be better tailored to serve the needs and interests of their village. Dan explained that each village is unique, and programing should be tailored for each village:

I think that Wildlife Clubs have a lot of potential to do a lot of stuff, for individual kids, for communities, and everywhere in between, and I think that they're still in their infancy of figuring out how to do that... almost every village is different in what is the best way to get the most out of the Wildlife Club, at least from when I was talking to other leaders from other villages at the Festival and hearing about all the different variables that they're dealing with in their village and even with the natural environment in their village.

Jeff added reflection by decision-makers is important to keep programs, like NRWC, active and achieving their objectives. He said Clubs could regularly evaluate whether the programming is still effective. He said those involved in the Club could design their own community surveys.

Participants highlighted two types of activities to increase: (i) fieldtrips and excursions, and (ii) activities with elders. These types of activities may overlap, such as if an elder takes Club members out on a daytrip in the forest to learn about local medicinal plants. Thirteen participants spoke about the club offering more fieldtrips. In the focus groups (see section 4.3.2.), the types of fieldtrips/excursions most advocated for were visits to the Iwokrama Field Station and canopy Walkway, exchanges with other Clubs, and fieldtrips in local ecosystems, particularly into the rainforest and along rivers, and particularly with elders who could teach TEK. The Surama and Yupukari Clubs have access to rivers, and participants said more river trips would be good. While relatively far from Iwokrama, Yupukari is close to Karanambu, famous for Diane McTurk's work with giant river otters, and Yupukari participants suggested that was an important fieldtrip destination. Visiting other Clubs was another popular suggestion, an activity that had happened in the past but was not a current activity in any village. Swift

explained that “it would be good if we got hooked up with other Clubs. Maybe nationally, and internationally, to get more ideas.” Again, as in section 4.3.2., participants highly valued the opportunity for their youth to gain exposure to people and ideas from beyond their village.

Six participants spoke about having more activities with elders. The main potential activities with elders described by participants were: fieldtrips with elders to teach about birds, plants, and animals; participating in birdwatching (see below); elders hosting workshops about traditional skills and TEK; and potential projects in which Club members could audio or video record interviews with elders to share with the wider community, possibly internationally. Swift explained, “Maybe they can try to get these traditional knowledges from the elder folks, or stories, or stories about the wildlife, about animals. Or just about, in their time, how it was, try to compare with now, try to see the changes.” Jeff and Dan both mentioned the exciting potential project of sharing elder’s IK through new technologies, such as video and YouTube.

Improve birdwatching. The main activity participants felt needed to be improved was birdwatching. Seven people talked about ways birdwatching could be improved. Two people said elders needed to be involved, and Jaguar said “if an elder went with them, they could learn the Makushi name.” Two people said their Club needed to use bird identification books more, and Martin added that this could improve data collection in birdwatching and other monitoring:

And the monitoring aspect now... there’s no consistency of the reports, the data collection, they’re just doing that and wasting time. They need equipment, they need binoculars to see, to learn, birds mainly, but information, there’s not a proper system for information...One time I remember Samantha [James]⁷⁸ trying to analyse the data but it’s not consistent. You got to be consistent, you got to be doing things over and over, you need to find the resources to engage and motivate the children to do it.

Meetings. Ten participants said that it was important for a Club to have regular meetings. These were considered to be an indicator of the health and activeness of a Club. For example,

⁷⁸ Samantha James, Iwokrama’s Community Education and Awareness Manager.

Uncle Owl lamented about the current activity of the local Club, saying “I only hope they can get serious about it. They don’t have regular meetings.” It was not clear whether holding meetings regularly was considered to be the responsibility of the youth or adult leadership.

Summary – Chapter 4

This chapter presented the data analysis and findings from individual interviews, focus groups, and observations. There was less data on certain themes in focus groups. Few of the research questions could be answered by observations, but when relevant, observations were included. Under Research Question 1, interview and focus group participants gave their perceptions about the term ‘pro-environmental behaviour,’ which they said meant a person did not litter, used natural resources responsibly, and educated others about environmental issues (Finding 1). Focus groups discussed the complex issue of burning the savannah in more depth than individuals did during interviews.

For Research Question 2, participants were asked about the term Positive Youth Development (PYD), and they said this meant a young person secured employment, knew IK and TEK, and had good character (Finding 2). These fall under the Competency (vocational competence and TEK) and Character elements of the 5C’s model of PYD (E. P. Bowers et al., 2010). They said PYD was supported by: youth completing school; receiving encouragement from parents, elders, and other adults; learning about their local ecosystem and wildlife; learning how to conserve their natural resources, mastering TEK and traditional skills; and being given positive role models or mentors.

Research Question 3 was about the perceived effects of Clubs on Club members. These impacts were thought to be positive. The perceived impacts on environmental knowledge, attitudes, and behaviour from interview and focus group participants were: Club members were

generally more aware of and caring towards the environment, were less likely to kill local birds, and were less likely to litter (Finding 3). The perceived effects on PYD were also positive.

Interview and focus group participants said vocational competencies (bird identification, public speaking, and the ability to obtain references) and opportunities for exposure beyond their home village were supported by being a Club member (Finding 4). The benefits of youth gaining exposure to other places and people beyond their village were discussed at length in the focus groups.

Research Question 4 explored the impact of Clubs on their local communities.

Participants reported positive impacts on the Club's community, such as the villages having less litter and that Clubs increased pro-environmental behaviour in the village overall (Finding 5). An important positive perception was that Clubs did and could be used even more to help youth connect with their local elders (Finding 6).

Research Question 5 explored perceptions about the program (versus the above questions on its effects). Participants had generally positive perceptions (Finding 7), and very detailed negative perceptions about the Club, which were mostly concerns about how it was functioning (Finding 8). Their concerns included community members' stating that the Club lacked enough adult support (from adult volunteers, parents, and elders); some community members (not participants) thinking "Wildlife" meant Clubs encouraged members to live a "Wild Life;" concerns about both adult and youth leadership of the Club; concerns about the programming; and perceptions of a lack of funding (Finding 8). These concerns correspond with the many recommendations participants offered about improving their local Club (Finding 9), which appear to address many of the above concerns. Recommendations included increasing

engagement with community members (especially elders ad parents), improving adult and youth leadership, and improving the programming.

Chapter 5 – Discussion

The Discussion, as was the previous Chapter, is organized thematically by the findings for each research question. All themes discussed in the focus groups were also discussed in individual interviews. However, not all themes discussed in the individual interviews were also discussed in the focus groups, or were not discussed in enough of the focus groups or in sufficient depth in the focus groups to allow for analysis. The Discussion draws upon the analysis of both these data sources. In addition, there were some themes to which my observations during my 2010 Reconnaissance and 2011 data collection were relevant and provide further context,⁷⁹ therefore these observations were included in the previous chapter and in the discussion of a few of the themes. The findings are discussed in relation to the literature, and in a few cases in which there were differences in the responses from the different villages, this is discussed as well.

5.1. Research Question 1 – Local Meaning of Pro-Environmental Behaviour

“Pro-environmental behaviour,” and several other terms (see 2.3.), is the term commonly used in the literature on environmental education (EE) and education for sustainable development (ESD). As per Section 2.3., in this dissertation’s literature review (**Chapter 2**) I use a modified version of Kollmuss and Agyeman (2002)’s definition for pro-environmental behaviour: behaviour that intends to minimize negative impacts or to have positive impacts on the environment. As per Stern (2000), these impacts change the availability of materials or energy from the environment or can alter the structure and dynamics of ecosystems or the biosphere. In the Rupununi, this term is not used. Local people spoke in terms of “taking care of your environment” or being “environmentally friendly.”

⁷⁹ Note all the observations from 2010 and 2011 are offered as a narrative account in **Appendix E**.

Consequently, based on pilot testing and discussion within the first focus group, the term used in the questions to explore perceptions about environmental behaviour in interviews and focus groups was “being environmentally responsible” instead of “pro-environmental behaviour.” Usually, however, some further explanation of the term was required. Participants were encouraged to think about what it “looked like” to them to “take good care of your environment” and to be “environmentally friendly.” There has been considerable effort by Iwokrama and other NGOs to provide public education on the environment, particularly on sustainable use of local natural resources. Many participants mentioned these workshops, meetings, and visits by Iwokrama staff and staff from other groups. Many participants also indicated that environmental issues were discussed frequently at Village General Meetings (VGMs) and other meetings in their village. Therefore most participants appeared to be knowledgeable about the environmental issues affecting their community, and to have heard about the Low Carbon Development Strategy (LCDS; see **1.4.3.**).

The description of what the construct pro-environmental behaviour means for people in Surama, Yupukari, and Wowetta was nearly identical from both the individual interviews and focus groups. From both data collection methods, participants said “being environmentally responsible” in the Rupununi meant not littering, responsible use of natural resources, and educating others. The following discusses these key aspects of the local understanding of pro-environmental behaviour in more detail, after a brief discussion of the importance of understanding the local definition of pro-environmental behaviour.

5.1.1. The importance of the local definition of pro-environmental behaviour

It was important to understand the local Makushi communities’ own way of understanding and defining concepts such as pro-environmental behaviour and PYD. I believe

this is ethically required conduct by a non-indigenous researcher, like myself, who is seeking to be an ally of the indigenous communities I have had the privilege to work with. To impose a Western definition of pro-environmental behaviour and assess the impact of the Wildlife Clubs using that definition would be colonial and oppressive (Smith, 1999). As explained in **Section 3.2.3.**, I sought to situate this research within Ethical Space. Navigating this space with respect and sensitivity included exploring and sharing the local Makushi understanding of pro-environmental behaviour.

I am not claiming that the Western definition of pro-environmental behaviour is inappropriate in the Rupununi, and the above modified version of Kollmuss and Agyeman (2002) definition I used in the literature review was useful for developing the questions used in interviews and focus groups. Makushi communities have demonstrated that they are receptive to learning from the Western perspective with respect to environmental education and sustainable development (Wihak, Hately, Allicock, & Lickers, 2007; Wihak, 2009). Indeed, NRWC was started by Iwokrama because North Rupununi communities requested a Western approach to environmental education for their youth (*Annex I*, 20009). However, it is up to these Amerindian communities to decide what their own definition of pro-environmental behaviour is, and what their corresponding actions will be if they wish to promote this pro-environmental behaviour in their communities.

An example of the potential harm that can happen to indigenous communities, and also the potential hindrance to the general goal of environmental preservation, is a study by foreign researchers in the Rupununi that used a Western understanding of pro-environmental attitudes and beliefs to assess the impacts of interventions in the North Rupununi on the pro-

environmental attitudes and beliefs of Amerindian (mostly Makushi) children. In brief, Mulder, Schacht, Caro, Schacht, and Caro (2009) state:

We sampled children's knowledge and attitudes towards Guyanese wildlife and the environment in order to assess how various forms of education, wildlife clubs, visits to zoos, conservation organization outreach, and even family ownership of a domestic animal affect children's interest in and tolerance of a western-based conservation message.

Membership in a Wildlife Club was a yes/no background item in their questionnaire on environmental attitudes and beliefs filled out by 366 children, aged 6-16, in nine schools within a 60 km radius of Lethem. They found no statistical difference in the attitudes and beliefs (they did not assess behaviour) about the environment in Club members compared to non-members.⁸⁰ As a consequence, someone reading this study may come to the conclusion that Clubs do not have an impact on environmental attitudes and beliefs, which may have implications for support of the program.

First, note that only three of the nine villages in the study even had a Club at the time of their research, and only one (Nappi) possibly had an active Club. This was not mentioned in the paper, and the authors may not have known this. Although 30.1% of children said they were members of a Wildlife Club, this tells us nothing about how personally engaged they were within their Club, or how active their community's Club was. In my opinion, it was inappropriate to assess and report upon the effect of a program in communities that do not have the program, or in which the program was weak. A more thorough assessment of the context may have avoided this situation.

⁸⁰ They were also surprised the Makushi children did not appear to favour preservation of charismatic megafauna over other species, and that despite very positive attitudes about wildlife, children were "tolerant" of natural resource exploitation (such as hunting, timber, and mining).

Second, the questions they used to assess pro-environmental attitude do not appear to correlate with the local understanding of the term “pro-environmental.” As described in the analysis, local people believe pro-environmental characteristics are not littering, responsible natural resource use (including not burning the savannah), and educating others. Of these three key aspects, Mulder et al (2009) only asked yes/no questions about natural resource use, which does not capture the nuance of what local people view to be responsible versus unsustainable natural resource use. For example, their questionnaire asked “Should people be allowed to hunt wild animals to eat?” and 54.9% (n=337) said yes. For the question about whether people should be allowed to sell wild animals to foreigners, 39.0% (n=331) said yes. And they found only 13.7% of children think burning the savannah should be allowed, which is consistent with my research with adults in communities further North. While the researchers interpreted their results to show Rupununi children had a high tolerance of the exploitation of natural resources, the results could also be interpreted as being consistent with the local views on responsible natural resource use. Adult participants in my research supported hunting for food, as long as it was sustainable. They did not support commercial hunting. Had Mulder et al. (2009) investigated local views on pro-environmental attitudes, they may have chosen to ask questions about littering, about raising environmental awareness, and about what children consider to be responsible versus unsustainable resource use.

It appeared there was a disconnect between the kinds of impacts the foreign non-indigenous researchers were looking for to assist the wider goal of conservation, and the impacts the local indigenous Makushi communities are seeking and require for their cultural preservation, autonomy, and to protect their ecosystems. What follows is discussion of some of

the aspects of pro-environmental behaviour that were important to the mostly Makushi participants in my research.

Not Littering. In all focus groups and most interviews, the first issue discussed as a key indicator for whether a person is environmentally friendly was a person's attitude and behaviour about littering. Not littering or "keeping the place clean" was considered to be evidence the person was environmentally friendly. Littering may appear to be a rather superficial, aesthetic conception of pro-environmental behaviour from the perspective of those from developed countries. However, many communities worldwide have campaigns to stop littering, and it is a nearly universal concern (Eastern Research Group, Inc., Lexington, MA., 1992; Newman, Watkins, Farmer, ten Brink, & Schweitzer, 2015; Wagstaff & Wilson, 1988). Marine litter presents an environmental, economic, human health and safety, and aesthetic problem (STAP, 2011). Marine or riverine litter can cause injury or death to wildlife which can ingest or become entangled in litter, it incurs losses to coastal tourism, shipping and fishing industries, and clean-up efforts are expensive (Gregory, 2009; Mouat et al., 2010; Secretariat of the Convention on Biological Diversity and Scientific and Technical Advisory Panel GEF, 2012). Losses to tourism, harm to wildlife, and the effort needed to clean-up are issues with litter in rivers and on land as well, such as in the Rupununi. And there has been considerable research that uses littering as a target behaviour to reduce (Ballance, Ryan, & Turpie, 2000; Eastern Research Group, Inc., Lexington, MA., 1992; Hartley, Thompson, & Pahl, 2015; Ojedokun, 2011; Trouwborst, 2011; Wagstaff & Wilson, 1988).

In the Rupununi, litter represents a concrete and very visible concern for local people. There is no garbage disposal service in villages, so households must dispose of their garbage themselves. A generation ago, all refuse was biodegradable and non-toxic (except for plant

derived poisons used for hunting and fishing). Therefore it was relatively simple to dispose of refuse. Once plastic, metal, and glass containers and toxic products were imported into the area, these non-biodegradable containers became visible litter (Chung Tiam Fook, 2010). With the emergence of the local ecotourism industry, litter is now even more of a concern since villagers realize litter makes their Village less attractive to tourists. As per above, their concern is supported by the literature which shows litter negatively impacts tourism (Ballance et al., 2000; Gregory, 2009; Jang, Hong, Lee, Lee, & Shim, 2014; Mouat, Lozano, & Bateson, 2010). Those who explained why littering was a concern indicated that reducing littering and keeping the Village common areas and villagers' individual compounds clean and tidy was important for the aesthetics of the Village, and also helped make a good impression on visiting tourists. Littering was believed to be particularly a turn-off for ecotourists, the most common type of tourist in the North Rupununi, who tend to be environmentally aware and concerned. Cleanliness was also associated with better hygiene and health for everyone in the Village.

Littering came up frequently in all three Villages as an environmental concern. Participant's perceptions about littering were similar in all three Villages. Therefore, local people interviews and focus groups tended to think first of littering as an indicator of an individual's environmental friendliness. Participants also had very positive views about Clubs doing "clean-up campaigns." There did appear to be a lack of understanding about what to do with litter that had been collected and with waste disposal in general. For example, the widespread practice of burning garbage, including plastic, releases toxins. A few participants even thought that plastic was compostable. However, there are currently no better local options available for non-biodegradable garbage than trucking it out (expensive and rarely used), or digging a pit and then burying the garbage in it, or burning the garbage in the pit first and then burying it. The one

exception is the use of empty glass rum bottles which are reused to package honey, crabwood oil, coconut oil, and other local products that are then sold locally and sent to market in Georgetown. Plastic beverage bottles are also reused, which is problematic since bisphenol A (BPA), phthalates, and other harmful chemicals can leach out of the type of plastic used in those kinds of bottles and into the liquids within the bottle, particularly with exposure to sunlight (Kubwabo et al., 2009; Thompson, Moore, vom Saal, & Swan, 2009; Wagner & Oehlmann, 2009).

Direct Resource Use. It was difficult at first in many focus groups and in some interviews to elicit other indicators about environmental responsibility. Therefore, I would ask about direct resource use, and the next most commonly identified indicator of environmental responsibility was whether a person's direct resource use was sustainable. Examples of direct resource use in the Rupununi are: hunting, fishing, lumbering, harvesting leaves for benab roofs, and harvesting fruit and nuts. Participants would sometimes talk about sustainable versus unsustainable practices, and traditional versus modern practices, especially with respect to fishing, hunting, the use of Ité palm leaves for roofs, and farming. Participants spoke of needing to know what resources they had, and details about the quantity and quality of these resources, in order for them to use them wisely. Unlike in developed countries, many people in the Rupununi depend on local natural resources for day-to-day life (food and shelter). Therefore they have a direct impact on the abundance of local species, versus people in developed areas who have an indirect effect based on their consumer choices (Bhandari & Abe, 2001; Bowers, 2004; Goodman & DuPuis, 2002).

Interestingly, some hunting, fishing, and gathering approaches that are considered to be traditional were also viewed to be wasteful, such as fish poisoning. The Surama men's focus group surmised that this wasteful kind of resource use was because, up until recently, fish,

wildlife and plants were abundant. While this may indeed be the case, it is possible that like with the “wicked” bird killing, a loss of traditional knowledge and values once Western values were imposed by public schooling may also explain the wasteful use of this resource (see **Appendix E – Encountering the Rupununi** for more on the impact of public schooling). Further research might help determine when fish poisoning used to take place. At the time of this research, participants were against poisoning entire ponds of fish. With hunting, most participants agreed sustainable hunting for subsistence was acceptable, but were against wasteful practices, unsustainable harvesting, and hunting commercially. Many participants described changes in their own hunting practices, or those of a family member, towards being more sustainable in recent years.

Another resource-use issue identified in all three villages was harvesting leaves, fruits, and nuts from trees. Participants indicated that many people used to cut down the whole tree to harvest leaves, nuts, and fruits. Since public education about harvesting from trees in the Villages, participants indicated that people were less likely to cut down trees. They knew that the sustainable method was to cut leaves and fruits and nuts down with a long stick and cutlass, or by climbing to the fruits, nuts, or leaves and cutting them down from there.

In both Surama and Yupukari, most interview participants talked about sustainable fishing, and the topic of fishing incited lively discussion and strong opinions in focus groups. All participants who mentioned seine nets⁸¹ felt they could cause overharvesting and harm to fish stocks. Many participants thought they should be banned, and everyone agreed that if they were to be used, the nets must be checked very frequently so that non-target fish would not die and be

⁸¹ A seine net is a fishing net that hangs vertically in the water with its bottom edge held down by weights and its top edge buoyed by floats. Seine nets can be deployed from the shore or from a boat. In the Rupununi, they tend to be set across rivers and creeks and left unattended for a few hours. If left for more than a few hours, the fish in the nets die. This means non-target fish are not released unharmed.

wasted. In Yupukari, over half of the participants spoke of the need to reduce fishing during spawning season. Most people advocated not harvesting a species at all when it is spawning. Ekki noted it was harder to encourage sustainable use when impacts are only seen in the long-term, such as it can take generations to see the impact of overfishing (Berardi et al., 2013). Tatabu spoke at length about the wasteful use of fish, especially at spawning time. He spoke of conserving resources for future generations. Unlike in the focus groups, few individuals in interviews mentioned a need to have resource management plans for the Villages to help prevent overusing local natural resources (birds, fish, trees, etc.). Martin credited Iwokrama for change to more sustainable resource use in hunting, fishing, and lumbering.

There were some differences in responses from the different villages about what constituted responsible resource use in the participant's village. In Surama, sustainable lumbering was discussed by several participants, but did not come up frequently with participants in Yupukari and Wowetta. This is likely because Surama is near the Iwokrama protected area, and some villagers are engaged in sustainable lumbering there and in Surama's forests. Noise pollution was also discussed by a few participants in Surama. Villagers complained about noisy gasoline powered generators, and about loud motorbikes. Noise pollution was not mentioned in the other villages.

This finding that responsible direct resource use is an aspect of the local meaning of pro-environmental behaviour is important because indigenous people living in their traditional territories are the key stakeholders who can protect their local environment. Indigenous peoples inhabit many of the areas of highest biological diversity on the planet (The Office of the United Nations High Commissioner for Human Rights (OHCHR), n.d.). The "Biological 17," the 17 nations that are home to more than two-thirds of the Earth's biological resources, are also the

traditional territories of most of the world's indigenous peoples. When looking at the global distribution of indigenous peoples, there is a marked correlation between areas of high biological diversity and areas of high cultural diversity. This link is particularly significant in rainforest areas, such as those found along the Amazon, and in Central America, Africa, Southeast Asia, the Philippines, New Guinea and Indonesia (OHCHR, n.d.). Since their own definition of pro-environmental behaviour includes responsible natural resource use, this means conservation groups can work with local Makushi to support the protection of their healthy and biodiverse local environment.

Burning the savannah. One form of direct resource management in the Rupununi that has been particularly targeted for change by government and NGOs is burning the savannah (Mulder et al., 2009). Human pressure on the Rupununi savannah is increasing. This is part of a general trend of intensifying human pressure on savannah ecosystems, usually via conversion of savannah to agricultural land and pasture (Cardoso da Silva & Bates, 2002). Burning the savannah is a widespread practice in the Rupununi. However, frequent burning leads to depletion of soil nutrients (Bush et al., 2007; Iriarte et al., 2012), as well as increased carbon emissions to the atmosphere (Andreae & Merlet, 2001; Bush, Silman, McMichael, & Saatchi, 2008). The issue of burning the savannah came up with over half the interview participants, in all three Villages, and was discussed in most focus groups. Overall, participants stated they were against burning the savannah. This is consistent with Mulder et al. (2009)'s findings with children aged 6-16 in villages just South of the villages that participated in this research: 87.3% (n = 336) of these children thought burning the savannahs should not be allowed. Mulder et al (2009) write "Clearly there has been some change in attitudes towards fire since Myers' (1936) citation of sources that refer to the aboriginal Indians as "inveterate burners.'"

Indeed, when I first arrived at BHI in 2010, one of the most frequently played public service announcements (PSAs) on Radio Paiwomak had been created by a Wildlife Club to tell people to not burn the savannah. Participants said they were against burning the savannah because it could kill birds and wildlife, and because the fire could get out of control and burn homes. In 2006 when I lived in Nappi and Yupukari, I heard of and witnessed cases of savannah fires that my friends told me had been set “for fun” by bored adolescents. One of these fires in Nappi nearly burned down a villager’s home. However, in both interviews and focus groups, participants’ views demonstrated the complexity of this issue in this area. Although they stated they were against burning the savannah, participants often explained why people still do burn the savannah. As reported in 4.1.1, some locals burn the savannah to clear out poisonous snakes, and to cause regrowth of the tough savannah grasses. Locals believe the new tender shoots are better for cattle, horses, and goats to eat (but in the long run, frequent burning depletes the soil of nutrients (Bush et al., 2007; Iriarte et al., 2012). Several people said they preferred the aesthetics of the fresh, green, new growth compared to old, tough, tawny grass. Thus, during the 2011 data collection, few participants were categorically against burning the savannah. Rather, their position was more nuanced, and it appeared that there could be justification for burning the savannah, and if so, then they said it must be done responsibly to avoid the fire getting out of control and destroying habitat and villagers’ homes.

It was beyond the scope of this research to dig deeply into the history of this widespread practice and to better understand the motivation for burning the savannah in the Rupununi. One elder revealed that in Yupukari, the savannah used to be burnt as a signal from hunters that they were returning home. Thus it appears burning the savannah in North Rupununi Makushi communities is a multi-purpose practice that is considered to be traditional, was once used to

convey messages, and is still used today to reduce the population of dangerous snakes near villages, to provide livestock with young grass, and for aesthetics.

However, the notion that managing the savannah through fire is a traditional indigenous practice in the Guiana Shield region of South America is contested (Bush et al., 2008; McKey et al., 2010; Sletto & Rodriguez, 2013). Recent research on seasonally flooded savannahs in nearby French Guiana suggests burning the savannah on the Guiana shield area is a post-European contact⁸² phenomenon (Iriarte, Power, Rostain, Mayle, Jones, Watling, Whitney, & McKey, 2012). Iriarte et al. (2012) note that the discovery that pre-European contact farmers used fire-free savannah management offers fresh perspectives on alternative approaches to savannah land use and conservation (see, for example, Oxfam, 2009). Adoption of raised-field agriculture in seasonally flooded savannahs has the potential to reduce atmospheric carbon emissions (Andreae & Merlet, 2001), and potentially to alleviate poverty (Iriarte et al, 2012).

Thus, non-fire alternatives to managing the savannah have been suggested and encouraged, while it is important to keep in mind that other factors besides indigenous savannah burning, such as agribusiness expansion (Welch, Brondizio, Hetrick, & Coimbra, 2013) are larger and more pressing threats to this ecosystem. It is also important for governments and NGOs to work respectfully with and genuinely consult local indigenous communities to negotiate natural resource management on and near Amerindian territory (Sletto & Rodriguez, 2013). Non-fire savannah management possibilities are timely, given the critical need for Makushi communities to manage their natural resources for the benefit of their communities and for future generations, and their willingness to navigate this critical time with tools both from their cultural traditions and from modern science.

⁸² The terms pre or post Columbian Encounter are also used in the literature.

Given that the motivating factor for burning the savannah was the belief it produced better, new grass for cattle and horse, it may be beneficial to include in the anti-savannah burning messaging and educational outreach to North Rupununi communities the fact that in the long run, repeated burning of the savannah depletes the soil. And to educate local indigenous people that there is solid evidence their ancestors did not manage the savannah with fire, and this fire-management is actually due to post-European contact influences.

Educating Others. Participants in interviews and focus groups identified educating others and speaking up about environmental concerns at meetings as an indicator of environmental responsibility. As reported in Chapter 4, this was especially emphasized in Surama, where Sydney Allicock and Glendon Allicock were identified as outspoken advocates for environmental responsibility, and were frequently used as examples and role models of being environmentally responsible.

This is interesting because it suggests that in these North Rupununi communities, people view pro-environmental behaviour to be more than individual actions, it includes educating and influencing others to behave pro-environmentally. It shows environmentally responsible behaviours matters to participants at the individual (micro) level and the community (meso) level. There is literature on intergenerational learning, and on EE programs for children also having positive impacts on the environmental attitudes of the children's parents (Ballantyne, Fien, & Packer, 2001; Ballantyne et al., 2006; Duvall & Zint, 2007) and other community members, too (Vaughan et al., 2003). Research participants, in particular adult volunteers with the Clubs, felt strongly that Club members positively influenced the environmental attitudes and behaviour of parents and of other community members, which is consistent with the literature and a promising avenue to continue positively impacting entire North Rupununi communities.

In addition, though I did not intend to explore what it means to be a good citizen in the Rupununi, participants did talk about aspects of its meaning and also what is meant by being a good community member. These observations arose when asked about pro-environmental behaviour and PYD. Pro-environmental behaviour certainly appeared to be considered an aspect of being a good person and good local citizen, therefore it is relevant to consider Westheimer and Kahne's (2004) distinctions between three different conceptions of citizenship. These types of citizenship can be characterized as: the personally responsible citizen, the participatory citizen, and the justice-oriented citizen. In the Rupununi, an example of personally responsible behaviour is not littering. An example of participatory behaviour is educating others not to litter and organizing clean-ups (as some Clubs do). And a justice-oriented citizen in the Rupununi might organize to stop the importation of non-biodegradable beverage bottles or examine and lobby for change in current government waste-disposal services in the Region.

From what participants said, it appeared that the meaning of pro-environmental behaviour in these communities could be categorized as personally responsible (not littering, responsible direct resource use such as hunting and fishing), and participatory (educating others, organizing clean-ups). When participants spoke about PYD, the skills they identified as desirable for youth to obtain via the Clubs included public speaking skills, which would assist with educating others (participatory) and potentially with representing one's community at the national and international level (justice-oriented). Given that the local meaning of citizenship appears to be a mix of all three kinds of citizenship (Westheimer & Kahne, 2004), it may be useful for further research to better understand the meaning of citizenship in North Rupununi communities.

Also interesting to note about "educating others" being an important aspect of the local definition of pro-environmental is that indirectly influencing others via EE has long been a goal

of EE programs. The most common format is aiming for intergenerational learning, such as providing environmental education to children and youth with the goal to change their beliefs, attitudes, or actions, and to also positively change those of their parents (Ballantyne et al., 2001; Ballantyne et al., 2006; Duvall & Zint, 2007; Volk & Cheak, 2003), and their communities (Gallagher & Hogan, 2000; Volk & Cheak, 2003). Indeed, some participants said Club members learn from the Club, and then go home and teach their parents about environmental responsibility. Antbird believed that the NRWC program was positively impacting her community's local environment, as quoted in 4.1.1., because Club members (and Club activities) educated parents. Some adult volunteers also said they learned through volunteering with the Club.

This local opinion that pro-environmental behaviour includes educating others means that for local EE to respond to the communities' needs and priorities, it should empower learners to educate others. This connects with the perception that participating in NRWC increased Club members' communication skills, particularly public speaking. The examples given in Surama of village leaders speaking about environmental issues and encouraging community members to behave pro-environmentally underlines that the impact of Clubs on public speaking is relevant in these communities.

Absence of TEK in definition of pro-environmental behaviour. It was interesting that knowing or acting upon TEK was not mentioned as an aspect of being an environmentally friendly person. And yet, in all focus groups and many interviews, elders and their TEK were spoken of with respect and appreciation. And several participants in interviews said Clubs could undertake projects to interview local elders and use creative means to share the wisdom of these elders, such as videos to post online or audio reports that could be played on Radio Paiwomak.

Nor was teaching TEK mentioned as a way to encourage community members to be environmentally friendly. In contrast, recent public education efforts by Iwokrama, and the Wildlife Clubs, were frequently mentioned to be inspiring changes to more sustainable local resource use. These forms of education are more Western in their approach, and this perception that they increase pro-environmental behaviour raises the question of whether these North Rupununi communities are valuing their own indigenous understanding of pro-environmental behaviour and related terms, or if a Western perspective is colonizing their terms, beliefs, and educational interventions (Kulnieks, Longboat, & Young, 2010; Sheridan & Longboat, 2006; Sheridan & Longboat, 2014). As described in greater detail in 4.3.1., participants said the reduction in boys killing birds with slingshots was evidence of the positive impact Clubs were having on Club members and on the wider community. At first, this may appear to be a narrative of a Western form of environmental education coming into the community and showing them the light, that they should not wantonly kill birds. There were other stories, too, from participants that claimed that they had not been environmentally conscious or friendly until foreigners arrived. For example, the former practice of fish poisoning was mentioned in Wowetta. In Surama, a few people (such as Swift, a tour guide) said they had not appreciated their local fauna and flora until Western tourists came and community members witnessed how impressed and delighted the tourists were when they saw the birds and animals that locals had taken for granted.

By asking in-depth questions about bird-killing, I learned from elders that actually this was a rather recent phenomenon, likely due to two factors: the arrival of public schooling that denigrated local traditional ecocentric values; and the arrival of rubber to make slingshots. Before slingshots, people hunted birds with arrows that were laborious to make. As elders explained, no one would waste these arrows to kill birds without having a good reason to do so.

Thus the impact of the Clubs could be interpreted as helping youth to return to these traditional local ecocentric values. This is not to critique Makushi youths' integration of Western ecocentric values, it is only to say that this is not the only way to interpret the Wildlife Club's impact.

Indigenous communities like the Makushi communities in the Rupununi are impacted by the decisions of other nations, such as the decisions that are currently fuelling global warming which impact the Rupununi ecosystems, and are allowing non-local media and other influences into their communities. Consequently, Makushi communities may wish to consider what impact programs like NRWC can have on their youth. As discussed in Section 4.4.2., Clubs have the potential to reconnect youth with their local elders, and help them return to the deep, local traditional values and knowledge. Simultaneously, Clubs can offer education and experience that draws on a broad Western science-based perspective. See **Chapter 6** further discussion.

Variation between villages. There were only subtle differences between the responses about what pro-environmental behaviour meant to participants. The difference was in what kind of direct natural resource use participants' used to identify pro-environmental behaviour. People in Surama and Yupukari spoke about responsible fishing. Only people in Surama spoke about responsible forestry. And only people in Wowetta spoke about responsible Ité palm harvesting for roofing. This appears to reflect which type of local natural resource use is prevalent in each Village: Surama has some forestry, both Surama and Yupukari are by rivers important for fishing (while Wowetta is not), and Wowetta has an abundance of Ité palm that local villagers and also people from further away use.

5.2. Research Question 2 – Local Meaning of Positive Youth Development in the Rupununi

During my reconnaissance in 2010, I realized that local Makushi cared about whether their village's Club had a positive impact on their young people's environmental behaviour.

However, I also realized they cared a great deal about what impact the Club had on a child's entire life, especially upon their future as an adult. Therefore, I modified my research plan to include investigating the perceived impact of Clubs on PYD.

Vocational competence, an aspect of PYD, was discussed in focus groups, but PYD in general did not elicit much discussion in the focus groups. Consequently, there was not enough data to analyze the PYD theme for focus groups. The following discussion, therefore, is based on the interpretation of the findings from the analysis of interview data only.

As with some other questions, it appeared that many participants had not had opportunities to think about PYD, so the response rate on PYD in individual interviews was relatively low. Many of those who did respond did not say much beyond that, to them, PYD meant being able to get a good job as an adult. This suggests that to participants, vocational competence ("getting a job") is a key indicator of being a successful adult. A few people mentioned being happy and knowing TEK and traditional skills were important to them.

When asked what supports PYD, sufficient education was considered to be the most important factor that young people needed to achieve vocational competence specifically, and for a successful adulthood in general. Encouragement from adults and elders, having positive role models and mentors, getting exposure outside of one's village, and being taught about the local environment were also suggested as helpful to young people's development.

It appeared from the interviews that although local community members certainly care about the development of their youth, there have not been opportunities to discuss youth development in the holistic way that is possible when the discussion is framed in terms of PYD. This may explain why participants mentioned little besides employment as a desired outcome, and education and encouragement as the key means to that outcome. These are but a few of the

many aspects of PYD that support youth to become productive, contributing members of their communities. Shek, Sun, and Merrick (2011) list 15 constructs that can be evaluated for programs intending to support PYD, and that could be a starting point for determining locally and culturally appropriate criteria to evaluate of NRWC's impact on PYD. Bowers, Li, Kiely, Brittian, Lerner, and Lerner (2010) describe the "Five Cs" they argue need to be nurtured in youth: Competence, Confidence, Connection, Character, and Caring. Researchers speculate that young people whose lives demonstrate these Five C's are on a developmental path towards expressing a "Sixth C": Contribution to self, family, community, and the institutions of a civil society (Lerner et al., 2005). The "Five Cs" were discussed further in the section PYD literature review in Chapter 2.

PYD programs seek to create supportive communities for all young people to nurture the 5Cs, and simultaneously engage youth to contribute (the sixth C) to the well-being of the larger community. Rupununi communities might be interested in discussing PYD and how youth can be supported, perhaps with Village meetings. Participants said it was important for their youth to become successful adults and to contribute to their community. And many people in the Interviews and in informal conversations spoke about the issue of young people leaving the Rupununi to obtain work in Brazil or Georgetown. Familial relationships in Makushi villages are important, and many youth currently must make the difficult choice between employment outside their village or staying close to their families. A few participants spoke about the need for local opportunities for employment so that youth can stay in their home communities and be employed. The ecotourism industry has created employment opportunities in Makushi villages, and helping Makushi youth be competitive for these jobs within ecotourism was part of the incentive for founding the NRWC program.

As will be discussed in **5.5.2.** (about participants' recommendations), since certain aspects of PYD are felt to be important to North Rupununi communities, and since Clubs could be an appropriate way to support PYD, communities will need to determine what PYD means for them, which aspects of PYD are priorities to support, and how NRWC could be used to achieve PYD. For example, six participants said it was important to teach youth about their local ecosystem and wildlife, conservation, and about TEK and traditional skills. While these could be considered to be competencies in the "C" of "Competency," it's possible that there are some aspects of the PYD concept that may need to be adapted or expanded to encompass what it means to be a fully realized Indigenous person in the Rupununi. Knowing TEK may not impact the well-being of a person in Georgetown, but could be essential to the identity of a Makushi person in the Rupununi.

Not surprisingly, participants said public schooling (education) was the most important way to support the PYD outcome of vocational competence ("getting a job"). It was interesting that no one said that participation in the Club was important for PYD, yet one of the stated program objectives of NRWC is vocational competence (NRDDB, n.d.b). Moreover, when asked about the impact Clubs have on former members, vocational competence and other components of PYD were frequently stated. This points to the potential utility of villages exploring what else besides public schooling contributes to vocational competence and PYD in general. For example, extracurricular activities play a critical role in PYD; in Western contexts, regular family dinners and organized activity programs support PYD (Zarrett & Lerner, 2008).

According to the literature, the more extracurricular activities in which adolescents participate, the higher they score on scales for PYD and for contribution to family, school, and the community at large (Kleinfeld & Shinkwin, 1982; Lerner et al., 2005; Lewin-Bizan et al.,

2010; Mahoney, Harris, & Eccles, 2006; Seligman et al., 2005; Zaff, Boyd, Li, Lerner, & Lerner, 2010). Thus Wildlife Clubs could serve as the extracurricular programming needed to support PYD in the Rupununi, especially given there are few other organized extracurricular activities available. An example of how Clubs already support PYD is birdwatching, which is thought to develop the skill of bird identification, an essential skill for becoming a bird or tour guide. This skill is not taught in school. This is an example of how the Club can complement the public school system.

Mentoring also supports PYD (Lerner, Napolitano, Boyd, Mueller, & Callina, 2013; Lerner, Brittan, & Fay, 2007; McDonald, Erickson, Johnson, & Elder, 2007; Schwartz, Chan, Rhodes, & Scales, 2013; Stanton-Salazar & Spina, 2003), and some participants identified mentoring and positive role models as important to support youth development. Role models are also important for children and youth to develop their own sense of competence for environmental behaviours (Chawla & Cushing, 2007). Mentors and role models may be particularly important for indigenous youth to help them connect with their culture, which is important for indigenous adolescents' well-being and resiliency (Wexler, 2009). Effective mentoring for indigenous youth may require certain characteristics beyond those of mentoring programs for non-indigenous populations. For example, a study in Edmonton Alberta found that successful Aboriginal mentoring programs require: community dialogue and support, including the mentee's family, including traditional values and culture, and adequate resources for sustainability. The authors also advocate forming a community advisory group for guidance and support of mentoring program, especially for programs involving outside organizations (Klinck, Cardinal, Gibson, Bisanz, & da Costa, 2005).

There has been little research on PYD specifically within indigenous communities, thus these findings in these indigenous North Rupununi communities are an interesting contribution to understanding what PYD means to indigenous people, and points to the need for further research on how to support PYD in indigenous youth (see **Chapter 6**).

5.2.1. Differences between Villages

There was little difference between the three villages with respect to conceptions of PYD and what supports it. The one difference was that two people in Yupukari spoke about some of the resources youth need (such as textbooks), and Dan pointed out that Yupukari does have a lot of resources to offer youth (solar-powered computers, satellite internet, a library, staff at Caiman House), but youth need to actually take advantage of these resources. This is interesting because the resources available in Yupukari may not only be helpful to support PYD, but to support other goals of the Yupukari Club as well. However, it appears that despite the availability of these resources, youth may not be using them. This raises questions about how to encourage youth to use available resources. It also raises questions about what resources Clubs need to function well. Interestingly, people from other villages did not bring up resources, yet Wowetta has nearby access to some resources at BHI that are comparable to those at Caiman house (solar-powered computers, satellite internet, a small library, and staff at NRDDDB and BHI-YLC), and Surama also has generator-powered computers and satellite internet in the Tourism office. I worked at both the NRDDDB building at Bina Hill and in the Surama Tourism office, and did not observe many people using computers, and no youths using the computers for Club or school purposes. However, this is likely since there were no (or very few) computers designated for people to use. Most people, like me, brought their own laptop and needed only the internet and electricity.

5.3. Research Question 3 – Perceptions of the Effect of Clubs on Club Members

The following is the discussion of perceptions about the Club's effect on Club members. Almost all interview participants (34 of 39) and all focus groups reported that their local Club had positive impacts on Club members. These positive impacts included the perception that participating in the Club increased pro-environmental behaviour (5.3.1.), and increased some aspects of PYD (such as vocational competence, public speaking, and bird-identification; 5.3.2.).

5.3.1. Finding 3: Perceived Positive Impacts on Individual Member's Pro-Environmental Behaviour

Interview participants said there were impacts on members' environmental attitudes: Club members were reported to be more likely to care about their local environment. Interview participants also felt Club membership increased environmental awareness: Club members were reported to be better informed and aware about their local environment. In interviews and focus groups, being able to identify local birds was the main evidence participants based their perception of increased environmental awareness upon.

Increasing pro-environmental attitudes and environmental knowledge are goals of EE, but the goal of the environmental movement is to protect the environment. Protecting their local environment for future generations is extremely important for North Rupununi Makushi communities, as expressed by participants and community members during the 2010 reconnaissance and 2011 data collection, and in previous research (Berardi et al., 2013; Chung Tiam Fook, 2011; Wihak et al., 2007). Thus, the holy grail of EE at both the global and local level is to increase pro-environmental behaviour, since it is behaviour that will determine if humanity will avert environmental disaster (Leeming et al. (1993), and if indigenous peoples, like the Makushi, will be able to continue their cultural traditions that are inextricably linked to

the health of their local ecosystems. There is an extensive literature on EE's impact on environmental attitudes, knowledge, and behaviour (which was reviewed in section 2.3.), and increasing pro-environmental attitudes and knowledge does not necessarily increase pro-environmental behaviour (Kollmuss & Agyeman, 2002)). Increasing pro-environmental behaviour is a key outcome for any environmental education program. Thus it is important to note that interview and focus group participants reported Club members were more likely to *behave* pro-environmentally, and that this pro-environmental behaviour was relevant to protect the local environment.

In their comments about the impact of Club membership on Club members, all focus groups and many interview participants were emphatic that the Clubs had a positive impact on Club members' environmental behaviour. One environmentally negative behaviour that had been reduced because of the Clubs was "wickedness": young boys killing birds for fun with slingshots. When asked what impact the Club had on kids, for most interview participants, the reduction in bird-killing was the first thing they said, and this was consistent in all three villages. Participants in all six focus group also agreed within their groups that this was a key impact. A few interview participants also perceived a related increase in empathy towards animals in some Club members. However, as recounted in 4.3., later in one focus group's discussion, a participant produced an anecdote of Club members who did continue to kill birds "for no reason" (i.e., were engaged in "wickedness"). Similarly, a few interview participants said some Club members and former Club members did not behave pro-environmentally. This can be interpreted as participants feeling that the Clubs tended to positively impact most, but not all, Club members' environmental behaviour. One Club volunteer said, "There must always be a few wicked ones."

Interestingly, it was not just Club members who stopped killing birds, interview and focus group participants reported that Club members also influenced non-Club members to stop killing birds. Participants' responses about their conception of pro-environmental behaviour indicated that in the Rupununi, being pro-environmental means behaving responsibly in one's personal use of the local natural resources (such as how birds are harvested), and also means being able and willing to educate others about being environmentally responsible (such as telling others to stop bird-killing). Hence, the reduction in bird-killing by non-members suggests that Club membership also increased the ability of Club members to educate others, and influence them to behave pro-environmentally.

Most interview participants and all focus groups reported Club members were less likely to litter, and not littering was considered to be another important aspect of being environmentally responsible. In some focus groups, not littering was suggested before reduction in bird-killing as the main evidence that former Club membership positively impacted environmental behaviour. Thus, participants perceived Club membership to positively impact the key aspects of their local definition of pro-environmental behaviour: not littering, responsible resource use, and educating others.

These above impacts on pro-environmental behaviour fall under what Stern (2000) calls public-sphere behaviour and private-sphere behaviour (see **2.3.**). In Western contexts, research on private-sphere pro-environmental behaviour has tended to be the focus on the purchase, use, and disposal of personal and household products (Stern, 2000). In the Rupununi, not littering and not killing birds are private-sphere pro-environmental behaviours. In the Western context, public-sphere pro-environmental behaviour includes environmental activism (e.g., active involvement in environmental organizations and actions) and non-activist behaviours (e.g.,

writing letters and signing petitions on environmental issues, contributing to environmental organizations). In the Rupununi, educating others could be considered an aspect of public-sphere environmentalism. Public speaking and leadership skills, the PYD competencies participants felt were improved through Club participation, could also be considered to contribute to the ability of former Club members to represent their communities' interests at the national and international level, and thus contribute to their ability to carry out public-sphere environmental action.

Chawla & Cushing (2007) ask an important question that environmental educators need to consider: "What kinds of actions most effectively address environmental problems?" They state: "It is not enough for environmental education to promote action for the environment: It needs to emphasize the most strategic actions." They argue that an analysis of the world's most serious environmental problems suggests that the effect of private actions is limited unless it is combined with equipping people to organize for collective, systematic change (Chawla & Cushing, 2007). This is interesting to consider in this North Rupununi context, because unlike in many Western contexts, private-sphere actions *do* have a large impact on the local environment, and this happens to be a particularly precious biodiverse environment. Therefore it does make sense for Wildlife Clubs to target and attempt to change certain private sphere behaviours. However, this precious biodiverse environment is under threat from external players, such as corporations wishing to engage in resource extraction (particularly mining and logging), and global warming. Both of these threats to the North Rupununi environment will require indigenous people from the North Rupununi to advocate on behalf of their communities and environments at the national and international level. Therefore the above mentioned perceived impacts on public-speaking and leadership skills are important for former Club members to be

able to engage in public-sphere environmentalism, locally, to educate community members, and also beyond their communities as advocates.

However, we cannot infer from the *perception* that Club membership increases pro-environmental behaviour that Club membership actually *causes* increases in pro-environmental behaviour (or decreases environmentally detrimental behaviour). More research would be needed, which compared the actual environmental behaviour of members and former members to those who had not been members of the Club.⁸³

5.3.2. Finding 4: Perceived Positive Impacts on Individual Member's Positive Youth Development

Interview and focus group participants felt Club membership had a positive impact on PYD, such as increasing vocational competence and leadership skills. They did not use PYD terms, but spoke in terms of youth “doing well.” One common belief expressed in interviews and focus groups was that former Club members, particularly former Executive members, “do well.” The anecdotal evidence that former Club members were more successful in life because of Club participation tended to focus on a few well-known examples of former Club members who became successful adults. In my reconnaissance, Samantha James (personal communication, February 2010) told me about several former Club members who had become community leaders, secured employment, or were otherwise successful. I met and conversed with many of these young adults. Other community members also told me they believed being in a Club benefitted Club members.

⁸³ Ideally, communities would choose the key impacts they want their Club to have on members, decide on the indices that would mean these impacts had or had not been achieved, and monitor their Club over time. This kind of monitoring would be beneficial for individual Clubs and the NRW Program, and could be very helpful for other similar programs, and for the field of EE. See Chapter 7 for more on potential research in the area, and the suggestion of a community-based ongoing program evaluation focusing on achieving positive impacts on members.

The issue, as with the literature on the Wildlife Clubs of Kenya (WCK, e.g., McDuff & Jacobson, 2001), is that this does not prove causation, because youth who were already motivated to become leaders and to succeed may be more likely to join the Clubs. For example, McDuff (2000) reports, “Many of today’s leading conservationists in Kenya were wildlife club members when they were students.” Like the above assertions about former NRWC members, these are also only the success stories, and we do not know how many youth participated in the a Wildlife Club program and did not become leaders or become successful. Iwokrama’s survey of former and non-former Club members reported former Club members tended to be more likely to be employed and to have more desirable jobs than non-former Club members (James, n.d.). Again, however, this does not prove it was the NRWC program as opposed to self selection that caused this. Ideally, randomly assigning children and youth into the program and into a control group and then comparing their outcomes over the long-term would be useful to determine the impact of the program. An alternative that might be more feasible in the North Rupununi would be to compare the outcomes of children and youths in villages with a Club versus those in villages without a Club (instead of comparing Club members versus non-Club members within the same village). This possibility will be further explored in **Chapter 6**.

When considering the role Clubs can play to promote PYD in the Rupununi, we can draw upon a simplified form of Maslow’s hierarchy of needs (Maslow, 1943; Rouse, 2004). Once a young person’s basic needs (for food, water, shelter, etc.) are met, they are able to develop Preparedness (to develop skills and competencies to succeed as adults), then Connection (with their families and community), and finally, develop Engagement (youth need opportunities to meaningfully engage with their community to participate in civic discourse) (Bowers et al.,

2010; Lerner & Silbereisen, 2007). The two competencies highlighted by participants are part of Preparedness, and both are complex and require learning knowledge and skills.

In the field of Positive Youth Development (PYD), “competence” is defined as having a positive view of one’s actions in domain-specific areas. There are several kinds of competence: physical, social, cognitive, vocational, and moral (Lerner, 2005; Roth & Brooks-Gunn, 2003).

Vocational competence. The two main competencies identified by interview and focus groups participants to be developed through participation in the Wildlife Clubs were public speaking and bird identification (including knowing bird’s scientific names). These two impacts are part of vocational competence, which fall under the six “Cs” category of Competence. Confidence was discussed as a result of some of the competencies gained by Club participation, such as public speaking, rather than as an end in itself.

Vocational competence is defined in the PYD literature as good work habits and successful career choice explorations, including entrepreneurship (Lerner, 2005; Roth & Brooks-Gunn, 2003). However, that was not what interview and focus group participants in these communities discussed. The competencies they discussed are important for securing employment specifically in the Rupununi. The main jobs in the Rupununi are in ecotourism, as teachers, as health workers, in small businesses (like shops and making crafts), and the occasional opportunity to work as a community collaborator for a research project. There are also paid and unpaid position in local governance, such as the role of Toshao or as a Councillor on a Village Council, positions at NRDDDB, and possibilities of representing one’s Village or Region nationally and internationally.

As outlined in Chapter 1, one of the original goals of NRW was to cultivate the skills that local Makushi youth needed to be competitive for the new employment opportunities created

by the emerging ecotourism industry, especially as Wildlife Rangers and birding guides.⁸⁴

Viewed from the perspective of the field of Positive Youth Development (PYD), these positive impacts are consistent with what participants' perceived to be the mandate of Iwokrama, and with the mandates of other programs working in the area to increase and support Youth Empowerment (Chung Tiam Fook, 2011).

Community members also spoke of Club participation as useful for obtaining references for employment. This benefit, and the two competencies, public speaking and bird identification, are discussed, below.

Public Speaking. When asked what positive impact Club membership had on members, helping them to be "less shy" (improve public speaking) was the next most popular answer after increasing pro-environmental behaviour, in both interviews and focus groups.

Public speaking is a competency that is important for youth to develop to be civically engaged, to be able to represent their community effectively, for future leadership roles, and for certain kinds of employment (Bowers et al., 2010; Bumbarger & Greenberg, 2002; Lakin & Mahoney, 2006; Lerner et al., 2003; Lerner & Silbereisen, 2007). In the Rupununi, public speaking is important for many of the few job opportunities in the Region, such as for being a teacher or a tour guide. It is also a useful skill for being a community collaborator (foreign researchers are required to hire community collaborators). Indeed, many (21) interview participants said Club membership gave children and youth experience that would help them to be employed as adults, and several focus groups discussed this, as well.

Public speaking tends to be learned by being taught the theory and basics of this form of communication, and then practicing the skill (Lucas, Basquiat, & Basquiat, 2004; Staton-Spicer

⁸⁴ Other jobs that also became available due to Ecolodges, in particular as cooks and cleaners, were not as competitive. Local Makushi women were already proficient in these tasks, although some cooks have received further training in Georgetown.

& Bassett, 1980). This includes: learning to craft one's own speech; learning to deliver it effectively (speaking clearly, loudly enough, keeping the audience engaged, etc.); and being able to produce and tailor the content and delivery of a speech to a specific audience (for example, a talk for tourists would be different than an informal conversation with locals). Additionally social/emotional skills are important due to shyness being consistently identified by community members as a problem for local youth. Hence, learning to manage anxiety and be self-confident enough to speak could be important for local youth to become competent public speakers.

At the time of this writing, Guyana's Ministry of Education Guidelines do not have public speaking as a skill developed in Primary School (Grades 1-6, ages 5-13) (Guyana Ministry of Education, 2013a). But curriculum documents do identify public speaking as a skill to develop in Secondary School, which is Grades 7 to 9: in the English Language and Literature Curriculum Guide - Grade 7 (Guyana Ministry of Education, 2002a, p.13-14), in the English Language Curriculum Guide - Grade 8 (Guyana Ministry of Education, 2002b, p.17 & 51) and the Grade 9 English Language Curriculum Guide p.18-9 is the most extensive about public speaking, with a "Speaking" section (Guyana Ministry of Education, 2002c, p.18-9). I searched other subject areas that might include public speaking skills, such as the Secondary School Expressive Arts Curriculum Guides, another subject area where public speaking skills could be learned, but these did not include public speaking skills, even though the guides had a drama component (Guyana Ministry of Education, 2013b).

The Ministry's Curriculum for Grades 7-9 English has a similar learning method and objectives as above for public speaking, except they do not include managing anxiety about

public speaking or increasing confidence (which could be particularly important for North Rupununi youth who participants said tended to be shy).

There are only two Secondary Schools in the North Rupununi (in Annai and Lethem), so most children who go to Secondary School leave their home village, and so their home Club, to go board at Annai, Lethem, or a Secondary School in Georgetown. For the duration of their Secondary School studies, these students tend to have few opportunities to participate with their village's Club since they are away during the school year (September until the end of June), and Club activity historically declines or is non-existent from June to September, when these students are home. None of the Secondary Schools have a strong Club (Annai has a Club that only becomes active to participate in the Wildlife Festival), so they do not have access to Club activities during the school year. Many young people return to their home villages after Secondary School, but a pattern reported by many participants was that when young people return, they tend to be uninterested in the Club. The few youths who do re-engage with the Club tend to take on roles as adult volunteers.

This situation indicates that when Club members are of an age to be both enrolled in school and in a Club (up until Grade 6), the school curriculum does not include public speaking. And when the school curriculum does include public speaking (in Secondary School), young people are unlikely to be participating in a Club. Had the school curriculum included public speaking in Primary School, then the Clubs could complement this curriculum. And if the secondary schools supported strong Wildlife Clubs, then the Clubs could complement the school curriculum.

Bird Identification. Bird identification is the other vocational competency identified in all focus groups and by many interview participants as key for gaining employment as tour guides,

rangers, or research assistants. Given the importance participants placed on Clubs preparing members for local employment, which was also one of the incentives for starting the NRWC program, it is understandable why the most common Club activity is birdwatching. Birdwatching is intended to train Club Members in bird identification and in bird monitoring (i.e., tallying the number of species and numbers of individuals of each species observed during birdwatching). It also explains why improving birdwatching was one of the recommendations from participants (see **5.5.2.**).

There is the Ideal Birdwatching Outing envisioned by community members versus the Observed Birdwatching Outing that occurred during the data collection period. The Ideal Birdwatching Outing tended to be described by participants when they were first asked in the focus groups or in individual interviews about the activity. Upon further questioning, they would describe their perceptions of what was currently happening. These subsequent descriptions were similar to the Observed Birdwatching experience, described in **Appendix E**. The Ideal and Observed Birdwatching Outings are compared in **Table 2**, below.

Table 2 – Ideal Versus Observed Birdwatching Outings.

Ideal Birdwatching Scenario	Observed Birdwatching Scenario
Happens every Saturday, 6-7am	Did not happen every Saturday
Along one of several established routes (a transect approach)	Tended to occur along only one route
With an experienced birder and the adult Coordinator	Experienced birders were often not present, and sometimes adult Coordinators were not present
Enough binoculars and bird identification books for Club members to share	The binoculars and bird identification books were not always used (Wowetta did not appear to have any binoculars or books), and there were rarely enough for Club members to share.
Iwokrama's bird monitoring form being filled out by the adult Coordinator or a responsible Club member	Iwokrama's bird monitoring form was only filled out in Surama, and was often incomplete
The majority of Club members participating in each birdwatching outing	The majority of Club members did not participate in each birdwatching outing (5 or 6 in Yupukari, up to 15 in Surama, and there were no

	birdwatching outings in Wowetta during the data collection period)
The majority of Club members engaged with the birdwatching activity and learning from the adults present (especially birds' names)	Many of the Club members on outings were not engaged with the birdwatching activity, and only a few appeared to learn from the adults present

This means that while the Ideal Birdwatching Outing could offer excellent opportunities for learning and for building Club members' skills, their actual experience of the activity may not provide these benefits. One example is the bird monitoring forms to record data on the abundance of local birds. Information required to fill out on the form for a birdwatching outing includes: the date, time, weather conditions, route, number of Club members present, name of the person filling out the form. There is space on the form to record each species and the numbers of individuals observed from each species. Clubs used to be requested to forward these completed forms to Iwokrama's Community Education and Awareness Coordinator once a year for data analysis. I do not know whether this was occurring during the data collection period.

It is a great idea to provide Club members with the opportunity to contribute data that could be used to track the abundance of local birds. This could provide Club members and adult volunteers with useful experience in data collection, which is another vocational competency for positions in research or local resource management. However, these possibilities were not discussed by focus group and interview participants. During the reconnaissance and data collection periods, the only Club still using the form was Surama, and there was variation in how much was actually recorded on the form. In addition, even when the form was used, I observed that not many Club members were involved with this aspect of birdwatching.

The competency most discussed by focus group participants was the ability to accurately identify birds and name them. For someone to develop the bird identification skill to the calibre required to be a tour guide or research assistant, this requires learning the scientific, common,

and Makushi names of the bird, being able to identify the bird by sight and/or sound, and knowing at least enough about the bird's behaviour to be able to find it reliably. Depending on how it is learned, bird identification could also be an access point into local TEK.

To learn this skill, Club members need guidance from experienced birders who know the common, scientific, and Makushi names of birds in their area, and ideally access to bird identification books and binoculars. Local traditional hunters can identify birds with the naked eye and by sound, while most foreign visitors can only identify birds with binoculars. Since tourists have and rely upon bird identification books and binoculars, it is useful for would-be tour guides and research assistants to know how to use these tools.

I observed considerable variability in the number of birds noted and the accuracy of their identification. Also, the names the members were told for the birds appeared to depend on who lead the birdwatching. When Umbrella Bird took the Club members out in Surama, for example, he noticed far more birds and appeared to be more accurate in identifying them correctly than other adults who took the members out, and he was one of the few people in any of the villages who knew all three versions of the birds' names. In Yupukari, a particularly active President in his late teens led many birdwatching outings, and used the bird identification books. However, he did not know the Makushi names, which highlights the importance of involving elders in the learning process. When he stopped being active in the Club, the frequency of birdwatching waned so that during data collection, birdwatching was left to a foreign volunteer to organize (who naturally did not know the Makushi names).

As mentioned above, besides variability in the quality of guidance depending on who leads the birdwatching, and the infrequency of the birdwatching observed during the reconnaissance and data collection period, another problem for training through these

birdwatching outings is the lack of enough bird identification books and functioning binoculars, except in Yupukari where the Club has a fair number, and also has access to Caiman House's supply. The combination of a lack of adult volunteers and lack of binoculars and books resulted in no birdwatching in Wowetta during the study period, except when Iwokrama's Outreach Officers visited and led it themselves. In Yupukari, which had adequate physical resources to support birdwatching (binoculars and bird identification books) there was a lack of willingness to conduct birdwatching during the data collection period. The dramatic change from conducting regular birdwatching during the reconnaissance period to almost no birdwatching in the data collection period a year later was therefore not due to a lack of physical resources, but to the lack of an adult volunteer or youth Executive member who was enthusiastic about this activity.

This was an interesting case, because it shows the importance of strong adult leadership. The Yupukari Club's President in 2010 was enthusiastic and determined about birdwatching, and I observed a high turnout of Club members during the birdwatching outings he led in 2010. By the time of the 2011 data collection, the former President had stepped down and was employed outside of Yupukari. The new President was not interested in the Club, and the foreign adult volunteer tasked with supporting the Club did not want to insist on conducting an activity he did not feel the Club members themselves were interested in. This raises questions about how much Club members themselves enjoy birdwatching, and whether current Club programming is interesting to Club members. A limitation of this study was that I did not ask current Club members about their experience of their Club (because I only interviewed adults over the age of 18). I did ask nine participants who were former Club members about their experiences, and about what they liked and disliked about their Club's activities. None of these participants said

they disliked birdwatching. In fact, several said they had enjoyed birdwatching with their Club. However, this does not necessarily mean that current Club members enjoy birdwatching.

Another issue to consider is whether the preferences of the Club members should determine which activities the Club should undertake. The activities that children and adolescents prefer are not necessarily the ones that will achieve PYD. Birdwatching has been the flagship Wildlife Club activity because it is an educational activity with the potential to provide vocational skills to Club members. To stop conducting birdwatching because Club members seemed uninterested may not have been in the best interest of the Club members. Perhaps finding ways to make the activity more appealing could have been attempted. On the plus side, though the Club stopped birdwatching it kept conducting pit trap monitoring,⁸⁵ which is another activity that could develop vocational skills relevant to being a tour guide, research assistant, or conservation officer.

In summary, it is possible for the Clubs to help members develop their bird identification skills, but it seemed that only those with an interest or talent in this area were actually seizing the opportunity to learn, and that perhaps the birdwatching activity needed to be improved to increase its educational value and its appeal to Club members (see 6.5.4.).

Provides evidence for references. Participation in the Club did appear to help Village Councils and leaders to provide supporting documents and references for youth seeking employment. As stated by Eagle, Martin, Jeff, and others, this kind of documentation is increasingly important to gain employment in the North Rupununi, and is required for employment elsewhere in Guyana.

⁸⁵ Pit trap monitoring in Yupukari entails digging a hole, and placing a bucket inside with a special lid through which insects and small animals (usually reptiles and amphibians) fall into the bucket and cannot escape. The pit traps are checked frequently, and all the species found within are documented and then released.

Exposure outside of the home community. Interview and focus group participants highly valued the exposure Club members could gain from excursions and fieldtrips beyond their home village, and from attending Festival. Field trips have a long history and are popular in both formal and informal education. In the contested field of Environmental Education (EE), the goal of field trips has been debated. The traditional view is that field trips/outings increase the effectiveness of EE in terms of learning and retaining what has been learned about the environment (Ernst & Theimer, 2011; Falk & Balling, 1980; Farmer, Knapp, & Benton, 2007; Knapp & Poff, 2001; Martin & And Others, 1981; Munday, 2008). More recently, some argue it is not enough to learn *about* the environment, children and youth should learn *in* the environment via experiential learning (Ballantyne & Packer, 2009; Barratt Hacking, Barratt, & Scott, 2007; Brody, 2005; V. Cook, 2008). Additionally, there is some literature specifically about the use of fieldtrips and outings by Environmental Clubs (L. R. Johnson et al., 2007; Johnson-Pynn & Johnson, 2005; McDuff & Jacobson, 2001; McDuff, 2000).

Fieldtrips were one of the activities mentioned in the research on Roots & Shoots (R&S), a program developed by the Jane Goodall Institute (Johnson & Johnson-Pynn, 2007; Johnson-Pynn & Johnson, 2005). These field trips were to teach about or connect R&S members with the environment, not with people from other communities. Another particularly relevant example is the Wildlife Clubs of Kenya (WCK), the oldest Wildlife Club program documented in the literature. WCK was founded in 1968 by Kenyan students who wanted the opportunity to visit their own national parks and learn about wildlife and conservation (McDuff & Jacobson, 2001; McDuff, 2000). In 1968, only wealthy tourists, not local Kenyans, visited the national parks. In the Rupununi today, the situation is not as extreme. However, without the Wildlife Clubs, most

Makushi children would not get an opportunity to visit Iwokrama's Field Station, Canopy Walkway, or other villages in Region 9.

However, none of this quite speaks to what Rupununi community members felt was important about fieldtrips for children and youth participating in the Clubs: exposure to people and ideas from outside the child's home village. No literature was found on small isolated communities valuing environmental Clubs as a way for their children and youth to gain exposure beyond their home village, therefore this may represent an important and novel finding from this research.

Some Clubs had fieldtrips to spend time in the nearby natural environment, such as trips up the river (for riverine communities like Yupukari and Surama). But unlike for children in Western, urban environments, or the urban children in Kenya in the 1960's, these trips were not very different from a child or youth's usual day. When not in school or helping at home, Rupununi children spend their time playing outside in relatively intact rainforest, savannah, or riverine ecosystems. Fieldtrips to natural environments that are different than those near one's Village may be beneficial, but this was not mentioned in the focus groups and was only reported by a few interview participants. It also stands to reason that children and youths already immersed in a local healthy natural environment have less to gain from a fieldtrip to another natural environment when compared to urban children and youths who are not immersed in a natural environment on a daily basis.

These kinds of Club fieldtrips for North Rupununi youths differed in comparison to their usual day in their home environment in that with adult supervision and transportation, the Club members can be taken further than they would go on their own and consequently, to places unfamiliar to them. There is also the potential for these adults to provide environmental or TEK

education. Little was documented on how time is spent on these Wildlife Club fieldtrips, which have also become infrequent in Surama and Yupukari, and there have been none in Wowetta for several years. Unfortunately, there were no opportunities to observe any fieldtrips during data collection. Participants did not talk about whether there was an educational component to their Village's past fieldtrips.

A relatively unique kind of fieldtrip was highly valued by participants: these were called "Exchanges" or visits with other Clubs. There is no documentation in the literature of exchanges between Clubs of any kind. Based on my personal experience with R&S, I know of its "Partners in Understanding" program, which was intended to connect R&S Clubs from the global South with R&S Clubs from the global North. However, these connections were via the internet, not in person via a fieldtrip, as in the Rupununi. Also, "Partners in Understanding" appears to have been discontinued, and appeared to have not succeeded in fostering these connections. Though it's not entirely clear why, one program officer from R&S told me when I asked about the program that there tended to be an age mismatch between Clubs that were interested in partnerships in the global South versus North, which made it difficult to form viable connections between children and youth of different ages.

There was one instance of the Surama Club attempting this kind of connection with an Environmental Club in the USA, but the connection was very brief (*Annex 1, 2009*). No literature was detected on this subject. Therefore, it is not possible to infer the value of this connection. What is known from the focus group and interview data is that fieldtrips that expose children and youth to people and ideas outside their home village are valued and considered important by the wide array of community stakeholders who participated in the focus groups and interviews,

which included parents, community leaders, teachers, NRWC volunteers, and former Club members.

5.4. Research Question 4 – Perceived Effects on the Community

The perceived effects of having a Wildlife Club on the Club's community was discussed in individual interviews and in some focus groups, but unlike the theme on impacts on individuals, there was not enough data to analyze from focus groups. Therefore the following is the discussion based on the analysis of interview data only. The perceived effects of the presence of a Club in a community were positive (Finding 5). The most extensively discussed theme was the benefit of connecting youth with their local elders, which could also be considered an impact on individual. Thus it is its own section, 5.4.3 (Finding 6).

5.4.1. Finding 5: Positive Perceptions about Effect of Local Club

The reduction in bird-killing that was reported as evidence of the positive impact Club membership has on individual Club members' environmental behaviour was also reported to be a positive impact on the community. Ecotourism is an important and growing source of economic benefit to North Rupununi communities. High bird abundance is essential to attract and retain ecotourists, many of whom are drawn to Rupununi communities because they are birders. Community members also recognized that there are some behaviours that can repel the tourists they seek to attract, and seeing birds killed for no apparent reason was something community members realized repelled birders and other ecotourists. Similarly, community members knew from the feedback of ecotourists that ecotourists do not like to see litter. This is consistent with the literature on the negative impacts the presence of litter has on tourism (Ballance et al., 2000; Budruk & Manning, 2003; Mouat et al., 2010; Newman et al., 2015; Pearce & Badmin, 2003). Many community members also expressed that they prefer that their Village be clean and tidy,

which was aesthetically pleasing to them. Some added this was more hygienic and important for the health of community members. Consequently, community members said they approved of and supported the clean-up campaigns that Clubs used to undertake. Some interview participants also reported that they felt Club members teach their parents to be more environmentally friendly. This is consistent with the literature on intergenerational and community learning that can be achieved with EE and other programs seeking to nurture positive social change (Ballantyne et al., 2001; Ballantyne et al., 2006; Duvall & Zint, 2007; Gallagher & Hogan, 2000; Istead & Shapiro, 2014; So & Shek, 2011; Vaughan et al., 2003).

The above positive impacts are important to note because an evaluation of similar programs in similar contexts in three African countries (Mali, Tanzania, and Zambia) found that reciprocity with a program's community was important for the success of an EE Club (GreenCom: Environmental Education and Communication Project, 2000).

Differences between communities. One positive impact on the community that was only identified by participants from Yupukari was that the Club raised the profile of the community.. Jeff explained:

They've been successful in giving Yupukari a positive community profile, nationally, because they have got awards. And internationally, they've been successful in a couple of grants that had some activities attached to them. I think that creates a sense of pride.

Mora certainly expressed pride in the Club: "The minister of tourism and industry was here, and he donated a plaque, it is right there in front of the stage, you can see: 'The Best Nature Club for 2009.'"

This was not reported from other Clubs, although Surama and Wowetta community members, like Yupukari community members, took great pride when their Club won awards at Festival, therefore Clubs appear to promote a sense of pride in communities.

5.4.2. Finding 6: Clubs Can Connect Youth with Local Elders

The positive impact on the community that interview participants spoke about the most is the potential for Clubs to help reconnect youth with their local elders. This could also be considered an individual impact on Club members and on elders as well, however, it is categorized here under Research Question 4 since it is a positive impact on the entire community because it nurtures the intergenerational transmission of TEK and IK necessary for indigenous cultures to thrive (McGregor, 2009; Simpson, 2002; Vereeke, 1994; Wihak, 2009).

More engagement of elders with the local Club was frequently suggested as a recommendation to improve the NRW program, as will be discussed in the 5.5.2., below. The findings in this sub-theme lay the foundation for understanding the frequency of this suggestion. Participants from all demographic groups, in individual interviews and in the focus groups, said elders and their TEK/IK are important, and that it was important for their culture's survival to transmit this TEK/IK to youth. Participants felt Clubs already do this, but not as much as they could.

Using an Environmental Club program to help mitigate the recent disruption in the transmission of IK by elders to youth is an interesting potential program objective for NRW, and could be an important role for the Club to play. While elders have been involved with the Clubs since the inception of the program, especially for preparation for the annual Wildlife Festival, this is not a formally documented program objective (see 1.6.). Its potential importance for local youth, their community, and for the viability of the Club was an emergent theme that I included in the interviews because of discussions and observation during my reconnaissance in 2010.

The importance of elders to Indigenous communities is documented in the literature and is reported widely in oral traditions, artistic expressions, and writing by many Indigenous persons (Ball & Simpkins, 2004; Baydala et al., 2013; Beckford, Jacobs, Williams, & Nahdee, 2010; Christensen & Poupart, 2012; P. Cook, 1999; Kenny, 1999; Restoule, Gruner, & Metatawabin, 2013; Simpson, 2002). Consistent with this literature and lived experience, participants in this research unanimously expressed respect and appreciation of elders and their Knowledges. However, apparently this had not always been the case. Compared to other parts of Guyana and other places worldwide, many Makushi communities experienced little interference with their traditional way of life until around 60 years ago. Older participants described the impact of the introduction of the Guyanese public schooling system in the 1950s. Shortly thereafter, several different churches made their way into the North Rupununi. Both of these external influences had profound impacts on communities in the North Rupununi (Chung Tiam Fook 2011, Forte & MRU, 1996). As in many Indigenous communities all over the world, some Makushi community members came to have negative attitudes and beliefs about their Indigenous culture. This and other factors contributed to disruption in transmitting TEK and IK. However, Indigenous peoples are resilient, and many proudly maintained their culture during periods of suppression and oppression by the Dominant culture (Adamson, 2008; Mohawk, 2008).

With this resurgence in interest within North Rupununi communities in having TEK and IK transmitted to their youth, using the Clubs to connect elders may be a novel and effective way to do this. No examples of environmental clubs being used to facilitate elders transmitting TEK to youth were detected, but there are other kinds of programs described in the literature that have linked elders and youth. For example, in Northern Canada, a cross-cultural program to teach the traditional uses and names of plants used hands-on activities on the land to increase aboriginal

youth's interest in TEK and science (Hermanutz et al., 2012). In this program, elders and researchers worked together to run the learning activities. Another example is a program that invited elders to form elder-youth relationships with nurses in training in the "American Indian MS to PhD Nursing Science Bridge" at the University of Minnesota, School of Nursing (Moss et al., 2005).

It should be noted Clubs are not the only way elders can connect with youth. It may be more appropriate, and reach more children and youth, for schools to take on this role. Indeed, Antbird, a teacher in Surama, recounted an idea. Elders have been invited to the primary school to teach traditional crafts, so she suggested to primary school teachers: "they have arts and crafts on the national timetable. But what are you going to do for arts and crafts? You don't have to just kill time. So I told them, why not try to integrate it with traditional skills."

In addition, Amerindians in Guyana recently secured the right to teach their children in their Indigenous Makushi language (Wihak, 2009). Therefore while a few participants thought the Club could be used to help teach Makushi, the public school may be a more appropriate venue, and hence the Clubs could concentrate on environmental and TEK goals and objectives. Communities may wish to assess what role their local Club could play, and what role schools and other local institutions and organizations could play in meeting the village's overall objective to serve their youth.

If communities do wish to engage elders more, using the appropriate, respectful protocol to invite elder participation will be important. For example, interviewees spoke of the importance of meeting with an elder to invite them to work along with the Club. But some participants described inviting elders to Club meetings, while others spoke of a representative for the Club going to meet the elder individually. It will be up to communities to decide what is the best way

to reach out to elders. In **5.5.2.**, participants' recommendations, there will be further discussion about encouraging elders to volunteer.

Differences between Villages. There was some variation in how much elders were currently participating in their local Club (see **4.4.2.**). Participants in Surama reported the most current engagement of elders in the Club, and participants in Wowetta reported the least. However, it is important to note Wowetta's Club was not active at the time of data collection, therefore this difference might be explained by that. There was more variation in the responses of participants in Yupukari, and around a quarter of participants reported they did not know if elders were involved with the Club." Besides helping to prepare for Festival, the only other way elders were assisting with Clubs I observed was in Surama during the reconnaissance when Umbrella Bird took the Club out for birdwatching.

5.5. Research Question 5 – Perspectives on NRWC Program

As noted in **4.5.**, most participants answered an open-ended question about what they thought about NRWC as a program (Research Question 5), versus what impacts they felt the program had (Research Questions 3 and 4). The positive comments about the program were general (Finding 7), while the negative comments were often quite detailed (Finding 8), and frequently lead to recommendations of how to improve the program (Finding 9).

5.5.1. Finding 7: Positive perceptions about the Club

The positive comments from participants about the program were general, such as: "it's a very good program," "it's a good educational tool, a good way of teaching the kids," and positive comments about the annual Festival. All parents interviewed either had children in a Club or wanted their children to join when they were old enough.

The more specific positive comments about the NRWC program all involved perceived positive impacts on individual Club members (Research Question 3) and positive impacts on communities (Research Question 4), versus about the program itself, and were discussed above.

It is not clear why the negative perceptions about the NRWC program (below) were specific and detailed, while the positive perceptions were so general. However, it may be human nature to go into detail about negative opinions, and be more general about positive opinions.

5.5.2. Finding 8: Negative perceptions, concerns, and issues about the Club

Overall, there were more positive comments about NRWC than negative. In fact, none of the interview or focus group participants said they did not want the program in their village,⁸⁶ although several participants spoke about the persistent rumours when the program started that the Wildlife Clubs would promote a “Wild Life,” or encourage the members to “act wild.” Rather, participants’ own negative perceptions were about aspects of the program they disliked or felt were not effective, or about perceived weaknesses in the program. In other words, NRWC was perceived to be a positive program for the village to have, however, participants felt it needed some improvements. Thus, the negative perceptions actually are the foundation for many of their recommendations (see **5.5.3**) on how to improve the program. Some recommendations were also based on how to improve or expand on what was perceived to be a positive activity or impact of the Club.

Participants in focus groups did not talk very much about their negative perceptions about the Wildlife Clubs. This is important, because as explained in the **3.12. Limitations**, it shows the reluctance of participants to voice negative perceptions about the Club among their peers,

⁸⁶ However, a few participants revealed “off-the record”, after they had participated in an interview and/focus group, that they felt some community members did feel the Club had been imposed upon them by Iwokrama, and so did not support the Club. This appeared to be a sensitive matter that participants were not comfortable revealing in interviews, even though they knew they could choose their comments to be anonymous.

particularly comments that could be perceived as a criticism of fellow participants or their kin who were present in their focus group. Consequently, there was not enough data to analyze from the focus groups on the theme of negative perceptions. In a few focus groups, participants talked about a lack of certain resources, dissatisfaction with the frequency and quality of birdwatching, a perceived lack of parental support of the Club (which was contested in one individual interview), and that one of the benefits about the Clubs that they valued most, exchanges with other Clubs and field trips outside of the village, were no longer occurring as frequently as they would like. These concerns were all also expressed in individual interviews. Therefore the following discussion is based on data from the individual interviews, with occasional reference to comments from focus group participants.

Issues with adult leadership and participation, and lack of parental support. The problems identified about adult leadership and participation in Clubs⁸⁷ and problems with parental support are related. All involvement by adult community members in the Club is on a volunteer basis⁸⁸; thus, like many non-profit programs everywhere else, NRWC needs to recruit, train, and retain adult volunteers. This is no easy task, and the communities who participated in this research may need to investigate and implement strategies tailored to their community that support and encourage volunteering in their village. In other contexts, organizations that require volunteers rarely have enough volunteers. For example, in Australia, 78% of environmental and animal welfare organisations reported they were currently trying to attract more volunteers (Randle & Dolnicar, 2015). And in the UK, the work done by the voluntary sector is growing, but the number of people volunteering is not increasing at a comparable rate (Bussell & Forbes,

⁸⁷ Participants talked about the performance of local adult volunteers. They did not talk about the performance of Iwokrama staff and volunteers, such as Outreach Officers, except for three participants who made positive comments about Iwokrama's Community Education and Awareness Manager, Samantha James.

⁸⁸ Again, this discussion is on adult community members who volunteer with Clubs, not about Iwokrama's staff and volunteers who are involved with NRWC.

2002). Studies on EE Club programs in similar context to the Rupununi demonstrate the importance of adult volunteers to the success of EE Clubs (Ana, Oloruntoba, & Sridhar, 2009; Johnson-Pynn & Johnson, 2005), but do not discuss how to recruit and retain these adult volunteers. An interesting observation from the study on EE Club programs in Tanzania and Uganda was that youth who had been highly engaged in their Club for years were more likely to then volunteer with their Club once they graduated from Secondary School (Johnson-Pynn & Johnson, 2010). This is intriguing, because some participants in this research (like Dove) wanted secondary school graduates and school leavers to volunteer with the Club. In all three villages, periods when former Club members took on volunteer roles with their Club (on the Executive or other volunteer positions) were times when the Clubs were active. Perhaps enhancing the Club for current Club members will lead to more young adults willing to volunteer with their former Club.

In the North Rupununi I observed that some adults do have relatively more free time than adults in developed contexts like Canada or the USA, particularly young adults, and there are fewer opportunities to volunteer since there are fewer programs that require volunteers. However, community member's spare time is dependent on the season, since many Makushi still carry out their traditional subsistence activities of hunting, fishing, and farming, which are time and energy intensive. Makushi have a strong tradition of volunteering for community workdays. As described in section 1.5., large tasks that required more labour than a family could manage (such as cutting a field to plant cassava) was achieved through *mayu*, when Makushi gather to work collectively (Elias et al., 2000). For cutting a field, a family would ask their friends and neighbours for help, and a group of people would form on the specified day. Parikari would be provided to the volunteers, which brought a festive spirit to the task. And there was reciprocity in

that those labouring on their neighbour's farm would expect assistance when they needed a mayu on their farm (Elias, Rival, & McKey, 2000). In a similar vein, villages like Surama currently have community workdays in which people are assigned by village council to work together on a specified day on a task to benefit the entire village. For example, when I was conducting my fieldwork in Surama, I was given permission on one of these workdays to notify the community members on one of their breaks about my research and invite them to participate. These workdays are similar to mayu in that people volunteer to work together, however, mayu entails reciprocity between community members ("I'll work on your farm, and you'll work on my farm later") and benefits one family, while community workdays entails working together on something to benefit the entire village.

These examples of volunteering in the Rupununi indicate different motivations to volunteer. Motivation to volunteer for a mayu includes securing work on one's own farm later, and the mayu itself is designed to be an enjoyable and social experience. As per Maslow's hierarchy of needs (Maslow, 1943), this fulfills people's needs for food (which in the Rupununi requires farm work that a family cannot achieve without help), the need for community and socializing. In contrast, the motivation to volunteer for community workdays may be different. Community members are assigned to work on these workdays, and it does not appear to be obligatory, since I observed that some people did not show up to work. Motivation may be to comply with the community's decision to have workdays, or because the individual volunteers believe the project they work on will benefit the village, their family, or themselves.

From the literature, we know that those who are invested in a program and believe in its positive impact are the most likely to support it financially and as volunteers (Bussell & Forbes, 2002; Henderson, 1980; Randle & Dolnicar, 2015; Tsui, Kinghorn, Huck, Al, & Rathi, 2011). In

the USA, having a child in a program is also a motivator for volunteering with the program (Henderson, 1981). Consistent with this, in these three villages, parents are the demographic group most likely to be motivated and committed to supporting the Club (if they believe the Club will benefit their children). During data collection, parents with their children in the Club were the adults who were the most likely to volunteer with the Club, both as occasional volunteers and in the position of Coordinator and volunteer roles (such as chaperones for Festival). The next demographic group most likely to volunteer were former Club members, and then, elders. During data collection, Yupukari had one volunteer from North America at Caiman House, and one of his roles was to help with the Club.

Thus parental support of their local Club is crucial because they are the key demographic group that volunteers with the Club. Given the current volunteering with the Club, and the other examples of volunteering that already exist (mayu and work days), it would be useful for communities to discuss with their community members what motivates people to volunteer, and apply these insights to recruiting and retaining volunteers for their Club.

Parental support is also crucial because parents who do not support the Club may not allow their children to join the Club or participate in activities. Even if they do allow their children to participate, participants spoke of the importance of parents consistently encouraging their children to participate. In a context where many families live a subsistence lifestyle, parents need to feel that participating in a Club activity is beneficial enough to warrant releasing their children from chores and farm work in order to participate.

The participants with the most experience with their local Club (adult volunteers and former Club members) tended to attribute the concerns and negative perceptions of other community members, especially of parents, to be due to not understanding or knowing about the

goals and purpose of the Clubs, and what the Club activities are. What these engaged participants reported to be the most serious concern of parents, both during the data collection period and during the reconnaissance, was what seems on the surface, a trivial misunderstanding of the name of the program. As described in 4.5.2., in “**The issue of Wildlife = “Wild Life,”**” some parents and community members thought that the Wildlife Clubs would promote living a Wild Life. So they did not want children and youth to participate in the program because they were concerned the young people would be encouraged to “act wild.” I did not detect this kind of concern in the literature, nor have I heard of it from other similar programs. However, there are reports of initial resistance to EE Clubs in some communities, such as resistance by elders in communities adjacent to national parks when the Wildlife Clubs of Uganda (WCU) program began (Johnson-Pynn & Johnson, 2010). In addition, it can take time for the innovation that an EE Club is in itself, and the changes it may seek to inspire within its community, to be accepted by community members, as was found in 3 African countries with EE Club programs (GreenCom, 2000).

“Wild Life” may seem to be a simple misunderstanding, but it was such a widespread and emotionally loaded concern that it did have a significant negative impact on the early viability of the NRWC program in all the communities that I visited (in both 2010 and 2011). Proponents of the NRWC program worked to change this misperception through outreach to parents to educate them about the purpose of the local Club. Along with inviting parents to Club meetings, Yupukari started making reports at the Village General Meeting (but no longer did this during data collection), and the Surama Club had also reported to their Village General Meetings (VGMs) for most of the existence of the Club. The Wowetta Club did not do this.

These efforts to engage and inform parents and community members about the Clubs is consistent with efforts made by similar programs in three African countries (GreenCom, 2000). Some other strategies these African EE Clubs used were creative ways to engage community members through theater, poetry, song, and radio (GreenCom, 2000). These strategies could also work in the Rupununi. Club members already perform skits, poetry, and song at Culture Nights for Festival, perhaps they could perform for their own communities. And Radio Paiwomak would be an excellent way to raise awareness and support for the Clubs. Pro-environmental PSAs (some by Club members) were played on Radio Paiwomak while I was there in 2010 and 2011. Granted, there are issues with the use of radio messages for increasing pro-environmental behaviour, as illustrating in a study on the use of “jingles” in Nigeria, which found listeners mostly did not adopt the behaviour recommended in the jingles because the government had not made the infrastructure needed for behaviour change available or functional (Ojebode, 2005). In the Rupununi, messaging to make natural resource use even more sustainable is something local people can take action on themselves. But if the messaging was about more environmentally responsible garbage disposal, it is unlikely local people could act on the information presented because there is no infrastructure that supports garbage disposal.

While parents’ concern about “Wild Life” appears to stem from ignorance about the NRWC program, other concerns were due to things that happened that parents did not like or agree with. Some resistance to the annual Wildlife Festival was because there were past cases of unplanned pregnancies (“Festival Babies”) and other types of misbehaviour by Club members that distressed and outraged parents and other community members. One concern encountered at the end of data collection (and so I was not able to check with other participants) was a parent who had been very upset about a report on the community radio station, Radio Paiwomak, about

what she felt was inappropriate sex education at the 2011 Wildlife Festival. She was not against sex education, her concern was that although the Club members had been divided according to age, with more mature subject matter reserved for the older youths, she still felt that some of the material taught was not appropriate for the younger children.

With respect to critiques of current or past Club Coordinators, most criticism was about not helping the Club organize enough activities and meetings, or not showing up for activities. This failure to meet the expectations of the role could be due to Coordinators being too busy with their jobs and family. The Coordinator role does appear to be rewarding for most current and former Coordinators. However, it is also a source of stress. Two Coordinators described feeling like they were the only ones capable to fulfill the role, and yet they were busy teachers. This does suggest a problem of not having enough dedicated adult volunteers who could either lighten the workload of the Coordinator, or as had been the case in Yupukari, rotate the role so no one is Coordinator for more than two years. The Yupukari Club also now has a Coordinator and Vice Coordinator, so the workload is shared between two people. Many other EE Club programs require an adult volunteer(s) in a role comparable to Coordinator (such as Matrons/Patrons for R&S) (Adepoju, 2007; Ajiboye & Silo, 2008; Ana et al., 2009; Johnson-Pynn & Johnson, 2005; Johnson-Pynn & Johnson, 2010), but these studies do not discuss how to support adult volunteers in this essential role.

There was also the issue of not having enough trusted and responsible adult chaperones for Festival and other activities. This was a source of parental resistance to sending children to Festival. This highlights the importance of this role, and again, of volunteers. There seemed to be a pattern that the adult volunteers who parents were most comfortable to be chaperones tended to be older adults who were relatively busy, especially female teachers. One Coordinator said she

frequently had children in her Club tell her that their parents would only agree to the child participating in an excursion if she was going. In **Chapter 6**, there will be more discussion about supporting Coordinators, chaperones, and other adult volunteers.

The most serious critique of a Coordinator that was not related to performance was the allegations of unfair prize distribution. This was considered highly inappropriate by community members who made the allegation. It also appeared to also have a negative impact on Club morale. These Festival prizes are highly valued. The prizes tend to be material things, like footballs, toys, and other objects, that are still not readily available in the North Rupununi, and can be quite expensive when they are available. Note this could be a misunderstanding or unclear expectations of how to distribute prizes. In any case, such behaviour would need to be addressed at the Village Council level to determine the best way to resolve the situation.

Insufficient Elder participation in Clubs. Many participants reported that an issue for their local Club was insufficient engagement and participation by elders. As stated in **5.4.2.**, the importance of elders to Indigenous communities is documented in the literature and oral traditions (Ball & Simpkins, 2004; Baydala et al., 2013; Beckford, Jacobs, Williams, & Nahdee, 2010; Christensen & Poupart, 2012; Cook, 1999; Kenny, 1999; Restoule, Gruner, & Metatawabin, 2013; Simpson, 2002). The importance of elders in programs for youth in indigenous communities is also very important (Ball & Simpkins, 2004; Baydala et al., 2013; Beckford et al., 2010; P. Cook, 1999; Kenny, 1999; Restoule et al., 2013). What does not appear to have been discussed in the literature is how to support elders to participate in these programs, thus this research might encouraging determining best practices in the North Rupununi (See **Chapter 6**), which may in turn offer insights for other contexts.

Participants valued existing elder contributions (such as assisting in preparation for Festival, and some past fieldtrips with elders) and reported their Club would function better and have a stronger and more positive impact on Club members if more elders were engaged with the Club, and if there were more activities or projects with elders. Participants identified several barriers to the participation of elders. Addressing these barriers will be discussed in the **5.5**.

Problems with youth leadership. Weak youth leadership was considered another important issue for Clubs. As described in the Analysis section, having a weak President can derail a Club. But due to most secondary school-aged youth being away from their home village, and upon their return, not re-engaging with the Club, this limits the number of potential candidates for President. While it seems perplexing why there were two cases of uninterested and even unavailable (not currently living in the Village) Presidents being elected, this could simply be due to a lack of suitable candidates.⁸⁹ For example, one of the uninterested Presidents was considered bright and speaks well, which may explain why he was elected.

In my opinion, this highlights the importance of adult guidance. Ideally, a Club would have a strong Coordinator, President, and Executive Body. But even if the President and Executive go through a period of relative weakness, a strong Coordinator can keep the Club functioning and active. As Auntie Heron pointed out, most Club members are children aged eight to 11, who cannot be expected to keep a Club functioning optimally. Even a participant who was considered to be a strong and effective President did *not* feel supported during her presidency and gave up. Encouraging children and youth to take on leadership roles is important and can be very enriching (Ajiboye & Silo, 2008; Y. T. Hern et al., 2008; Johnson-Pynn & Johnson, 2010; Joselowsky, 2007; Kleinfeld & Shinkwin, ; Kleinfeld & Shinkwin, 1982; McDuff & Jacobson,

⁸⁹ In my reconnaissance I visited a Village in which the Club's President had gone to secondary school in September 2009, and the Club was dormant when I visited in January 2010.

2000; Riemer, Lynes, & Hickman, 2013). However, for it to be a positive experience for the young people and to keep the program running smoothly, adult leadership, guidance, and mentoring is crucial. Supporting this aspect of PYD will be discussed further in the 6.5.

Differences between Villages. Despite some differences in the context and resources of each village and in the narrative for each Club, the similar patterns with respect to youth leadership are striking. All three Clubs had periods of time of high activity that corresponded with having a strong President. For the five years prior to data collection, the strong Presidents were older youths who were 16-20 years old. In one case, a President was a young adult over the age of 20. One former president was volunteering with his Club as an adult at the time of the 2010 reconnaissance, which is consistent with the observation that highly engaged youths in an EE Club program in Tanzania were likely to later volunteer with their former Club (Johnson-Pynn & Johnson, 2010)(Johnson-Pynn & Johnson, 2010). Most of these former Presidents obtained well-regarded jobs or positions of responsibility within their communities.

The effect of the Coordinator on the activity of the Club during periods of weak presidents was difficult to tease out. Yupukari's relatively lower activity level while lead by a weak President was during data collection. Yupukari has had far more turnover in Coordinators than the other two Clubs, and at the time of data collection had a Coordinator and Vice Coordinator, and a young adult volunteer that was a former Club member and had remained engaged and offered considerable support to the Club, including serving on the Executive as the Secretary. The Club also had an international volunteer, to assist. While there was little birdwatching while I was there, the Club was engaged in other enriching activities, such as pit trap-monitoring and work to establish a butterfly farm. In Wowetta, the "golden age" recalled by so many participants was when two young women had worked together as President and

Coordinator. When they both quit a year or so before data collection, the former Coordinator, a teacher, resumed her role, and a new President (who was mostly away at St. Ignatius Secondary School) was elected. At the time of data collection, the Club was inactive. While no generalizations can be made from these two cases, it does appear that Yupukari having more adults volunteering and supporting the Club may have helped the Club stay active during a period of having a weak President. Note Surama does not appear to have had vastly different levels of activity from its founding until the 2011 data collection, the way the other two Clubs have, and the adult Coordinator was the same person during the entire span of the Surama Club's existence.

Critique of programming, activities, events. First, it is useful to note that while some participants were critical of how the Club was functioning and its programming, no one voiced any concerns about the Club's stated objectives, such as teaching young people about the environment and training them in bird identification. Nor did anyone object to the impacts the Club was having that go beyond those stated objectives, such as the Clubs providing opportunities for youth to learn from elders, and that the Clubs appear to support PYD, such as providing opportunities to improve public speaking and increase vocational competence.

The main critique by participants was concerning the Wildlife Festival and other excursions outside the village. These were also the activities most valued by participants (see **5.1.4.** about positive perceptions). In **Chapter 6**, I will suggest that communities may wish to determine what kind of programming they would like to see at Festival, and then advocate for that. And since these activities outside the village are valued, communities may wish to discuss how to better support responsible adults to be chaperones so more parents will be comfortable to have their children participate.

Another critique was that activities within the village could be improved. For example, Jeff said that with the resources and opportunities available in Yupukari, the Club could be much more active, and could offer more effective programming: “There’s a lot of idle time. The Wildlife Club is a great forum for doing more. We could do more tourism, ecotourism. And ecotourism could bring so much more to us if the Wildlife Club was stronger or more active.” He and others noted sometimes the Club activities did not appear to have much educational value, versus providing programming and training that could benefit the Club members. A few other people mentioned other skills the Club could provide more training on, such as traditional skills and using computers. These kinds of critiques of programming, such as that EE programs sometimes offer “feel-good” environmentalism or pleasant but ineffective programming versus education that equips people to take effective action have been levelled at many EE programs, including non-formal EE Club programs that are similar to NRWC (E.g., GreenCom, 2000; L. R. Johnson & Johnson-Pynn, 2007; Johnson-Pynn & Johnson, 2010; Kingston, 2013; McDuff, 2000). For example, a few participants critiqued their local Club for continuing the same activities they had since the Club’s founding. This is similar to critiques of WCK, an older and more established program. Some respondents felt WCK was not evolving its mission and methods to be relevant to current environmental problems in Kenya, rather, that it was continuing with the same programming used over the previous three decades (McDuff, 2000). On the other hand, staff of WCK felt the program was evolving, but that some of the traditional activities (rallies, trips to Wildlife Parks, and seminars) were still effective and engaging activities for their WCK members (McDuff, 2000). Similarly, while there may be pressure on NRWC volunteers to change their Club’s existing activities, or on Iwokrama staff to change the Wildlife Festival, ultimately the most effective practices are determined from experience with

the Club and considering best practices from the literature on similar program in similar contexts rather than changing practices to do something “new.”

Lack of funding. Some Club activities do not require much funding. Clubs that still have their bird identification books and binoculars only need a trained or experienced adult to take the members out for birdwatching. Very few materials are needed for clean-up campaigns, pit trap monitoring, or for Club meetings. However, without sufficient funding, Clubs cannot undertake the activities considered most beneficial by participants: excursions. This requires expensive fuel for motor vehicles or motorboats. This is why the men’s focus group in Surama had a long and dynamic discussion of potential fundraising strategies. Woodpecker, Laba, and others noted that Clubs need parental support to secure resources and funding, which shows the issue of a lack of funding is interrelated to parental and community support of NRWC. Lack of funding in socio-economically disadvantaged and rural areas, like the North Rupununi, is a common issue (Adepoju, 2007; Ana et al., 2009; GreenCom, 2000; Johnson-Pynn & Johnson, 2005; Johnson-Pynn & Johnson, 2010; Kingston, 2013).

5.5.3. Finding 9: Participants’ Recommendations

As explained in 4.5.3., most participants in individual interviews were asked at least one open ended non-directive question about their thoughts on their local Club, and only former Club members were asked specifically about what they liked and disliked about their Club experience. Despite most participants not being asked specifically for their recommendations to improve the program, many participants offered extensive recommendations. Their main recommendations were: engage community members (especially elders) more with the Club; establish stronger adult leadership; improve the youth leadership; take more control over the programming

(especially have more excursions); and fundraise more to support the Club's activities and to build or maintain a clubhouse.

Focus groups were not asked for recommendations because there was not enough time to include this question. However, the men's focus group in Surama discussed recommendations about improving programming and fundraising of their own accord, and their suggestions are included in those sections.

Engage Community More

The literature on the importance of community engagement for Youth programs to succeed indicates that community buy-in and ongoing support of a program is essential for the program to achieve its goals and to persist over the long term (Bussell & Forbes, 2002; Epstein, 1988; Glass et al., 2004; M. H. Hall, McKeown, & Roberts, 2001; Henderson, 1980; Henderson, 1981; Karl, Peluchette, & Hall, 2008; McDuff, 2000; Tsui et al., 2011). Consistent with this, some community members indicated their local Club could better engage the community through reciprocity. For example, the project to install a water pipe for the Butterfly Farm also meant the nearby sector of Yupukari would have a more convenient water source. The Club's workday was very well attended and the pipe installation was a success. More mutually beneficial projects like this could increase community support for their local Club. Participants in focus groups and interviews also indicated they appreciated the clean-up campaigns that Clubs had undertaken in the past. Clean-up activities are opportunities to teach Club members about waste disposal, and engage them in a meaningful activity that "gives back" to their Village. Participants valued the improved aesthetic and hygienic condition of their Village after the clean-ups, which is not only important for local health and well-being but was also described as helpful to attract and satisfy ecotourists. The ideal of reciprocity is espoused in R&S's philosophy, which includes Clubs

engaging in an initial and then follow-up “Community Needs Assessments.” These needs assessments are used to select projects that will benefit the R&S Club’s community (Jane Goodall Institute (JGI), 2013; L. R. Johnson & Johnson-Pynn, 2007).

For all demographic groups, participants suggested meetings to help engage community members, educate them about the goals and activities of the Club, and as an opportunity to request their assistance (such as volunteering). It would be useful to determine what types of meetings work best to engage community members, and whether each of the main stakeholder groups may need a specific kind of meeting. For example, presenting or giving reports about the local Club at a Village General Meeting (VGM) will reach many (though not all) villagers from the main stakeholder groups that Clubs need to engage (youth, parents, elders, and community leaders). And the Club’s volunteers and Executive only need to prepare a presentation and prepare for questions, they do not need to expend resources and time to organize the meeting themselves. They would benefit from participating in an already established and important Village governance activity.

To get the most out of reporting at VGMs, communities and Clubs need to decide together how to implement reporting (or improve existing reporting). For example, who should give the report? A youth or child from the Executive? Or is this a role better fulfilled by an adult Coordinator? What should the Club report about? Participants did not talk very much about the content of Club reports, but a few mentioned reporting on the Club’s activities since the last VGM, the Clubs plans until the next VGM, financial reporting, and special announcements. Clubs could also consider reporting at VGMs to be an opportunity to request assistance for their projects and activities.

Clubs could also consider if there are other levels beyond the local community to which they could report. Iwokrama has its own system of monitoring Clubs, including requesting activity reports. In addition, these activity reports could be read at VGMs. Mora also said that the Yupukari Club used to give their activity report not only at the VGMs, but also sent copies to the RDC (Regional Democratic Council) and to the NRDDb. That could help many levels of government know about and value the Clubs.

However, reporting at VGMs may not be the best way to reach out to some stakeholder groups. It may be that some demographic groups do not attend VGMs as frequently, or that the information about the Clubs would be better received by certain groups in meetings tailored specifically towards those groups. For example, perhaps a meeting just for parents of youth and children who have not joined the Club might be more effective than presenting at a VGM. This would allow those involved with the Club who are hosting the meeting to address the questions and concerns of a more homogenous group. It could also be more effective to meet some demographic groups one-on-one or in smaller groups. Different groups also provide different kinds of support to the Club, which would be another reason to meet them separately since requests for assistance would be different. Elders can teach TEK, community leaders help support Clubs in their programming goals through community decisions to allocate financial support and encouraging villagers to participate, parents are the main source of volunteer support, and youth can help on the Executive or as volunteers. Meetings with each specific group would allow Clubs to communicate their requests for specific types of support to those groups. Strategies to engage the main stakeholder groups are discussed in the following subsections.

Parents. Participants recommend engaging parents more in the local Club. This is consistent with numerous studies about supporting EE Club programs (de Brabander &

Rozendaal, 2007; Epstein, 1988; Legault & Pelletier, 2000; Mapp, 2002; Meeusen, 2014; Pomerantz, Moorman, & Litwack, 2007; Smit, Driessen, Slegers, & Teelken, 2008; Vaughan et al., 2003; Volk & Cheak, 2003). Parents are a key group to engage because for younger children, they decide whether the child can participate in the Club or not, they can encourage their child to participate and get the most out of their Club experience, and they provide the main source of volunteer work essential to keep the Club functioning. Therefore meeting just with parents could be an important step to support the Club, and as some participants suggested, perhaps these meetings should be regular and ongoing. Some people suggested inviting parents to the existing Club meetings. This would help keep parents informed about the Clubs activities, but could disrupt the Club meeting and might not offer a forum for parents to discuss their concerns or offer suggestions. The adult Coordinator would likely be the one to organize and schedule regular meetings with parents. But the Iwokrama Outreach Team could also provide support in this area.

At the time of data collection (2011) the Outreach Team visited villages once a year, usually between January and March, which is the period leading up to Festival (See **Appendix D** on the 2010 reconnaissance). In 2010,⁹⁰ the Team's approach was to arrive at a village in late afternoon or evening, and then lead a birdwatching outing the next morning at 6:00 am. At some point during the school day, the Team would present for around an hour to one grade at the village's school to inform students about Iwokrama's activities, show documentaries, and talk about the upcoming Wildlife Festival. Then in the afternoon after school, they would meet with the local Club to educate the Club members about a specific environmental topic for that year, often engaging them in a hands-on learning exercise, remind them about the upcoming Festival,

⁹⁰ As described in **Appendix D**, I travelled with Iwokrama's Outreach Team in February 2010 to Masssara, Kwaimata, Yupukari, Rupertee, and Toka.

and troubleshoot with them about any problems the Club might be having, or resources it might need.⁹¹

In individual interviews and informal conversations, community members indicated that it would be helpful if the Outreach Team met with parents (both with and without children in the Club) in the evening that they arrived in a Village. There could be locally organized, regular meetings with parents, and an annual meeting for parents with the Outreach Team. This annual meeting would be an opportunity to support the local Club volunteers' efforts to engage parents with the Club, and educate them about its goals and potential positive impact on children and youths. It would be an opportunity for Iwokrama to hear directly from parents and address their concerns about the Club, and hear their suggestions for future activities and fundraising. A meeting with parents could add value to the Outreach Team's visit.

Participants talked about the ambiguity of some parents' reaction to the local Club, and also that parental support is essential for the Club. The above described meetings could help. But I also wish to highlight that some parents indicated they genuinely enjoyed some volunteering experiences, as expressed by Dove: "Coming together as parents... everybody just sit down, the mothers sit down, they had to do their child's costume. They're doing it very neat, you know? And the children are there to help with beads or whatever. They seem happy about it." What she described was an enjoyable experience shared between parents and children that had them come together as a community towards the common goal of getting the Club ready for Festival. It was mentioned above that it would be good for Clubs to reciprocate more with their community, and Woodpecker said this was particularly important to gain parental support for the Club. Creating

⁹¹ The Outreach Team is doing valuable outreach on behalf of Iwokrama, and their method was likely carefully thought out. In the Chapter 6 I will discuss some other potential ways the Outreach Teams' visit could be even more effective. I will also suggest other Club-based programs may wish to consider if having visits from an organization that manages or funds a local program could help their program, especially in rural areas.

more opportunities like the activity described by Dove could help the Club to reciprocate with parents by creating enjoyable, community building experiences.

Elders. Elders are not expected to put in the time, labour, and effort that younger adults can into volunteering with the Club. Instead, their guidance, advice, and wisdom are extremely valuable. As described previously, elders can teach TEK, share traditional stories and local history, teach Makushi, and take Club members on field trips into the forest or along the river to teach about the flora and fauna.

Elders are another important stakeholder group that may require a tailored, one-on-one approach to engage. Some elders and other participants said that many elders did not know much about the Clubs, and they had not been invited to engage with the Clubs. Several elder participants who were not currently engaged with their village's Club indicated they would be interested, but would need to be properly approached and invited by representatives from the Club. Therefore, those interested in the NRWC program continuing and achieving its goals may wish to consider checking with elders about the proper protocol to inform them about the Club and invite them to work along with the Club. Some participants indicated one-on-one meetings with elders was the way to do this.

For elders who knew about the Clubs and the possibility to volunteer with the Club, there were barriers that could prevent their participation. Communities may wish to find ways to address the following barriers to increase elder participation in their local Club. The main barrier to engaging with the Club was busy schedules, especially elders who worked, were involved in another organization in the community, or were community leaders (such as on Village Council). For example, one of the elders most in demand to work with Surama's Club was one of the leaders of the community's very active Culture Group. This particular Culture Group performs in

and out of the Village, and the Culture Group is a priority for this elder. She also works at the community's Eco-lodge.

Another barrier cited by a few participants was that some elders did not feel their IK was valued. This mentioned in **5.1.3.**, the values introduced by public schools and other aspects of Colonialism appear to have convinced some elders that their IK is not valuable to youth or to their communities. Therefore, as one participant put it, these elders do not feel confident to teach their IK, via the Club or in any other way.

Community Groups. Greater collaboration between local primary schools and Clubs was identified as a way to strengthen Clubs. Literature on similar EE Club programs support this recommendation to collaborate with local schools (Ajiboye & Silo, 2008; Hill & Taylor, 1992; Johnson-Pynn & Johnson, 2005; Kingston, 2013; McDuff & Jacobson, 2000; Roberts, 2009). Teachers are often involved with the Clubs. In fact, most current and past Coordinators are teachers. However there was not much interaction between the schools and the Clubs. As Jeff points out, this is a missed opportunity since Clubs provide an opportunity to create learning experiences that complement the school's curriculum. Although it was not mentioned specifically with respect to the lack of collaboration between schools and Clubs, it was frequently mentioned that teachers are particularly busy, and that may explain why schools have not engaged more with Clubs. If communities decide collaboration between schools and Clubs would be beneficial, they will need to find a way to support such collaboration without adding to teachers' workloads.

Other organizations that were mentioned that could collaborate with Clubs were Caiman House and Rupununi Learners in Yupukari, and the Culture Group in Surama. As quoted in the analysis, Dan spoke of the benefits if Caiman House were to work more with the Club. The Club

already benefits from the assistance and opportunities provided by Caiman House, but could certainly benefit further.

Caiman House has staff with skills that could help these projects succeed. Participants also suggested more field trips and the need for skilled volunteers to work with youth to get the most out of excursions. Along with elders, the trained guides and others who work at Caiman House would improve fieldtrips, birdwatching, and other activities. Caiman House staff could also serve as mentors, since mentoring is important to indigenous youth (Klinck et al., 2005; McDonald et al., 2007; Stanton-Salazar & Spina, 2003).

In Surama, the Culture Group was viewed as something former Club members tended to join once they left the Club. However, the community could consider if the Culture Group could work along with the Club on mutually beneficial projects, and whether Culture Group members could be mentors to Club members.

Wowetta's participants did not mention organizations other than the local school that could collaborate with their Club. However, Bina Hill is nearby and could offer fruitful collaboration opportunities.

Improve Adult Leadership

Many people in interviews (and in informal conversations) spoke of the importance of adult volunteers to sustain the Club program, and for the Club to realize its potential positive impacts on young people. This is consistent with the literature on the essential role adults play in programs for youth (Athman & Monroe, 2001; Epstein, 1988; Henderson, 1980; Henderson, 1981; L. R. Johnson et al., 2007; Johnson-Pynn & Johnson, 2005). Children and even adolescents cannot be expected to do the work necessary to keep a Club active and healthy over time. They are not mature enough for certain tasks and for longer-term planning. And the young

Club members are by nature only involved for a certain length of time depending on their age and interest. In contrast, adult volunteers have the maturity and skills necessary to maintain a Club program, and the potential to offer the Club longer-term stability when they volunteer for long periods, or when they engage in a careful transfer of knowledge to new adult volunteers, as some adult NRWC volunteers have done. In other words, one of the many roles of adult volunteers is to maintain the institutional memory of programs like NRWC. This is not the role of the Club's youth on the Executive.

As per the analysis, participants' main concerns were that adult volunteers should have certain characteristics and competencies, more adult volunteers were needed, and that more could be done to support adult volunteers.

Participants indicated it was important for adult volunteers to have the following characteristics: be responsible, dependable, honest, and enthusiastic about the goals of the Club. And these skills: experience with children and youth, empathetic about the needs of children and youth, be organized, and have leadership and mentorship skills. These desired characteristic and skills may be essential for the core adult volunteers to have, but may not be required of other adults who volunteer less regularly. For example, it may be essential for an adult Coordinator to have the above characteristics and skills, but an elder who carries the Club members into the forest once in a while may only need to be knowledgeable and a good teacher. Note while the ideal characteristics (such as honesty and enthusiasm) may not require specific training, some of the desired skills could be nurtured in existing or potential adult volunteers through training.

Participants did not talk about training adult volunteers so that they could fulfill their roles, nor did I observe any training of adult volunteers during the short windows of observation in 2010 or 2011. From the literature, training of environmental educators is very important for

EE programs, although most of the literature is on training teachers (Åhlberg, Kaasinen, Kaivola, & Houtsonen, 2001; Álvarez, De La Fuente, Emilia I, Perales, & García, 2002; Çalik & Eames, 2012; le Roux & Ferreira, 2005; Wilke, Peyton, & Hungerford, 1980) with few studies specifically about training volunteers to be EE educators (Gough, Walker, & Scott, 2001a; Vinton & Zachmeyer, 1986). In other fields, training is considered one of the important ways to support and retain adult volunteers (Bussell & Forbes, 2002; Clary & Snyder, 1999; Hager, 2004; M. H. Hall et al., 2001), including in PYD programs (Henderson, 1981; Philipsen, 1996). Community members identified supporting and retaining adult volunteers as important, therefore communities may wish to consider establishing training for adult Club volunteers (to be discussed further, below).

The perception that their Club needed more adult volunteers is consistent with the program needs of any volunteer run organization. The issue of attracting and retaining adult volunteers with the required characteristics and skills has been discussed in the literature on supporting PYD (Delgado, 2002; Henderson, 1981; Lakin & Mahoney, 2006; Lerner et al., 2007; Roth et al., 1998) and EE programs (Randle & Dolnicar, 2015). Former and current adult volunteers indicated that the support and recognition they received from their community was important to them, and this is consistent with the literature (Hager & Brudney, 2004; Jamison, 2003). Therefore, communities may wish to think about formalizing the recognition of Club volunteers. For example, would it be helpful to recognize Club volunteers at VGMs on a regular basis? In what other ways could volunteers be recognized for their volunteer work? This could encourage existing volunteers and help recruit more volunteers.

Community members also had the idea of offering key adult volunteers a stipend so that they could commit the required time to fulfill their role. Perhaps Village Council could establish

a position such as “Youth Development Officer.” The Youth Development Officer could focus on supporting PYD in their community, and have the Club and other items in their portfolio. As mentioned above, participants did not talk about training for adult Club volunteers. However, they did want to recruit and retain more adult volunteers. If there was a Youth Development Officer position, not only could this person be trained to support the Club and PYD, they could also help manage, train, and support volunteers with the Club. Being the Club’s Coordinator could also be in their portfolio. This idea will be further explored in **Chapter 6**.

Improve Youth Leadership

Many participants felt the youth leadership (the Club’s Executive) of their local Club was weak. Participants also reported that when their Club had a strong Executive, in particular a strong President, the Club was more effective and active. Thus, weak youth leadership was perceived to negatively affect the Club and its ability to achieve its objectives. The benefit of having a strong Executive was not contested by anyone, however, some community members also recognized that an important factor for the strength of the Club and for the strength of the Executive is the adult leadership. They recognized that it is really the adult Coordinator(s) who manage the Club. The Executive tends to be the source of ideas for Club activities, and for planning and executing those ideas, but it is the adult Coordinator(s) who manage the Club over the long term and help support the Executive to achieve its goals. Therefore, while the strategies, below, to help strengthen the Executive are important, even more important may be having strong adult leadership, and so implementing the ideas discussed above.

One of the challenges participants identified for developing a strong Executive is that in most North Rupununi communities, young people need to go to a boarding secondary school, and so that removes most of the key candidates aged 12-16 who could be on the Executive. I did

not detect this issue in the literature for other similar programs in similar contexts, so it is possible this is a problem that is unique to the North Rupununi. It does bring to mind the residential schools in Canada, the USA, Australia, and elsewhere that separated indigenous children and youths from their families for months or years at a time. Thankfully, those residential schools were closed, but the legacy of trauma still impacts indigenous communities in Canada and elsewhere. This is not to suggest that the boarding schools in the Rupununi are similar to the former residential schools in Canada and elsewhere, but the history of residential schools does give reason to exercise caution about separating indigenous youth from their families and communities. Indeed, the negative impact that the absence of these youths is having on the Wildlife Clubs may be symptomatic of a larger issue. My research did not explore this issue, but perhaps future research or communities' own inquiry could.

Because of the above, the Executive members at the time of data collection tended to be children younger than 12, who were often too young for their role on the Executive, or students who were actually attending secondary school, and so were out of their Village most of the time. Since both school leavers and those who complete secondary school and return to their Village were reported to be no longer interested in the Club, these older youths aged 16-18 years-old were not taking on Executive roles, either. As noted earlier, Dove wished youths aged 16-18 could help more with their Club. The lack of interested or available candidates aged 12-18 may explain much of the difficulty in having a strong Executive.

In an effort to keep the Club strong, two communities had adult Club Presidents in 2010, and one still had the same adult as President in 2011. In another community, a participant recommended replacing the existing President with an adult, because she argued an adult would be better qualified to be effective in the position. While it may be tempting to have an adult

President, communities may wish to consider the value of having Executive positions filled by Club members aged 12-18. The role of President in particular is an opportunity for a young person to shine and to take initiative. If an adult holds the position, then it is a missed opportunity for a young Executive member to prove himself or herself and so benefit from the potential career opportunities (through connections and reference letters). From the literature, youth engagement and agency in managing environmental programs is highly beneficial to the youth (Ana et al., 2009; GreenCom, 2000; Istead & Shapiro, 2014; L. R. Johnson & Johnson-Pynn, 2007; Johnson-Pynn & Johnson, 2010; McDuff, 2000; Riemer et al., 2013; Westfall, 2014), therefore communities may wish to find ways to engage youth in the Executive rather than rely on adult Executive members.

During data collection, former and current Iwokrama staff indicated that former Club Executive members, especially former Presidents, were perceived as good candidates to work at Iwokrama. They and their past achievements were already known by Iwokrama staff when they applied for positions, which gave them an advantage. Former Executive members were perceived to have desirable skills and competencies over and above those of regular Club members. Thus, Executive roles can potentially give the Club members valuable vocational and leadership experience and open up opportunities.

Improve Programing

Many participants spoke about improving the programming of their local Club, with recommendations mostly about increasing Club activities, and improving current activities, especially birdwatching.

Increasing activities tailored to the needs of the Village. Participants said their local Club needed to undertake more activities in general, and to have activities throughout the whole

year rather than only participate once a year at Festival. Participants highlighted two types of activities to increase: fieldtrips/excursions, and activities with elders. A few people said that their local Club's activities could be better tailored to serve the needs and interests of their village. This is consistent with what Samantha James (Iwokrama's Community Education and Awareness Officer) said in personal communications during my reconnaissance. Dan noted that each village is unique, and Jeff recommended that each Village ought to determine for itself what impact they want the Club to have on Club members and the whole community, and therefore what a Club's goals and activities should be to achieve those impacts. Indeed, as mentioned earlier, R&S Clubs perform Community Needs Assessments to decide what projects to undertake in their communities (Jane Goodall Institute (JGI), 2013; Johnson & Johnson-Pynn, 2007), and other studies point to the need to customize EE for the setting in which the program takes place (Aguilar & Krasny, 2011; Bynoe & Filho, 1995; Çalik & Eames, 2012; Campbell, McNamara, Furlong, Lewis, & Howson, 2007; Johnson-Pynn & Johnson, 2010; Shin, 2008; Shumba, Kasembe, Mukundu, & Muzenda, 2008; Szczepanski, 2009).

The main type of activity participants suggested increasing was fieldtrips, especially with elders who can teach TEK. The other main benefit participants valued with fieldtrips is youth getting exposure beyond their home Village. However, those types of excursions – exchanges with other villages, trips to Canopy Walkway or the Iwokrama Field Station, or trips by motorboat on the river – are expensive due to the need of vehicles, fuel, and food for longer trips. Thus, Clubs would need to secure more funding (see below) to increase these trips.

Some fieldtrips could be affordable without additional fundraising. Most Clubs do local birdwatching (discussed below), and there are other local fieldtrip options and experiential learning opportunities. Many participants appreciated the clean-up campaigns that most Clubs

had run in the past. Many participants thought it was good that the Club helped to keep the village clean and tidy, and Anteater pointed out that members need to feel that the activities they engage in are meaningful, and that they are achieving something. Jeff said there needed to be more praise, more positive reinforcement, when Club members contribute and succeed. From the literature, youth indeed require positive reinforcement and praise to thrive (Lerner, 2006). Clean-up campaigns could be modified to enhance the learning experience for Club members, and would be a good opportunity to praise Club members, which in turn would encourage them in more activities that contribute to the well-being of their village.

Some participants said Club members needed more local environmental education, which could be achieved with fieldtrips in the local rainforest, river, or savannah ecosystems with local guides or elders. Swift noted that in Surama, there is now a conservation area near Burra Burra River, and he said Club members “should be the ones going in there to do some monitoring. We are also building a camp further up, and using it mainly for retreats.” Swift also described an exercise he had done previously with youth:

You take them out into the forest, maybe 100m apart from each other, and you just leave them there for an hour... When you come back, you have this little talk with them. What did you observe? What did you notice? What did you hear? That kind of stuff. Reconnecting with Nature. Truly getting a sense of what Mother Earth is all about. There's so many things we take for granted, but it's there. And you don't see it. And it helps you to also to think about what is the purpose of life... I think also what they need to do is more outdoor stuff. Like out THERE. Get out. That's where it is, you know.

Note this activity requires no additional cost beyond an adult volunteer to assist and facilitate it, and could be done in any village. It would help Club members connect and understand the ecology specific to their village. Clubs could likely develop many other activities like this that have high educational and experiential value and are not expensive. This reconnection of indigenous people with their territory through indigenous methods is advocated

by Canadian scholars interested in re-indigenizing EE (Kulnieks et al., 2010; Kulnieks, Longboat, & Young, 2013; Sheridan & Longboat, 2006; Sheridan & Longboat, 2014).

Several people said Clubs should expand the variety of their activities beyond birdwatching. Their main reason was to provide programming that was more broadly appealing to children and youth. They pointed out some children are mobility challenged, and others are interested in Nature, but not in birdwatching. Auntie Tanager said artistic projects, for example, could be a more regular activity, rather than just once a year before Festival. As recounted in **Appendix E**, I observed two instances which also made me wonder if perhaps some other form of activity would be better for some of the Club members attending a birdwatching outing. The first was in Wowetta in 2010, when I attended a birdwatching outing hosted by Iwokrama's Outreach Team. Two girls in particular (which given there were only 10 Club members present, represented one fifth of the group!) appeared to be far more interested in botany. They brought me sample after sample of fascinating plants. I admit I got distracted from birds myself, the plants they brought were truly stunning, and they knew their properties! A seed used to make an orange dye, another that could stick to one's ears like fake earrings, an edible yellow flower, some fruit... the cornucopia of fascinating plants they brought me seemed inexhaustible. I wondered if Wowetta's Club could consider having botany excursions as well as birdwatching.

The second instance was in Surama at the only birdwatching I observed there during data collection. In this case, some of the Club members became fascinated by spiders, including a branch I found that was covered in baby spiders launching into the wind on their threads. In this case, it was not necessarily that I felt birdwatching needed to be replaced by spider-watching, but I did wonder if birdwatching could be made more flexible to take advantage of teachable

moments like this, when the adult volunteer could explain, for example, the spider-behaviour observed that day.

One interesting note is that most participants said that there needed to be *more* activities, but in Surama, with the most active Club, two people (including a key adult volunteer) said there were too many activities. Kiskadee said “I think by now the youths have so many things from the Wildlife Club they have to go... so at the end of the day when they actually have to go in the farm, then children don’t even have time to go and help their parents, they have so many activities.” This reinforces the importance of good communication between Club volunteers and community members, especially parents, to understand how activities and their frequency are perceived.

There were a few other suggestions of what could be taught through Wildlife Clubs that might be more appropriately taught in other programs or at school. For example, one participant said Clubs could teach about AIDS and STIs: “Club should deal with this disease that will rapidly come in. Have little classes with them about sexually transmitted disease.” Teaching youth to protect themselves from STIs is extremely important. So important and potentially life-saving that this sounds like a part of sexuality education that ALL youth need (Gavin, Catalano, David-Ferdon, Gloppen, & Markham, 2010). Therefore, it is likely more appropriate that it be taught in schools. Another participant suggested Clubs should teach members about computers and the Internet. Similarly, with these skills becoming increasingly important for youth in the North Rupununi, it would appear more appropriate to make sure all youth have the opportunity to learn these skills. However, if Clubs took on a project-based approach to some of their activities then it is possible these projects could naturally facilitate the members working on them to improve any skills they may learn in school. For example, if some Club members

decided to make a documentary of elder's stories about local birds, then they would need to learn more than basic computing skills. The participant made the suggestion because schools were not teaching computing skills at the time of the interview. Until communities find the best way to provide computer and internet training, it is understandable why Club volunteers may wish to provide Club members with some training. Once again, communities need decide what training and opportunities they want their youth to have, and then how to support that. Communities also need to define clearly the objectives of their local Club. The A Wildlife Club is but one of many options to encourage PYD.

Improve birdwatching

Birdwatching is the most common Club activity, although there was no birdwatching during data collection in Wowetta. However, all Clubs have had birdwatching in the past, and it was a well-known activity, thus many participants had comments on it. Most people who made suggestions on how to improve the birdwatching recommended: i) An elder or trained birding guide ought to take the members out birdwatching; ii) Members should be taught the Common, Scientific, and Makushi names of birds; and iii) They should use enough bird identification books and binoculars so that Club members can take turns using these tools. The first point means the second point can be achieved if the elder or trained guide is willing to teach the three names of birds. The third point would require some Clubs to obtain more binoculars and bird identification books. For some Clubs, they do have enough, but may need to organize their resources more to ensure items like binoculars are available when they are needed. Since Yupukari and Wowetta do not have clubhouses, valuable resources like binoculars are often stored at an adult volunteer's home, and this creates difficulty to make sure these items are available when they are needed.

Some participants added members ought to be writing down the species and frequency sighted in a notebook or on the forms Iwokrama provides, to help them learn, potentially provide data about local bird abundance, and to help the Club's adult volunteers know if the members were truly engaged in the activity. Some participants also added that the Club members should also learn about the bird's behaviour, natural history, and traditional stories about the species, which further underlines the need to have elders or trained guides lead or assist birdwatching. It also shows participants recognized that the birdwatching outings could be an even more enriching learning experiences for Club members. Teaching about the birds, rather than just how to identify them, may also attract more participation in birdwatching.

Funding

Many participants said their Club needed more funding. More funding would certainly be required to achieve some of the above recommendations. The excursions to give Club members the exposure that participants highly valued requires fuel for motorboats or motor vehicles. The other main proposed use for funds was to acquire a clubhouse. There was also the suggestion of providing an honorarium to adult volunteers to support them in their work with the Club (like Martin saying someone may need to be paid a stipend to properly maintain the Clubhouse; this idea is further explored in **Chapter 6**).

Many participants spoke about the Club fundraising within their Village, and recommended that the Club host more market days or sell goods at existing market days and other events. While this has worked in the past, this might not be the most effective way to raise the amount of money needed to fund the larger and more expensive ideas participants had to improve the Club program. Fundraisers within the village sought support from those most likely to care and contribute, and were seen as providing an opportunity to engage the community with

their Club. However, as pointed out by Jeff and by men in the Surama men's focus group, Clubs could set their sights higher and fundraise well beyond their village. Some Clubs have already obtained grants for larger projects, such as building a Clubhouse. Sources within Guyana that Clubs have successfully obtained funding from include Iwokrama (which initiated NRWC at the request of communities, and still offers considerable support), EPA (which had a Green Fund Clubs could apply for), and WWF. These organizations also provide funding for Festival, under the leadership of Iwokrama.

Clubs could also attempt to fundraise from International sources. The men's focus group in Surama in particular spoke extensively about this possibility. They realized that they had all the ingredients they needed to seek funding from international sources. They needed to have a website with video, pictures, and engaging writing to showcase what the Club is doing and why this is important and worth funding (to protect their healthy ecosystems and support PYD), and demonstrate financial accountability. With solar or generator powered laptops, satellite internet, and access to volunteers and staff with training in how to set up websites, the Surama Club has the resources and capacity to set up an engaging website. With local people trained by Citizen Cinema to make documentaries, and other capacity building programs that supported writing skills, Surama has the ability to create the engaging media for the website to showcase the Club's activities. And, with local people trained in accounting, and the example of the Village Council's financial accountability, they have the resources to make the Club become financially competent and transparent so that foreign funders can trust that their investment will be put to good use.

As Jeff put it, once communities in the North Rupununi decide what is best for them, and make a clear request, then "they can say whatever they want and they can get it. And that's not

an overstatement – because of who they are, they could get whatever they want.” What he means is that because these North Rupununi communities are Indigenous people seeking to protect their culture, environment, and promote PYD, there are many foreign donors who will want to support this. There are significant funds available for development, and communities may wish to dream big for their future — then they could obtain the funding for their Clubs, which could play an important role in achieving the ideal future for their community. Indeed, Yupukari’s Club obtained funding from international sources, such as Ecoclub.com (Karwacki, 2009), and other Clubs could do the same.

5.6. Revisiting Conceptual Model

In Chapter 2, **Figure 1 – Conceptual Model** was introduced to illustrate assumptions about the Wildlife Clubs’ effect on Club members. Below is the revised model, **Figure 4**, based on what was learned via this doctoral research.

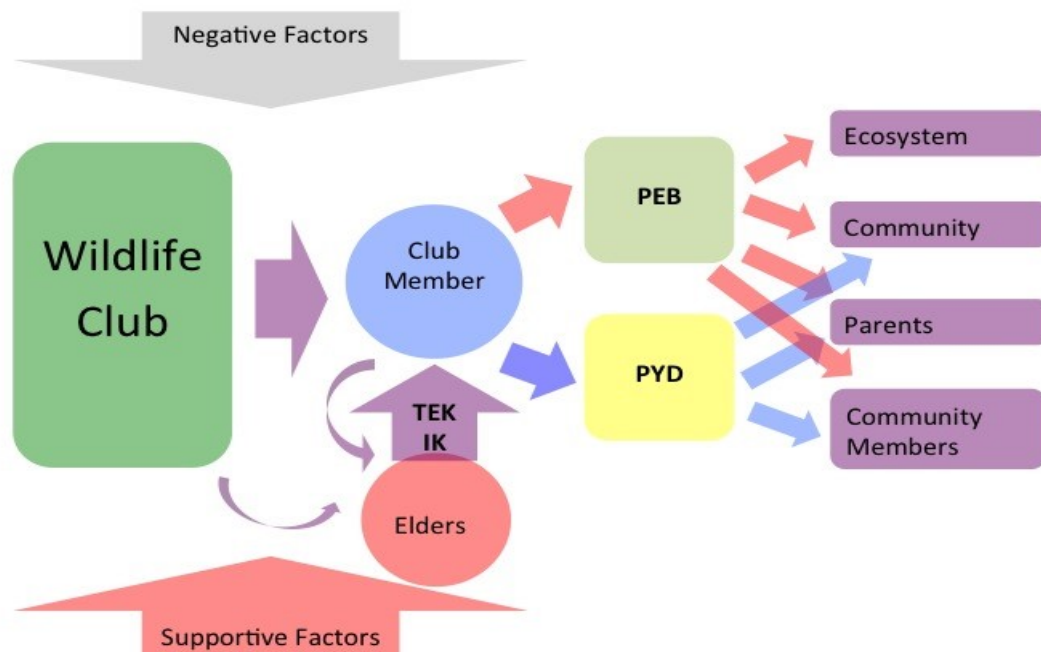


Figure 4 - Conceptual Model Revised. This diagram updates **Figure 1**. This doctoral research provides modest support for the assumed relationship between a Wildlife Club (the local manifestation of NRW, an EE program) and Club members. According to interview and focus group participants, Club membership was perceived to positively impact a Club member's pro-environmental behaviour (PEB) and Positive Youth Development (PYD). Additionally, the Club member's PEB does appear to positively impact the Club member's local ecosystem (such as the reduction in bird-killing and clean-up campaigns), and the PEB of parents and other community members (indirect impacts reported by participants). Participants also reported that Club membership supported Club members' PYD, in particular, vocational competence. The effects of Club members' PYD on their local community, parents, and other community members (indicated by the blue arrows) was not clear, though the PYD literature supports the notion that thriving youth will contribute to their communities (Lerner, 2006). Note there are factors that can negatively impact the Club's effectiveness, and these are now better understood for NRW via participants. They listed the following as factors that can negatively impact their local Club: inadequate community engagement, particularly of parents and elders; lack of volunteers; weak adult leadership; weak youth leadership; inadequate programming; lack of funding. And factors that can support the Club's effectiveness include: community support and buy-in; elder support; engaged volunteers; strong adult leadership; strong youth leadership; appropriate programming; funding, particularly for outings. A fascinating impact that the Club had on the community was the perception that Clubs help connect youth with their local elders, which facilitates the transmission of TEK and IK. Elders are now understood to be a very important supportive factor, and are added to the above diagram. The broad purple arrow represents elders transmitting TEK and IK to Club members. The thin purple arrows show the potential for involvement with Clubs and with Club members to positively impact elders, as well.

Summary – Chapter 5

In summary, in this chapter I discussed the following points. First, the meaning of “pro-environmental” behaviour in the three mainly Makushi, North Rupununi communities that participated in this doctoral research (Research Question 1). In these communities, pro-environmental behaviour means a person does not litter, uses their local natural resources sustainably (e.g., hunting, fishing, lumbering, farming, harvesting fruits and nuts from the rainforest), and educates others about the environment (Finding 1). Based on their own local definition of pro-environmental behaviour, participants perceived their local Wildlife Club to increase pro-environmental behaviour in Club members (Finding 3). Next, I discuss the meaning

of Positive Youth Development (PYD) in these communities (Research Question 2). Community members' discourse about PYD tended to be concentrated on young people being able secure employment, which depended on completing their education, and some participants felt PYD included the fact of young people developing good character and learning Traditional Ecological Knowledge (TEK) (Finding 2). When asked about how to support PYD, few participants said much more than children and youth need to be supported in their schoolwork, and positive mentors were helpful. According to this narrowly defined version of PYD, which was mostly about vocational competence, the Clubs were perceived to support PYD because the Clubs were perceived to support vocational competence. In particular, Clubs support developing the skills needed for the most attractive locally available jobs (ranger, tour guide, or research assistant). It will be interesting to see how communities' discourse on PYD may evolve, and how Clubs may be able to support a broader definition of PYD.

Then I discuss the perceptions about the effect of Clubs on individual Club members (Research Question 3). Participants' perceptions were very positive. They thought participating in a Club increased Club members' pro-environmental behaviour (Finding 3) and their PYD, particularly the vocational competency aspect of PYD (Finding 4). Participants' perceptions about having a Club in their village (Research Question 4) were also positive, such as that the presence of the Club generally raised awareness about the need to protect the environment, reducing bird-killing by young boys, and that clean-up campaigns were beneficial (Finding 5). A particularly fascinating impact that the Club had on the community was the perception that Clubs help connect youth with their local elders, which facilitates the transmission of TEK and IK and provides youth with access to mentors (Finding 6). This is also a positive impact on individual Club members and on elders, but is categorized under Research Question 4 since it is a positive

impact on the entire community because it nurtures the intergenerational transmission of TEK and IK necessary for indigenous cultures to thrive.

Next, I discussed the perceptions about the NRWC program (versus NRWC's perceived impacts; Research Question 5). While the positive perceptions about the program were general (Finding 7), the negative perceptions about the program were quite specific and detailed (Finding 8). The most frequently identified categories of negative perceptions were: issues with adult leadership of the Clubs (especially adult Club Coordinators and the perception of a lack of parental support and adult volunteers); inadequate elder participation in the Clubs (barriers to elder participation were described); weak youth leadership (particularly due to youths aged 12-16 boarding at one of the few secondary schools available in the Rupununi); critiques of the Club programming; and lack of funds and resources.

Finally, I discussed the participants' recommendations about how to improve their local Club (Finding 9). These recommendations were unsolicited and many of the recommendations derived from participants' considering how to mitigate or change the aspects of the NRWC program participants had negative perceptions about (such as a perceived lack of volunteers), and enhancing or increasing aspects of the Clubs they had positive perceptions about (such as increasing the number of excursions). Participants' recommendations included: suggestions on how to increase community engagement, particularly that of parents and elders; improving the adult leadership of Clubs, including the idea of paying a stipend to a key volunteer; improving youth leadership of Clubs; improving the Clubs' programming, with an emphasis on more excursions; and on improving the flagship NRWC activity: birdwatching.

Chapter 6 – Implications for Practice

This chapter will discuss implications of the research findings in the form of recommendations for the North Rupununi Wildlife Club (NRWC) program (which may be relevant to other similar programs in similar contexts), and for future research on programs like NRWC. These recommendations spring from participants' recommendations, from the literature, and from the author's knowledge and experience.

6.1. Implications for North Rupununi Wildlife Club (NRWC) Program

Building on participants' recommendations, these suggestions could help strengthen the NRWC program. While each community in the North Rupununi is unique, the communities do share characteristics and access to similar resources that indicate that some recommendations based on the research in Surama, Yupukari, and Wowetta could be generalizable to other communities in the Region (and perhaps beyond). However, the following recommendations are only a starting point. In fact, the first recommendation is that communities themselves determine a good process to identify and clarify their own goals and objectives for their local Club. Based on that, they can determine which, if any, of the following recommendations may help their Club attain those goals. They could then engage in an iterative process of applying plausible recommendations, and continually assessing the impact of NRWC.

6.1.1. Community Dialogue on Meaning of Environmental Responsibility and PYD

A striking feature of the findings about the local definitions of both pro-environmental behaviours and PYD was that both definitions were rather narrow. Participants said behaving pro-environmentally meant not littering, responsible direct natural resource use, and educating others. Knowing or acting upon TEK was not mentioned as an aspect of being an environmentally friendly person. And yet, in all focus groups and many interviews, Elders and

their TEK were spoken of highly and with respect. And several participants in interviews said Clubs could undertake projects to interview local Elders and use creative means to share the wisdom of these Elders, such as videos to post online or audio reports that could be played on Radio Paiwomak.

There have been programs in the area to educate and train community members about natural resource management (Chung Tiam Fook, 2011), which may explain high awareness about natural resource use. A community education and dialogue process that would explore the meaning of pro-environmental behaviour, including examining definitions such as Stern (2000)'s definition of "environmentally significant behaviour" would be useful. He described two ways to define environmentally significant behaviour: by its impact, and by the actor's intent. The former is defined as behaviour that "changes the availability of materials or energy from the environment or alters the structure and dynamics of ecosystems or the biosphere itself" (Stern, 2000). Stern (2000) goes on to explain that some behaviour directly or proximally causes environmental change, "such as clearing forest or disposing of household waste," while other behaviours have an indirect impact on the environment by shaping the context in which the choices that directly impact the environment are made (e.g., Rosa & Dietz, 1998; Walters & Vayda, 2009). This is an important point anywhere, but particularly in the North Rupununi with its exceptionally high biodiversity. Local people's waste disposal, hunting, fishing, etc., certainly have an impact. But as Stern (2000) points out, indirectly environmentally significant behaviours can have greater environmental impact than behaviours that directly change the environment, such as "international development policies, commodity prices on world markets, and national environmental and tax policies" (Stern, 2000). For Makushi communities in the North Rupununi, the decisions made at the national and international level can have a huge impact on their local

ecosystem. Indeed, the need to have representatives who can advocate for their communities and local ecosystems is essential at this time of climate change caused by industrialization and over-consumption. This is one reason why PYD is important in the region, because its promotion helps to raise the leaders that can be effective representatives to advocate on behalf of their communities at the national and international level.

There is also a second meaning of environmentally significant behaviour. From the actor's standpoint, it is a behaviour undertaken with the *intention* to change the environment (Stern, 2000). The intent-oriented definition differs from the impact-oriented definition in two important ways: environmental intent is an independent cause of behaviour, and it is possible that environmental intent may fail to result in environmental impact. This is also important to discuss in North Rupununi communities, because there were some common misconceptions about what was environmentally friendly (for example, the belief that plastic was compostable). And there were some local issues that do not have a straightforward solution. For example, not littering was considered important. But there is no garbage disposal service in the area. Therefore local people who do not want to litter need to dispose of their garbage themselves, and most dig a pit, keep putting the garbage in, and then when it is full, cover it over. Some periodically burn the garbage in the pit (to reduce its volume and make any food scraps less attractive to animals).

Another issue is hunting and fishing versus raising domestic animals. In interviews, some participants said they had been told raising chicken or cattle to supply their protein needs was more environmentally friendly than hunting and fishing. However, the biomass (feed) to support domestic animals has to come from somewhere. Either locally or somewhere else, land must be farmed to supply feed for domestic animals. In contrast, sustainable hunting and fishing means

humans get the food they need without converting wild spaces into farmland. This is an example of an issue to discuss within communities.

To turn to PYD, participants said they felt success for a young person meant getting a job, and this was usually the first thing people said. A few also said knowing TEK and IK, knowing how to conserve the local environment, being happy, and cultivating a good character were important (see 5.1.2.). When asked how to support PYD, participants said youth need to complete their education, and they need support and encouragement from adults to help them succeed in school. A few people said youth need to be taught about their local ecosystem and wildlife, about how to conserve their natural resources, about TEK and traditional skills, and they need positive role models or mentors. However, the emphasis on success being defined as employment, and schooling as the key to obtaining employment, is a narrow conception of PYD, and it could be helpful for communities to engage in dialogue about PYD.

Firstly, a wider conception of PYD would be beneficial to local youth and their communities. In 2.4., the “5C’s” were discussed: Competence, Confidence, Connection, Character, and Caring (Lerner, 2005; Lerner, 2006; Theokas et al., 2005). Researchers speculate that young people whose lives demonstrate these Five C’s are on a developmental path towards expressing a “Sixth C”: contribution to self, family, community, and the institutions of a civil society (Lerner, 2006). Being able to obtain employment requires vocational competence, which falls under Competence. However, it is just one of many competencies that are important to youth development. I would encourage communities to support the other Cs of PYD, too.

Secondly, participants did mention knowing IK and TEK as aspects of PYD, which raises interesting questions about the nature of PYD in different cultures. Wexler (2009) notes that indigenous youth require connection to their culture in order to navigate identity formation and

develop a sense of purpose, both key to healthy youth development. Perhaps a “Seventh C” is Culture! At the very least, Cultural Competence is likely important to the PYD of Amerindian youths, and North Rupununi communities should consider discussing what PYD means to them and how to support PYD. Are there local and culturally specific ways to support PYD? What does having good Character (another C) mean in the North Rupununi?

6.1.2. Community Dialogue About the Role and Goals of Local Clubs

One of my sincere hopes is that this research will spark communities to engage in their own dialogue about NRWC, so that they can determine for themselves what their Club’s goals and mandate are. This kind of community dialogue would work well with the above suggestion that communities discuss the meaning of pro-environmental behaviour and PYD. It follows that then communities could turn the dialogue to the role of their local Club in supporting pro-environmental behaviour and PYD. My intention is to share the research findings from this Dissertation through documentary videos, which was the preference of each of the three communities.

The reason I sought a creative, engaging, and culturally appropriate way to disseminate the research findings within the communities was to fulfill my ethical obligations as a researcher in these communities and because my research paradigm is pragmatism. Ethical research with indigenous communities includes reciprocity (Wilson, 2008), and a documentary project on the research about Clubs demonstrated reciprocity because it ensures community members can engage with the findings, will provide economic opportunities and experience to community members who work on the video project, and will be an opportunity support community consultations about environmental behaviour, PYD, and the Clubs. From a pragmatic perspective, making documentary videos makes sense because it increases the likelihood of the

research findings being applied. I am legally required to provide each community with a printed copy of my Dissertation. I witnessed the fate of the Dissertations left by previous student-researchers. They became doorstops, seat-boosters, or just gathered dust on a shelf at the local village office or library. No one I spoke with had ever read any part of any of the Dissertations.

To return to the suggestion of community meetings about their Club, an agenda could include: brief history of the NRWC program; discussion of the current goals and mandate of Clubs that is posted online (NRDDB, n.d.b) or in other documentation; discussion concerning how the current stated goals and mandate satisfy or do not satisfy the community's views about pro-environmental behaviour and PYD; discussion to reaffirm or change local Club's goals and mandates; discussion of the activities required for the Club to fulfill its goals and mandate (e.g., birdwatching, outings with Elders, etc); discussion of the resources required for the Club to fulfill goals and mandate (e.g. financial needs that may require fundraising, purchase of binoculars, acquisition of volunteers, etc.).

While a community meeting as part of the video project would be a good way to start, ongoing community meetings would be required for continuous reflection by communities on their Club. There was consultation about the idea of starting Clubs in 1998, but it does not appear to have continued. Iwokrama's annual Outreach visits would be a good opportunity to hold ongoing community meetings. In 2010, I observed the Outreach Officers troubleshooting with Club members about the performance of their Club (see **Appendix E.3.5**). But what if the Outreach Officers held meetings open to all community members in order to obtain feedback? Or held meetings to keep clarifying the role of Clubs based on community input? This could be an iterative process to keep checking-in on the evolving needs of communities and their youth, and provide an opportunity for the local Club to evolve to meet the needs for which it is designed.

I also observed the Club Coordinator in Surama in 2011 engage some mothers in filling out the feedback form for that year's Festival (the form was to be returned to Iwokrama's Community Education and Awareness Manager). It is useful to have feedback on Festival, but I do not know if there were feedback opportunities about the program in general. The feedback process that I observed was problematic. It was conducted during a break in a women's focus group, which meant only women gave feedback. The women were there for the focus group, which meant they were likely interested in the Club, but to my knowledge they had not been asked to give feedback on Festival 2011, nor had a more general invite been issued by the Coordinator to community members to participate in filling out the form. The Coordinator read the questions aloud and asked for those present to answer, invited discussion on the answers, and then wrote down the answer agreed to by the group. The issue is that given this was a group, anyone who did not agree with the majority may not have felt comfortable speaking up. And it seems likely a more inclusive format could have been chosen to allow more community members to give their opinion. For this type of feedback, a meeting with stakeholders by an Iwokrama staff member may be preferable to one person filling out the form (since the person receiving the form would not know what process the person filling out the form had used). However, given limited resources and funding, it is possible this was the best option possible. In addition, there could be concerns that stakeholders might alter their responses to please the Iwokrama employee, since there is a power differential and community members may think an Iwokrama employee would prefer to hear positive feedback about the Club. In any case, communities need to find effective ways to decide on the programming of the annual Festivals and advocate for this programming.

If regular community meetings about the Club are implemented, this could become a reflective exercise for communities. This may also raise questions, such as whether a Western type of EE and nature appreciation should be provided by Clubs, versus TEK. Alternatively a Western EE and TEK can both be used to fulfill the Clubs goals and mandate. It could spark ideas for new activities in which to engage Club members, or improve existing activities.

I also found sometimes people expected things from the Club (like teaching computer skills or about HIV) which were probably not within the Club's mandate. I think if communities came together to discuss their Club, and what they think the Club's goals and mandate should be, then it will be clear what the Club needs to do, and what things other programs or activities should do. This would result in expectations about the Club being more appropriate. For example: I think community members felt birdwatching (or another similar activity, like pit trap monitoring) makes sense for Club members to do, since it teaches members about their local environment. But what about teaching about HIV/AIDS and STIs? This may not be appropriate. First, because that is not environmental education.⁹² Second, STI prevention (including HIV/AIDS prevention) is vitally important to saves lives, and so I don't think it should be the purview of a Wildlife Club which has voluntary membership and children and youth of different ages. Rather, if a community wants to protect their youth from STIs, they need to have an age-appropriate program that reaches ALL youths, not just those who are in the Club. Similarly, one community has a Culture Group, and that group may be more appropriate to support some aspects of PYD that are related to culture.

⁹² However, it could be argued STI prevention is part of PYD, and so communities might decide Clubs are an appropriate way to promote STI prevention.

6.1.3. Youth Development Officer

In their recommendations, a few community members suggested offering key adult volunteers a stipend so that they could commit the required time to fulfilling their role (see 5.5.2.). Building on this idea, I suggest that Village Council could establish a paid position such as “Youth Development Officer.” The Youth Development Officer could focus on supporting PYD in her/his community, thus her/his responsibilities would include supporting the village’s Club and other duties that support PYD. If a Youth Development Officer position existed, the incumbent could be trained to support the Club and PYD, and they could also help manage, train, and support volunteers with the Club. It is possible the Youth Development Officer could be the Club’s Coordinator (or co-Coordinator), which means the busy teachers who are often asked to be the Coordinator would be free to volunteer for less time-consuming roles. This could help with another issue raised by participants, which was the difficulty communities sometimes have in recruiting adult volunteers to be chaperones, particularly to send with the 15 youth delegates each Club can send to Wildlife Festival. Parents wanted mature and responsible adults they could rely on to be chaperones to keep their children safe while attending Festival. If there was a Youth Development Officer managing the day-to-day activities of the local Club, then teachers might be more available for short-term volunteer tasks, like chaperoning.

I would also like to highlight the comments of some participants that there seemed to be many young adults who could play a role in their local Club, and were not doing so. Dove remarked that there were many 16-17 year-olds in her Village that she felt could employ their time more constructively. In 2010 in Surama, several young men who were former Club members were helping out with the Club. From what I observed, this seemed very beneficial. In 2011, they were no longer engaged in this way. And Tapir said that Wowetta needed “someone

to resuscitate Club... Maybe a school leaver to take up that responsibility.” The idea of having a school leaver or other young adult take on a key role with the Club is interesting, which is why communities could consider how to make volunteering (or working) for the local Club attractive to young adults. The possibility of creating the above Youth Development Officer position that could report to Village Council could achieve this, especially if Village Council provided a stipend or some other compensation for the work, if the Officer were provided with training in PYD (and perhaps in Environmental Education), and if successful Youth Development Officers were provided with reference letters should they wish to further their careers. In this way, young adults could contribute to their local Club and get meaningful career experience.

It is not a new idea to have a position to provide opportunity and experience to Amerindian youth in Guyana’s interior. Guyana’s previous PPP/C government’s then named Ministry of Amerindian Affairs launched the Youth Entrepreneurship and Apprenticeship Programme (YEAP) in June 2013. With YEAP, “Indigenous youths, within the age bracket 18-40 years in the various hinterland villages and communities, were supposed to benefit from technical and governance training, to support their performance as Community Support Officers (CSOs) in village development” (Gina Webmasters, 2015). However, the program was criticised by the APNU opposition because they said the CSOs were actually doing political work for PPP/C. When APNU/AFC came to power in the 2015 election, it cut the program and fired the 1972 CSOs, all young Amerindians, in July 2015 (Rodney, 2015). The new government announced that YEAP would be replaced by Hinterland Employment and Youth Service (HEYS) in September 2015 (Henry, 2015). The new Minister of Indigenous Affairs, Sydney Allicock (from Surama Village) stated that “....our observation was that the young people were doing more political work (rather) than giving support to their councils and communities,” and he said

the youths in the program had not received any certification about their training (Gina Webmasters, 2015). In other words, the new government thought YEAP was not serving the interests of the youths or their communities. There was an outcry about the termination of the CSOs employment, and in August, a \$10M GYD lawsuit against the government was launched (Guyana Times, 2015). At the time that YEAP was cut and the CSOs fired in July 2015, the CSOs were being paid \$30,000GYD per month (approximately \$190CAD), and the APNU/AFC government was criticised for the harm the sudden loss of their income would cause to the Amerindian CSOs, their families, and their communities (Guyana Times, 2015)

Regardless of how the above unfortunate situation about the YEAP/CSO initiative is resolved, a non-partisan Youth Development Officer position that answered to Village Council and provided youth with training and certification would avoid some the pitfalls of YEAP. The Youth Development Officer initiative would need to be well implemented, and ongoing evaluation would help. Perhaps the position could be funded through HEYS, as long as the stipend or salary was administered by Village Council. The Youth Development Officer position could become an esteemed job, attract high quality people, help keep Amerindian youth in their communities, and act as a stepping-stone for a young person's career. It would also provide support for local Clubs and for PYD in general.

6.1.4. Improve Youth Leadership

Participants in this research felt PYD was important in their communities, and that Clubs could support the PYD of Club members. They also expressed concern that the Executive of their local Club had a tendency towards periodic weakness, which negatively impacted the effectiveness of the Club and, in turn, its impact on all Club members and the local community. During the data collection period, none of the three Clubs had the ideal situation of a youth being

a strong President. And, participants in all three Villages recounted periods when their Club was active and effective, which corresponded with having a strong President (see section 5.5.3.).

Building on this, I suggest that stakeholders in the Club may wish to develop a strategy to: i) Make the positions on the Executive into leadership training positions to attract motivated candidates; ii) Address the issue that most 12-16 year olds are away at boarding secondary school; and iii) Ensure they have strong adult leadership that can support the youth Executive.

In addition to the potential of the Executive experience to help youth develop vocational and leadership competencies, being on the Executive could help nurture other aspects of PYD. In 2007, a key elder and leader in Surama, Sydney Allicock (who at the time of this writing is the Minister of Indigenous Peoples Affairs), expressed the following in a paper he co-wrote about a PYD program that had run in the North Rupununi from 2001-2007 in partnership with a Canadian aboriginal organization, Ghost River Rediscovery:

Allicock... became intrigued with the Rediscovery group and the philosophy from which it was working. He dreamt of starting a similar Rediscovery program for Makushi youth. Although he believed that economic development was important to his region, he understood that the self-esteem of the young people was intricately connected to positive self-identities and the future development of the region and its leaders.” (Wihak et al., 2007)

Communities could consider whether their existing Wildlife Club program would help achieve Allicock’s dream, and support more comprehensive PYD in Executive members. They may wish to consider how they can build on the reputation of the Club Executive as providing vocational and leadership experience (participants had identified leadership skills and vocational competencies as important for their local youth). Defining more clearly the role and responsibilities of the Executive positions, providing the Executive with training, and providing the Executive with support and accountability from strong adult volunteers as well as their Club member peers could transform the experience of being on the Executive into a training program

for future leaders. Clubs could also support any engaged member, not just Executive members, to develop the self-esteem and positive self-image that Allicock identified as important, and which are also important aspects of PYD. The suggestion here is that Executive members receive more training to fulfil their roles well and to increase the incentive to be on the Executive.

With respect to the second point above, communities may wish to focus on recruiting the 16-17 year olds that Dove spoke about (while young adults over the age of 18 could be recruited to be Youth Development Officers). If the Executive positions were transformed into a leadership training program, that could make the positions attractive to both secondary school graduates and to school leavers because it would give them training for careers, leadership roles, and generally support them to be successful adults. Some participants noted the entire Executive needs to be strong, and Jeff recommended that the Executive could have a more horizontal leadership structure, rather than the hierarchical approach that allocates the majority of the responsibility, power, and prestige to the President. This would take undue pressure off of the President, so that no one child or adolescent would be burdened with the weight of the Club's success or failure. It could help the Executive be more effective, with an equitable distribution of responsibilities, tasks, and decision-making that young members could manage. And it would make holding one of the other Executive positions more attractive, since these other positions would provide more relative responsibility, power, experience, and opportunities.

If communities have meetings about their Clubs, they might consider discussing the structure of the Club's Executive and the way it operates. Is there a traditional Makushi governance structure that could be adopted? Are there aspects of Village Council that could be used? Jeff suggested a less hierarchical format for the Executive; is that of interest? Would this mean having Officer positions, but no President? With respect to operations, how are decisions

currently made? In the meetings I observed, an adult volunteer acted as a facilitator, and would ask the Club members at the meeting for input on a decision. For example: “Do you want to have a market fundraiser the weekend after next?” “Would you like to go pit monitoring this week?” The decision appeared to be based on the enthusiasm of the young members. If there were many loud “yeses,” then that was considered to be a yes. If some members said “no”, or if the response was lukewarm, that was considered to be a no. Communities might want to consider the possibility that decision-making should be by majority vote or by consensus, and then provide guidelines to the Club.

Another idea that could help with the issue of 12-16-year olds away at boarding school is to have Clubs be active from June to September. Traditionally, directly after the annual Wildlife Festival (usually held during the Easter Break in April) up to September has been a period of low activity for Clubs. However, the school break (July and August) is when the boarding school students are back home in their villages, and could be the ideal time for the Clubs to be more active. There may be other reasons why this has been a slow time for Clubs, such as that children being off school provided a good opportunity for them to help with farming chores, and the farms may be far from the villages. The timing of Clubs’ activity levels would be worth discussing in community meetings.

Another factor of interest to engage youth and support Makushi youths’ PYD in this indigenous context could require returning to traditional initiation rituals. Initiation does not appear to be discussed in the PYD literature, but was important in most indigenous cultures until interference by Europeans. Initiation ceremonies were part of becoming an adult, and proving one’s ability to become a healthy competent adult capable of raising children to continue the culture (Wexler, 2009). This is not to suggest that Clubs be used for initiation, only that initiation

ceremonies might be relevant to discuss in the wider context of what culturally appropriate PYD means in the North Rupununi.

6.1.5. Improving Volunteer Recruitment and Retention

Volunteers are essential to the functioning of Clubs. Regardless of whether a Youth Development Officer position is created, communities could decide on the tasks that their Coordinator needs to undertake. I observed that there was no clear definition of what the adult Coordinator's duties were, and some frustration with previous Coordinators may simply have been due to unclear expectations. Clearly defining what duties Coordinators and other adult volunteers need to undertake would help potential volunteers decide if volunteering was right for them, and help communities make sure adult volunteers were fulfilling their roles. Overall, regular monitoring of adult volunteer performance and other aspects of the local Club may be a worthwhile investment by North Rupununi Villages.⁹³

The following list of current responsibilities for the role of Coordinator are based on what I observed Coordinators doing in the eight communities I visited in 2010 and 2011, as well as from what participants told me in interviews. Coordinators: scheduled Club meetings; attended and facilitated or co-facilitated meetings; prepared a quarterly plan for activities; organized or helped organize Club activities; requested help and volunteers from the community to achieve their Club's goals; managed the Clubs resources, such as binoculars, bird identification books, and Festival prizes; filled out and sent paperwork to Iwokrama; received correspondence from Iwokrama and updated Club members about the content of the correspondence; attended Centralized Meetings and Festival, including preparing or helping to prepare a Club Report; managed their Club's preparations for Festival (such as overseeing banner-making, costume-

⁹³ In 2010 and 2011, I heard many times in the North Rupununi communities, "Treasure what you measure, and measure what you treasure." Community members had training in monitoring natural resources and knew it is important. They might consider monitoring their Clubs.

making, practices, and inviting Elders to help the members prepare for traditional skill contests). This is a long list for one volunteer, and there are other tasks that adult volunteers need to fulfil to help the Club function, like holding regular meetings, reporting at VGMs, outreach with parents, maintaining a clubhouse, and helping the Club make connections with stakeholders and facilitating collaboration.

Communities may wish to decide what is a reasonable list of duties for the role of Coordinator. Another idea communities and Clubs may wish to explore is having more than one adult Coordinator. Participants perceived this to be beneficial in Yupukari. Perhaps even a Circle or Executive of adults could help support the Club. For example, it could be that the duties usually carried out by a Coordinator could also be divided up amongst several adults with different roles as adult volunteers. Having more than one key adult volunteer would help reduce the workload of each volunteer and likely make volunteer positions more attractive. For example, in Surama in 2010, a few young men were helping the Club, particularly with birdwatching and local fieldtrips. They were informally taking on an “Activities Coordinator” type of role. Another example is chaperoning, for Festival and for other fieldtrips. Parents want responsible adults to be the chaperones for Festival, and prefer teachers to take on this role. As suggested in 6.1.3., if there was a Youth Development Officer who acted as the Club Coordinator, that would free up teachers for other volunteer roles, like being chaperones. Even without a Youth Development Officer, simply having multiple volunteering roles and clarity on the responsibilities of each role would be helpful.

The key thing to recruit and retain volunteers is that they need to believe their volunteer work will have a positive impact (Bussell & Forbes, 2002; Henderson, 1980; Randle & Dolnicar, 2015; Tsui, Kinghorn, Huck, Al, & Rathi, 2011). In a report on volunteer management practices

and retention of volunteers based on research on US charities, Hager and Brudney (2004) state that “Charities interested in increasing retention of volunteers should invest in recognizing volunteers, providing training and professional development for them, and screening volunteers and matching them to organizational tasks. These practices all center on enriching the volunteer experience.” Similarly, Jamison (2003) found that retention of volunteers improved when there was both pre-service and in-service training and when volunteers were assigned challenging tasks. Finally, retention improves when volunteers can voice their opinion about the organization for which they volunteer (Garner & Garner, 2010).

Therefore, communities could consider how to make volunteering for their Club more attractive. Promising ideas are: providing training for volunteers (that could be documented so the volunteer could include it on a resume); having multiple volunteer roles so potential volunteers could be matched to tasks of interest to them, and express their talents and develop their interests while volunteering; recognizing volunteers for their work (perhaps at VGMs); getting ongoing feedback from volunteers about their experience (especially to make sure the workload is acceptable); and consider providing an honorarium - to Elders for teachings, and to anyone for time-consuming tasks. Additionally, having public announcements and outreach about the Club and its accomplishments would help increase the buy-in of the community at large, and would remind volunteers that their work is meaningful. Finally, Clubs could consider how they would make their activities demonstrate more reciprocity, as Woodpecker brought up. Given the local tradition of mayu, Clubs might be more successful at recruiting and retaining volunteers if they conduct clean-up campaigns again. Participants said they appreciated these clean-ups, and it is a visible way to show the community members that Clubs are making a

positive impact on their community. This could encourage community members to reciprocate by volunteering with the Club.

6.1.6. Birdwatching

Participants made several recommendations to improving birdwatching, as discussed in **5.5.5**. I would like to suggest here that birdwatching may be a far more profound and beneficial activity than community members realize. Participants believed that the introduction of birdwatching when the Clubs first started was the key to reducing “wickedness,” the wanton killing of bird by boys with slingshots. But the primary source of support for birdwatching appeared to be that it offered the potential for youth to develop a vocational competence – bird identification. However, only a few children and youth will become tour guides or rangers, but all children and youth can benefit from other positive impacts of birdwatching. Birdwatching gets children and youth out and learning about a key member of their local environment, and potentially, learning about TEK. Participants said having an elder lead (or assist with) birdwatching was important, and this is an example of how Clubs can help connect youth with their elders and support transmission of TEK and IK.

Further, the ideal birdwatching scenario could be adapted for other life forms, such as mammals, reptiles, amphibians, fish, insects, and plants. In other words, birdwatching is a type of local fieldtrip, and other kinds of fieldtrips could be held regularly. And stakeholders in the Club may wish to consider if there could be different fieldtrips for different age groups. For example, older youths could participate in fieldtrips with more advanced scientific and TEK teachings. Stakeholders may also consider if these fieldtrips could complement the local school’s curriculum, which could strengthen collaboration between Clubs and schools.

6.2. Implications for Future Research on Programs Similar to NRWC

This section discusses ideas to improve research practice in North Rupununi communities. It may be beneficial to conduct more than one interview with some interviewees, to have long-term follow-up, and for researchers to be dedicated to empowering community members to do the bulk of their own evaluation based on their own goals. This would be ethical research consistent with the indigenous values of reciprocity.

6.2.1. Consider Conducting at Least Two Interviews

For some questions, I found that many participants had not had opportunities to think very much about the topic (such as PYD), thus the response rate to some questions was relatively low. One elder also told me his head hurt after all these questions, and that if I came back again in a few days, he would have time to think about my questions, and then he'd have better answers for me. Therefore other researchers may wish to consider whether multiple interviews (like Seidman's (2006) approach) would be more appropriate in this area.

6.2.2. Role of Researcher: Empower Community Members

Researchers may wish to consider how they can support communities to engage in their own continuous formative evaluation of programs like NRWC. Should this idea be applied, the Makushi Research Unit (MRU) and those who have worked as community collaborators would be excellent people to enact continuous formative evaluation of programs like NRWC, and to disseminate the findings.

6.2.3. Future Research Directions

A critique of EE research is the lack of long-term follow-up (Hines et al., 1987; Stern et al., 2014; Zelezny, 1999). The field of PYD has had some large-scale longitudinal studies (Bumbarger & Greenberg, 2002; Jeličić, Phelps, & Lerner, 2010; Rose-Krasnor, Busseri,

Willoughby, & Chalmers, 2006; Roth et al., 1998), but not in indigenous communities. Unlike some short-term interventions, NRWC is a program that children and youth may engage in for years. One future research direction I suggest is to compare the outcomes of children and youths in North Rupununi villages with a Club versus those in villages without a Club (instead of comparing Club members versus non-Club members within the same village), and have long-term follow-up on the impacts on their pro-environmental behaviour, PYD, and other aspects the communities deem to be important. Ideally, the research would assess actual behaviour versus self reported behaviour, since this would be more accurate for determining the effectiveness of NRWC (Johnson & Johnson-Pynn, 2007; Johnson-Pynn & Johnson, 2005). This doctoral research laid the groundwork for understanding the locally relevant meaning of pro-environmental behaviour and of PYD, and future research can assess effectiveness based on these local meanings. Additionally, while this research did not interview children and youth members of NRWC, I recommend future research do so to better understand what they appreciate about the program. Engaging youth in the structure, activities, and decision-making is important for youth empowerment and to increase their buy-in and satisfaction with the programs they participate in (GreenCom, 2000; Johnson & Johnson-Pynn, 2007; Johnson-Pynn & Johnson, 2005).

Given the intriguing finding from this research that Clubs could be a good way to connect youth with their local elders to facilitate transmission of TEK and IK, I also suggest long-term follow-up to determine if Clubs are indeed an effective way to connect youth and elders, thus encouraging them to return to the deep, local traditional values and knowledge. Simultaneously, Clubs can offer education and experience that draws on a broad Western science-based

perspective. Do these two goals – supporting TEK/IK and a Western science-based approach complement or contradict each other in these communities?

Another important recommendations of participants was to encourage parents to be more engaged in Clubs. It would be useful to conduct more research on the best practices to support parents being involved. What works best, meetings with just parents? Reporting at VGMs? Iwokrama's Outreach Team meeting with parents, as suggested in 5.5.3.?

Summary – Chapter 6

In this chapter I discuss ideas that could be useful to improving the NRWC program (6.1.) and for future research on NRWC and similar programs (6.2.). The main suggestions for improving NRWC were: having community dialogue on the local meaning of pro-environmental behaviour and PYD; having community dialogue on the roles and goals of their local Club; the idea of creating a “Youth Development Officer” position as an opportunity for local youths that would also support the Clubs; ideas to improve youth leadership; ideas to increase volunteer recruitment and retention (such as training and recognition of volunteers); and ideas to improve birdwatching, the flagship NRWC activity.

My recommendations for future research include: considering conducting more than one interview of each participant (perhaps Seidman (2006)'s method); empower community members to conduct ongoing formative evaluations of programs like NRWC themselves; and conducting longer term follow-up of the impacts of NRWC on pro-environmental behaviour and PYD; and, finally, conduct research on whether Clubs are an effective way to connect indigenous youth with their elders.

Epilogue

It is late, the night before the final version of this Dissertation will be electronically submitted. It is finished, but it does not quite feel finished. It is still imperfect. Like me.

The final version is due on 20 June 2016, which happens to be the Summer Solstice. And this year, there is a full moon on the same day as the Solstice, something that hasn't happened in nearly 70 years. Here in Ottawa, on traditional and unceded Algonquin territory, the June full moon is known as the Strawberry Moon.

It is a good day to achieve this completion.

In the late hours before this fortuitous day, my soon-to-be-born daughter is merrily kicking me. Though still in the womb, she has been *very* present these final months of work on my PhD. Like the evening before I deposited this Dissertation to be examined, I get a nosebleed. That evening in January, I was still experiencing “morning” sickness, and vomited so violently twice that it triggered a nosebleed. This time, in June, the cause of the nosebleed is unclear.

Maybe this blood is a stand-in for the red dust of the Rupununi's The Road, that red artery that so defines the Rupununi's landscape and the journeys there.

In any case, I want to let you know, Dear Reader, that though this Dissertation is finished, two projects based on the research are not: The videos that Surama, Wowetta, and Yupukari's participants wanted to disseminate the research findings within their communities, and the song based on my data analysis. I did not have the resources to achieve these creative outputs that were so dear to me before the Dissertation was finalized. And when the Zika virus reached Guyana, that quashed my intention to travel to the Rupununi while pregnant to complete the videos. I could not risk my unborn daughter's health.

Both projects will be posted at <http://juliecomber.com> when they are ready!

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APPENDIX A: List of Acronyms and Glossary

AFC: Alliance for Change

Amerindian: Term for the Indigenous peoples of much of Amazonia, including Guyana. In Guyana, ‘Amerindian’ is now used both as a term of self-ascription and to refer to the surviving nine indigenous peoples (such as in Guyana’s National Constitution) (Bulkan, 2013).

APA: Amerindian Peoples' Association of Guyana

APNU: A Partnership for National Unity. This is a political alliance formed in 2011 consisting of: the Guyana Action Party, the Guyana Association of Local Authorities, the Guyana National Congress, the Guyana People's Partnership, the Guyana Youth Congress, the Justice for All Party, the National Democratic Front, the National Front Alliance, the People's National Congress (PNC) and the Working People's Alliance.

Balata: Coagulated latex “bled” from the Bulletwood tree (*Manilkara bidentata*). Balata was used as an alternative to natural rubber. The demand for balata fell when synthetic rubber was invented. Although the balata industry had waned after World War I, it did not collapse in the Rupununi until the 1970s. Today, balata is still used to create Amerindian handicrafts, particularly figurines.

Benab: Is an Amerindian word for the customary round, gazebo-like, palm-thatched houses that are multi-use spaces for meetings, socializing, or, by stringing up hammocks, as a resting or a sleeping place for visiting people.

BHI: Bina Hill Institute for Research and Training ADD: , I will use: “Bina Hill” for the place, “BHI” for the Bina Hill Institute for Research, Training and Development, and “BHI-YLC” for the Bina Hill Institute Youth Learning Centre.

“The Big Bus”: The daily Intraserv Bus that ran until 2012. It provided safe and affordable transportation in and out of the Rupununi.

Bina: The term “bina” “is widely used amongst Indigenous peoples throughout Amazonia and South America and refers to charms comprised mainly of plants, but also other living beings, that are believed to contain special medicinal properties and spirits that can be harnessed by humans if treated with respect and understanding (Chung Tiam Fooook, 2011, p.313).

Captain: the term for the elected head in untitled Amerindian communities.

CI: Conservation International (this NGO is active in Guyana and is negotiating the conservation of large concession in the South Rupununi. The proposal will now include co-management with local Indigenous communities so that it will resemble the Iwokrama Protected area.)

Ecolodge: A type of tourist accommodation designed to have the minimum possible impact on the natural environment in which it is situated (Oxford Online Dictionary). Note that in this dissertation I use the Oxford Dictionary spelling of “ecolodge”, which is also used by The International Ecotourism Society (TIES, <http://www.ecotourism.org>). However, several ecolodges in the Rupununi use the “eco-lodge” spelling in their proper names, therefore I use their spelling for their proper name.

EE: Environmental Education

ES: Environmental Sustainability

Experiential Learning: The process of making meaning from direct experience (learning through reflection on what one does). Popularized by David A. Kolb.

EPA: Guyana’s Environmental Protection Agency

Fortress Conventional model: A type of wildlife and environmental conservation whereby protected areas are managed as pseudo enclosures under policies to control access and harvesting activities by resident or nearby local communities, which can displace communities from the protected area (Chung Tiam Fook, 2011).

Frontier Forest: Large, relatively intact forest ecosystems. A frontier forest must meet several criteria, such as being primarily forested, large enough to support viable populations of all species associated with that forest, dominated by indigenous tree species, etc.

GYD: Guyana Dollar. At the time of fieldwork in 2011, the exchange rate was approximately \$200GYD per \$1CAD.

Hinterland: Term used in Guyana for the sparsely populated areas south of the coast. Most of the small population is Amerindian. Similar to the term the “interior”, however the connotations are slightly different. Hinterland refers more generally to rural areas of Guyana, while interior refers to the forested parts of the hinterland.

IDRC: International Development Research Centre

Indentured Labour: A labour system where people paid for their passage to the New World by working for an employer for a certain number of years, as defined in a contract. After the period specified in the contract, the person was free of their servitude. It was widely employed in the 18th century in the British colonies in North America and the Caribbean.

The Interior: Written either as “The Interior” or “interior”, this is a term used in Guyana for the rainforest area South of the coast. The coastal areas are the most developed and populated by all the ethnic groups in Guyana. The Interior, by comparison, is little developed, composed of mostly untouched rainforest, and is sparsely populated by mostly Amerindian people. The term “The Interior” evokes a certain romantic notion of this part of Guyana as mysterious, unknown,

bearing possibilities for resource exploitation, and of finding diamonds and gold. It is not unlike when Canadians refer to The North., the mostly forested area North of the populous cities that tends to be sparsely populated by indigenous peoples.

Indigenous: The term indigenous (with a small i) refers to peoples who identify themselves as the original inhabitants of an area (such as Canada, Australia, or Guyana). Indigenous (with a capital I) is a collective term for indigenous peoples, and is an adjective to describe concepts that belong to Indigenous people, such as Indigenous Knowledge (IK), Indigenous Education, and Indigenous Research. It is a general, umbrella term which does not capture the diversity of the peoples who identify with it. The use of the term does not homogenize Makushi with Cree with Maori. Angela Wilson (2004) prefers this term “because of the implicit notion of coming from the land and being of the land. This is not only an accurate description of our people’s origins, it is also a political declaration about our claims to the land.” In legal and political contexts, indigenous peoples often use the definition provided by the International Labor Organization, Convention No.169, which defines Indigenous peoples as “ tribal peoples of independent countries whose social, cultural and economic conditions distinguish them from other section of the national community and whose status is regulated wholly or partially by their own customs or traditions” (International Labor Organization,1989).

Indigenous people are also able to rally behind the term in solidarity (Smith 1999, p. 7) and because indigenous cultures do share many similarities in their worldviews, values and epistemology, I think it is appropriate to use the term here.

Iwokrama: Iwokrama International Centre for Rainforest Conservation and Development (<http://www.iwokrama.org>).

Laba: A large rodent that lives in the rainforest, related to and slightly smaller than the Agouti. Considered a local delicacy, a Rupununi saying is that if you eat laba, you will always return to the Rupununi.

Lifeways: This is a relatively new term. The American Heritage Dictionary defines a lifeway as: "1. A customary manner of living; a way of life. 2. A custom, practice, or art: the traditional lifeways of a tribal society." The broad sense of lifeway means the ecological position of human beings within a larger ecosystem, such as within a food web. Some main distinctions can be made between lifeways: hunter-gatherer (including fishers); farmer (including the shepherd, goatherd or rancher) who domesticated wildlife to raise for food and clothing; and urban (trading on relationships or information, and manufacturing. Like Chung Tiam Fook (2011, p.382), Lifeways in this dissertation "refers to both the customary way of relating and living amongst the North Rupununi communities" and to how people are ecologically positioned and relate to other beings and natural entities within their local environment.

MoAA: Guyana's Ministry of Amerindian Affairs, renamed the Indigenous Peoples Affairs Ministry after Guyana's May 2015 general election.

NFE: Non-Formal Education, defined here as instruction that is not obligatory and structured, and with learning that takes place outside the context of a formal school. The key components of NFE: it is not compulsory, it does not lead to formal certification, and it may be state-supported, but does not have to be.

NRDDB: North Rupununi District Development Board. The following description of the role and functions of the NRDDB are taken from the NRDDB Constitution and Trust Deed, and posted online (North Rupununi District Development Board (NRDDB), 2012): "NRDDB will be a fully autonomous body free of any party political, religious or other institutional affiliation.

It will represent the interests of its constituent communities and will facilitate the development of these. It will be established as a non-governmental, not-for-profit, community-based organization which will act as the umbrella for convening the elected representatives of the North Rupununi communities.”

NRWC: North Rupununi Wildlife Clubs, formerly known as North Rupununi Junior Wildlife Clubs (“Junior” now appears to be implied, as it is common knowledge the Clubs are intended for children and youths).

Plantocracy: Also known as a **slavocracy**, is a ruling class, political order or government composed of (or dominated by) plantation owners

(<http://encyclopedia.thefreedictionary.com/plantocracy>). A number of early European colonies in the “New World,” including Guyana, were largely plantocracies, usually consisting of a small European settler population relying on a predominantly West African slave population.

Pro-environmental behaviour: Behaviour that consciously seeks to minimize the negative impact of one’s actions on the natural and built world (Kollmuss & Agyeman, 2002).

PYD: Positive Youth Development; the intentional efforts of other youth, adults, communities, government agencies, and schools to provide opportunities for youth to enhance their interests, skills, and abilities into their adulthoods

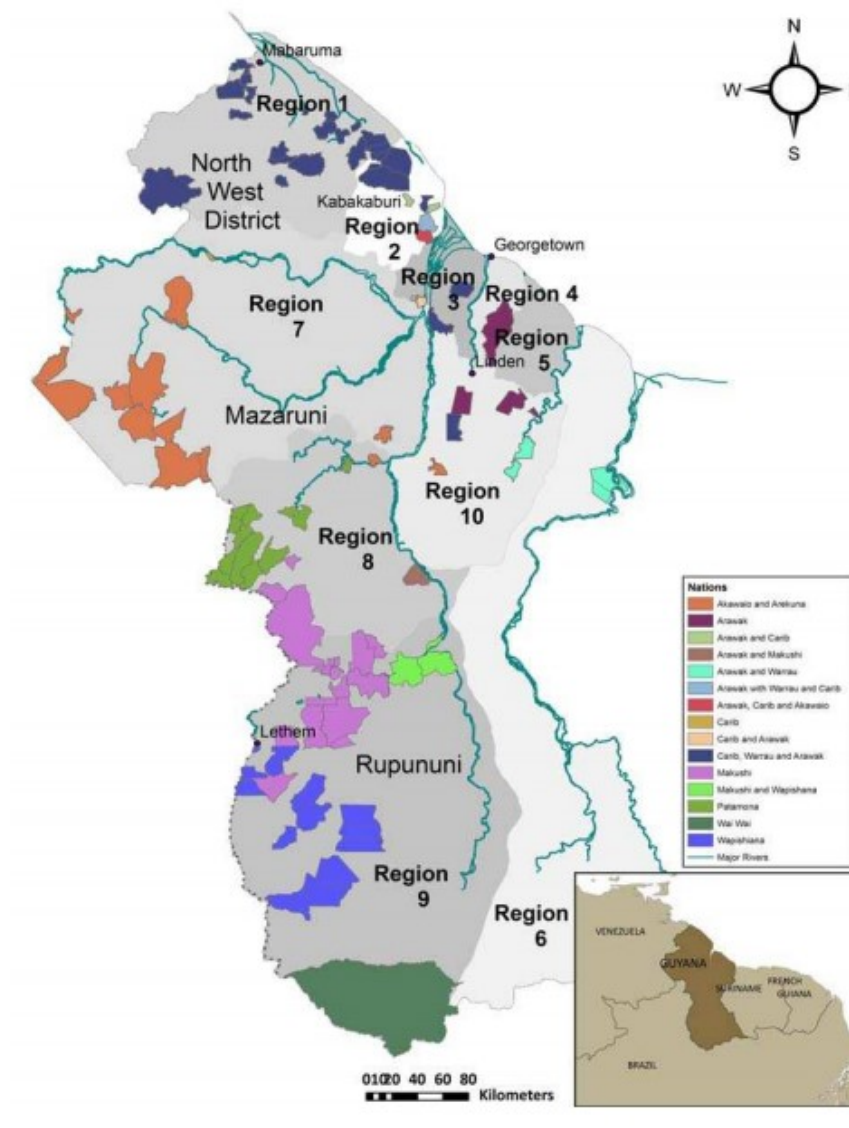
R&S: Roots&Shoots, the Jane Goodall Institute’s Humane and Environmental Education program (a Club based approach).

Titled Land: In Guyana, this means that the indigenous claim to a traditional territory has been formally recognised under the Amerindian Act, and the community’s land has been demarcated.

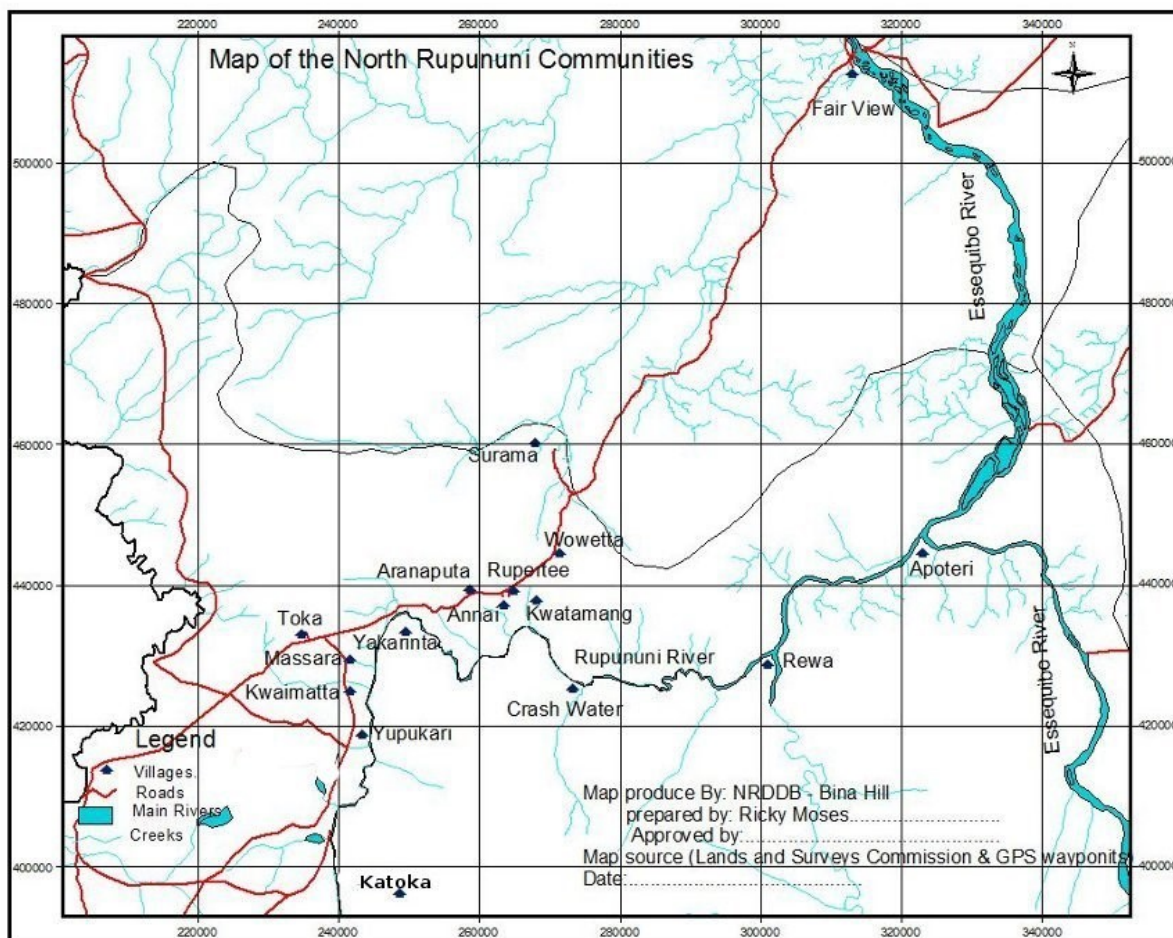
Toshao: The elected Village Head in villages with land title.

WCK: Wildlife Clubs of Kenya. One of the oldest and most well established Club-based EE programs.

Western: Wilson (2008, p. 35) uses the term “Dominant”. I will use the term “Western” in this dissertation, yet draw on his definition for Dominant to define Western: an adjective to describe aspects of European-descended and Eurocentric, Christian, heterosexist, male-dominated former colonial culture. Other adjectives that could be used instead of Western or Dominant are “Euro-American,” “Colonizer,” or “Settler”. In this dissertation, Western tends to be applied mostly to Western Culture, Knowledge, and Research Paradigms. Within the term Western is much diversity, since European countries colonized North and South America, parts of Africa and Asia, and Australia and New Zealand, and in each of these places as well as the original European colonizing nations, Western culture has its own expression. However, as per the rationale for using the term Indigenous, within this term there are broad strokes of similarity.

APPENDIX B: Map of Guyana Showing Indigenous Titled Lands

This map of Guyana shows the 10 administrative regions, formally titled indigenous areas, and names of indigenous nations. Note the Makushi's titled lands are demarcated by light purple. The titled areas do not represent the full extent of the indigenous nations' territories, only the lands that have so far been formally titled under the Amerindian Act. The map shows the northeast coast of South America, with the Atlantic Ocean in the North. Source: Bulkan (2013), with map prepared by Anthony Cummings.

APPENDIX C: Map of the North Rupununi

This map shows the research sites, Surama, Wometta, and Yupukari in relation to each other, the road, the Rupununi River, and to Lethem (in the southwest corner of this map). The North Rupununi District Development Board (NRDDDB) office and the Bina Hill Institute (BHI) at Bina Hill near Annai, the central hub in this region of Guyana. Iwokrama's Field Station is across the river from Kurupukari. The research sites are villages within a 3 hour 4x4 drive of Annai. Map created by Ricky Moses for the NRDDDB. Source: <http://nrddb.org/communities> (note that online, the map is interactive and clicking on a village takes the viewer to the village's webpage hosted on the NRDDDB website).

APPENDIX D: Brief History of Guyana and Amerindians

D.1. Brief History of Guyana

The indigenous Amerindian peoples are the first inhabitants of the area that is now called Guyana, and they have lived there for approximately 12,000 years (Vereecke, 1994). A Spanish sailor first sighted the coast of Guyana in 1500, and it appeared wild and untamed to European explorers (Colchester, 1997, p.7). But it was far from uninhabited. Up to 160,000 Amerindians are estimated to have lived in the area now called Guyana, Suriname, and French Guiana before first contact with Europeans in 1580 (Whitehead, 1988; Benjamin, 1992). Of the estimated 15 Amerindian nations at that time, nine now remain in Guyana: the Akawaio (*Kapon*), Arawak (*Lokono*), Arekuna (*Pemon*), Carib (*Karinya*), Makushi (*Pemon*), Patamona (*Kapon*), Wai Wai, Wapishana, and Warrau⁹⁴. The other six tribes disappeared or were assimilated within mainstream Guyanese society following colonization (Vereecke, 1994).

The Amerindian peoples were diverse as well as numerous. Their cultures were finely tuned to the specific ecosystems in which they lived. From the Warrau “Boat People” who foraged and fished in mangrove and swamp forests along the coast, to the Arawak (*Lokono*) who farmed cassava on higher land,⁹⁵ to the Patamona and Akawaio who call themselves *Kapon*, “Sky People” and lived further inland in the rainforest and montane forests. The Carib-speaking Makushi (*Pemon*) inhabited the northern Rupununi savannahs as they do to this day. All the Amerindian tribes were at the time (and still are) “woven together by an intimate network of

⁹⁴ There are several different spellings of the names of some of the Amerindian tribes in Guyana (such as ‘Makushi,’ ‘Macushi,’ ‘Macusi’). I have not detected a source for the definitive spelling of Amerindian people names, therefore, in this Dissertation, I use the spelling of Amerindian people names as they are spelled in the majority of the literature I drew on. For the Makushi, I use the spelling used by the communities I worked with. Please also note that like many other names of indigenous peoples currently used by mainstream culture, these are not necessarily the names indigenous people uses to refer to themselves. Therefore, in brackets and in italics of the list are the Amerindians’ own name for themselves. See 1.5. for the meaning *Pemon* for the Makushi.

⁹⁵ The Arawak’s ancestors are thought to have relied on intensive agriculture through the cultivation of cassava in elaborate raised beds (Colchester, 1997, p.7).

trading alliances, in which foodstuffs, tools, poisons, drugs, resins, dyes and magical objects and a whole host of other forest products were exchanged” (Colchester, 1997, p. 9). Communication was maintained through a maze of waterways complemented by an intricate network of forest trails (Lathrap, 1970). See **Appendix B** for map of current Amerindian territories.

The Caribs, who dominated local trade at the time of first European contact, were a hunting and fishing people who may have been relative newcomers to the region, part of a wave of immigration north from the Amazon over the previous centuries (Lathrap, 1970). They were “famous and feared by their neighbours for their abilities as warriors, raiding for women and food” (Colchester, 1997, p.9). The Caribs were first contacted by the Dutch in 1580 (Colchester, 1997, p.x). The first permanent Dutch settlement was established in 1616 at the confluence of the Essequibo and the Cuyuni rivers (Colchester, 1997, p.10).

Unlike the Spanish who declared the Caribs their enemies and subjected the Amerindians of the nearby Orinoco to resettlement and forced labour, the Dutch in the area now known as Suriname and Guyana forged alliances with the Caribs and traded with Amerindian allies. The Dutch knew they required Carib support to keep their newly established Essequibo, Demerara, and Berbice colonies. To help secure alliances, the Dutch established a custom of making annual presents of trade goods from their posts to Amerindian allies (Colchester, 1997, p.13). In 1665, British attempts to win the area from the Dutch failed. The Dutch signed a treaty with the Caribs in 1672, followed by a treaty with the Arawaks in the early 1700s. In 1708, French attempts to wrest the area from the Dutch also failed (Colchester, 1997, p.x-xi). The treaties with the Caribs and Arawaks were renewed in 1769, and treaties were also made with the Warrau and Akawaio (Colchester, 1997, p.13).

At first, the main economic activity of the colonizers in the area was trade with Amerindians for forest products, particularly for the dye annatto (Colchester, 1997, p.14). However, the intention was to form plantations of tropical crops like sugar, coffee, and cocoa. At first the settlements lacked capital and labour for these new plantations. Therefore they sought Amerindian labour, and the Caribs, in particular, armed by the Dutch, raided other tribes to capture “red slaves” to sell to European settlers seeking labour (Colchester, 1997, p.13). There is debate on the extent to which slavery in the area resulted from European colonization or was already practised by Amerindians⁹⁶ (Colchester, 1997, p.12). What is likely true is that dominant Amerindian nations exploited the labour of less powerful or aggressive peoples (Saignes, 1961; Rivière, 1964, p.81; Kaplan, 1977). However, it was European colonization and demand for cheap labour, combined with the Amerindians’ “unquenchable thirst for European goods” (Colchester, 1997, p. 13) that transformed exploited labourers from sub-dominant groups into outright slaves.

To reduce the mayhem that was resulting from the Amerindian “slave wars,” in 1686 the Dutch announced in their colonies (Suriname, Berbice, Demerara, Essequibo) that certain Amerindian peoples were “free nations” and could not be slaves. In the Guyana area, the “four free” nations were the Caribs, Arawaks, Warrau, and Akawaio (Colchester, 1997, p.14; Forte & Makushi Research Unit, 1996).

Once the plantation economy began to expand in the 1640s, demand for labour exceeded local supply of Amerindian slaves, hence as of 1678, slaves began to be brought from Africa to work on the sugarcane plantations (Menezes, 1977, p.1). The Treaty of Utrecht with Spain in 1713 consolidated Dutch gains in the colonies, and the rapid expansion of the plantation economy

⁹⁶ The Spanish, for example, tended to exaggerate claims of the Amerindians’ ferocity and lack of morality to justify their own use of slaves (Colchester, 1997, p.12).

began to eclipse trade with Amerindians for forest products and the raiding of Spanish colonies as economic activities (Colchester, 1997, p.14). Meanwhile, many African slaves who were “familiar with forest living and resentful of their miserable treatment on the estates, fled in to the interior” (Colchester, 1997, p.14). Referred to as “Maroons,” they became a new force in the interior. The Dutch paid their Amerindian allies to recapture escaped African slaves and bring them back to the plantations (Colchester, 1997, p.14). Hence the “free” Amerindian nations, particularly the Caribs, were capturing and trading Amerindian slaves and recapturing and trading escaped African slaves. Notes Benjamin (1992), “the slave trade allowed the Caribs to become virtually the sole distributing agents for European goods [such as guns and ammunition] among the interior nations.” By 1740, Dutch and Spanish sources claim the slave trade appeared to be the sole source of livelihood for the Caribs (Colchester, 1997, p. 15).

The European-fuelled slave trade caused inter-ethnic wars and conflicts between Amerindian peoples, and between Amerindians and escaped African slaves (Colchester, 1997, p.14-15). In 1753, the Caribs temporarily subdued the Wapishana in the South Rupununi for the Dutch, which opened up trade for the Dutch along the Rio Branco and allowed them to trade “with another famous Amerindian slaving people, the Manao, who had established pre-eminence in the ‘red-slave’ trade with the Portuguese” (Colchester, 1997, p.16). This competition for Dutch trade fuelled a bitter war between the Caribs and Manao, which peaked in 1763 (Colchester, 1997, p. 16). The escalating red slave trade caused considerable disturbance in the interior. The Akawaio revolted in 1750, and they and other tribes took up the Carib practice of raiding for slaves. Within decades, the annatto trade was almost abandoned. By the 1760s, Guyana’s economy was a plantocracy, with Dutch and British colonists running estates and exporting crops, and the Amerindians in the interior capturing “red slaves” and recapturing

African slaves (Colchester, 1997, p. 17). A snapshot of the total population in 1762 in the Essequibo colony reveals the small numbers of European settlers were controlling a far larger population of slaves: 346 Caucasians, 244 Amerindian slaves, and 3,833 African slaves (Colchester), 1997. Colchester (1997, p.17) notes that the Amerindians “must have outnumbered them [foreigners] ten to one”.

Contrary to some current descriptions of Guyana’s history that gloss over the role of the Amerindians (such as Youngblood-Coleman, 2014, p.7), the above demonstrates that the Amerindians were crucial to the survival of the Dutch hegemony in the Guianas. A mass mobilization of Caribs, Arawaks, and Akawaio, armed by the Dutch, helped put down the 1763 Berbice Slave Rebellion and then the 1772 slave rebellion (Colchester, 1997).

It is clear, too, that the colonists deliberately stoked inter-ethnic conflict to promote their own agenda. Director-General Storm van ‘S Gravesande, quoted in Benjamin (1992), reported that the Caribs were very effective in putting down rebellions and recapturing escaped African slaves, and that they had

...been so successful in all their expeditions as to have lost none of their own people, thus making them bold and beyond belief and expectation enterprising, and even reckless; and these occurrences cause a great embitterment between blacks and them, which, if well and reasonably stimulated, cannot fail to be of much use and service in the future of the Colonies.⁹⁷ (van ‘S Gravesande, quoted in Benjamin, 1992, p.15-16)

With a steady supply of African slaves, the Dutch no longer needed Amerindian slaves, nor the disruption to the interior caused by slave raiding, thus the Amerindian slave trade was abolished in 1793 (Forte & Makushi Research Unit, 1996, p.7). In 1814, the Dutch colonies of Essequibo, Demerara, and Berbice were officially ceded to Britain, and in 1831 these colonies were united as “British Guiana” (Colchester, 1997, p.18). Once slavery was abolished in British

⁹⁷ These words proved prophetic, as inter-racial conflict has plagued Guyanese politics up until the present day; Eg., see Youngblood-Coleman (2014) and Bulkan (2013).

territories in 1838, the emancipated African slaves left the plantations and resettled in urban areas. The plantation owners needed workers. Thus, indentured labourers (see **Appendix A - Glossary**) were brought to replace the former slaves on the sugar plantations. Portuguese indentured labourers arrived from 1841 until the 1880s and indentured Chinese labourers from 1853 until the 1860s (Colchester, 1997, p.27). But by far the largest number of indentured labourers came from India. From 1851 until indentured immigration ended in 1917, 238,000 Indian indentured labourers were brought to Guyana (Roopnarine, 2003).

In this era of the “plantocracy,”⁹⁸ plantation owners tried to maintain a malleable workforce for their plantations and to prevent freed slaves and indentured labourers from obtaining alternative employment. These interests of the plantocracy were supported by a combination of harsh labour laws, unjust land-ownership restrictions, and artificially inflated land prices (Colchester, 1997, p.27). Plantation owners also used a divide-and-rule policy to help prevent the labour force from organizing, “fomenting antagonism between the races” (Colchester, 1997, p. 27), similar to how Dutch colonists had previously promoted interracial conflict between the Amerindians and the escaped Africans slaves. This antipathy between Amerindians and the descendants of Africans “has not been entirely overcome in race-conscious Guyana” (Bulkan, 2013).

As a result of all this immigration, today’s “Land of Six Peoples” is indeed multi-cultural, with people of Amerindian, African, East Indian, Chinese, Portuguese, Caucasian, and mixed ancestry. As a result of the colonial policy to promote conflict between these ethnic groups, Guyanese society was deeply divided and Guyanese politics have been tumultuous at times

⁹⁸ A plantocracy is a ruling class, political order, or government composed of (or dominated by) plantation owners. Plantocracies were common in the “New World,” typically with a small population of colonists relying on a large population of slaves. See **Appendix A – Glossary**.

(Bulkan, 2013). It is beyond the scope of this Dissertation to detail Guyana's recent history, but some highlights follow in the next section (1.4.3.) to set the context for the current political and environmental situation of Guyanese Amerindians in general, before turning specifically to the Makushi who participated in my research.

D.2. Amerindian Interests in Guyanese Politics

Historically, the Amerindian's status on their own land changed over time as the economy of Guyana shifted, and as the indigenous Amerindian population decreased while the settler population increased due to the immigration of thousands of Africans and then Indians. Below are some relevant aspects from recent history, concluding with the current status of Amerindians in Guyana.

By the mid eighteenth century, trade with Amerindians by the Dutch had been eclipsed by the export of colonists' plantation crops (Colchester, 1997, p.25). And by the beginning of the 20th century, the total number of Amerindians had been reduced to perhaps one-fifth of their pre-contact population due to introduced diseases to which they lacked immunity (Seggar, 1958; Bulkan 2013) and due to being displaced from their land (Colchester, 1997). Things looked bleak at that time for Amerindians. Robert Schomburgk's view in 1840 was typical:

Driven from their lands, now in possession of the Europeans and their descendants, they have wandered from their ancient homes, strangers in their own country; and diseases and vices introduced by the settlers and feuds among themselves, have all but annihilated the rightful owners of the soil. It is a melancholy fact, but too well founded, that wherever Europeans have settled, the extermination of the native tribes has succeeded their arrival. (1840, p. 48)

Fifty years later, E.D. Rowland concluded in a comment on the British Guiana Decennial Census of 1891 that the Amerindians were of "little or no social value and their early extinction must be looked upon as inevitable in spite of the sentimental regret of missionaries (1892, p.56).

Due to concern about the possible extinction of Amerindians and to protect Amerindians from the deluge of gold miners after the 1880s gold rush (Colchester, 1997, p.62), and as a reward for Amerindian support to the British Crown in the boundary dispute with Venezuela in the 1890s, Guyana's colonial government took a protectionist approach towards Amerindians and created 10 Reserves for Amerindian habitation in 1902. Four more reserve areas were established between 1904 and 1946, for a total of 13,000km² (Bulkan, 2013). This is only 6.0% of Guyana's 214,970km². And these reserves did not confer Native Title⁹⁹ (Bulkan & Bulkan, 2008), thus Amerindian land rights were not secure. For example: "Even during the late 1950s when Amerindians were exerting a political role, the insecurity of tenure was shown by the de-reservation of almost 0.4 Mha [4,000 km²] in the Upper Mazaruni in 1959 and its replacement by a Mining District when diamonds were found" (Bulkan, 2013).

Once World War II ended in 1945, political awareness and demands for independence from Britain grew in all sectors of Guyanese society. The People's Progressive Party (PPP) was founded in 1950 by Dr. Cheddi Jagan (Indo-Guyanese). The PPP's platform was "independence [from Britain], workers' rights and a rapid transition to socialism" (Colchester, 1997, p.29). The PPP was originally a multi-ethnic party formed with the prominent Afro-Guyanese politician, Forbes Burnham.

As with many indigenous peoples worldwide, "a persistent concern of Amerindians has been to secure a strong legal basis for recognition of their rights to natural resources on which they have traditionally depended for livelihoods and their social and cultural existence" (Bulkan, 2013). This post-war period in the 1950s with Guyanese people working to gain independence from Britain was an opportunity for Amerindians to secure their land rights. The

⁹⁹ "Native title is the term used when there is legal recognition of pre-existing (before colonialism) indigenous rights of ownership to their customary lands traditionally occupied and used" (Bulkan, 2013).

colonial/coastlander government shifted from a protectionist approach to a less patronizing view of Amerindians by the 1950s, which is reflected in the 1951 Amerindian Act. The Act formalized the election process of Village Councillors and Toshias or Captains (Bulkan, 2013). Another very important development was the reform of Guyana's electoral law in 1953 to achieve universal adult suffrage (Bulkan, 2013). Before this time, many Amerindians (as well as many women and Indo-Guyanese) were excluded from voting because eligibility to vote required being literate (in English, not in Amerindian languages, Hindi, or Urdu), and owning property or having proof of a certain level of income. Achieving universal suffrage for all adult Guyanese over the age of 21 removed the above restrictions. The first election with universal adult suffrage was in 1953, but the Constitution was suspended after 135 days.

Although only 4% of Guyana's population in the 1950s were Amerindian, they used their newly acquired right to vote and their literacy in English (learned through mission schools) to be an important demographic in the elections leading up to Independence (Bulkan, 2013). Amerindians voted as a bloc in the national elections of 1957, 1961 and 1964, rallying around their champion Stephen Campbell, an Arawak who became the first Amerindian member of the legislature in 1957 (Bulkan, 2013).

Internal conflicts developed in the PPP, and in 1958 the People's National Congress (PNC), founded by Burnham, split from the PPP (Colchester, 1997). Over time, Jagan's PPP became associated with Indo-Guyanese interests, and Burnham's PNC with Afro-Guyanese interests. Guyanese began to vote along ethnic lines. Jagan was also labeled a communist, and neither the UK nor the USA wanted him to lead British Guiana and jeopardize their economic interests (Colchester, 1997, p.36; Office of the Historian, 2009).

The United Front (UF), a conservative party opposed to the radical socialist policies of both the PPP and PNC, was founded in 1960. UF ran for the first time in the 1961 general elections under the leadership of Peter D'Aguiar, a Portuguese-Guyanese businessman. UF was supported by the Portuguese-Guyanese community and British Guiana's social elite (Stabroek News, 2010). Since this was a relatively small segment of the population, "UF therefore did not hesitate to 'play the race card' like its rivals [PPP and PNC]" (Stabroek News, 2010). UF was backed by the Roman Catholic Church. Through missionary work, the Catholic clergy had extensive influence among the Amerindian population in the hinterland¹⁰⁰ (Bulkan, 2013). This helped UF gain the support of the Amerindian community. UF recruited Campbell and championed Amerindian issues. The PPP won the 1961 general election, with PNC coming second. Four UF candidates were elected to the Legislative Assembly, of which two were Amerindians: Campbell was re-elected, and Edward 'Teddy' Melville (Wapishana) was also elected (Stabroek, 2010).

From 1962 to 1968, the United States covertly intervened in Guyanese politics to oust Jagan from power because they considered him to be communist and pro-Marxist (Colchester, 1997, p.32; Grow, 2008a, p.57; Rabe, 2005). This interference was consistent with United States foreign policy at the time, which sought to prevent countries in the Caribbean and Latin America from becoming communist, as happened in Cuba. This led to overt invasion (Guatemala, Cuba, Dominican Republic, Grenada, and Panama), and covert operations, such as: a botched kidnapping turned assassination (Chile); covert funding of a civil war (Nicaragua); and the above-mentioned election meddling in Guyana (Grow, 2008b). In 1963 there was an 80-day general strike financed by the U.S. Central Intelligence Agency (CIA) (Colchester, 1997, p32;

¹⁰⁰ Hinterland refers to the sparsely populated areas south of Guyana's coast. A more general term than interior, which refers the forested parts of the hinterland. See Appendix A.

Office of the Historian, 2009), and through until 1964 there was inter-racial violence, labour union-related violence, arson, 160 deaths, and 1000 homes destroyed as PNC and UF supporters denounced the PPP government as communist (Grow, 2008b; Rabe, 2005). The USA put pressure on the UK to refuse to grant British Guiana Independence with the PPP in power, and to impose a system of proportional representation, which the US thought would benefit anti-Jagan forces (Office of the Historian, 2009). Following the assassination of President Kennedy in 1963,

[T]he Johnson administration... continued the Kennedy administration's policy of working with the British Government to offer encouragement and support to the pro-West leaders and political organizations of British Guiana as that limited self-governing colony moved toward total independence. The Special Group/303 Committee approved approximately \$2.08 million for covert action programs between 1962 and 1968 in that country (Office of the Historian, 2009).

On 22 May 1964, the governor of British Guiana declared a state of emergency. As the violence escalated, the governor assumed full powers in June 1964. Elections were called and held on 7 December 1964 (Nohlen, 2005). Through the CIA, the U.S. government provided Burnham's PPP and D'Aguiar's UF with "both money and campaign expertise as they prepared to contest the December 1964 parliamentary elections. The U.S. Government's covert funding and technical expertise were designed to play a decisive role in the registration of voters likely to vote against Jagan" (Office of the Historian, 2009). Burnham's and D'Aguiar's supporters were, indeed, registered in large numbers (Office of the Historian, 2009), however, Jagan's PPP still won 46% of the vote and 24 of the 53 directly-elected seats. Due to the new system of proportional representation, the PPP was prevented them from having a majority in parliament (Colchester, 1997, p.32). PNC won 40% of the vote and 22 seats, and UF, won 11% percent of the vote and seven seats. The British governor invited the socialist PNC and conservative UF (supported by Amerindian voters) to form a coalition government; this kept the PPP out of office (Colchester, 1997, p.134; Office of the Historian, 2009).

The above illustrates the powerful influence of outside forces, namely the United States and Britain, on Guyana's pre-independence elections. It also demonstrates that Amerindian voters were a 'third force' in the struggle between the PPP and PNC from 1955 until independence in 1966 (Bulkan, 2013; Colchester, 1997, p.134-5). Amerindians achieved this through bloc support in Campbell's geographical constituency (the North West District), and bloc support of the UF in the Rupununi District (Palmer, 2010). The PNC-UF coalition government created a special Department for Amerindian Affairs (within the Ministry of Home Affairs), under Campbell's responsibility as Parliamentary Secretary (Pierre, 1993). However, Bulkan (2013) argues "the Department was little more than honorific, lacking an independent budget line or staff."

Further, Colchester states that a "remarkable aspect of Guyana's gaining of independence in 1966 was the extent to which the colonial state's integrationist policies went unquestioned and were even reinforced" (Colchester, 1997, p.134). Colchester (1997, p. 134-5) goes on to argue that Guyana's new government continued policies that attempted to assimilate Amerindians into mainstream Guyanese society, even more so than the former colonial government. The exception to continuing integrationist policies was with respect to land. The inclusion in the Independence agreement of a commitment to settle Amerindian land claims was thanks to Campbell's concerted lobbying (Bulkan, 2013).¹⁰¹ The British and the PNC agreed to Campbell's demands in order to secure Amerindian and UF support (Colchester, 1997, p.135). This "marked the high point of Amerindians as a political force in Guyana" (Bulkan, 2013). Campbell died on 12 May 1966 - just two weeks before Guyana achieved Independence on 26 May (*The Guyana Times International*, 2010).

¹⁰¹ Had it not been for Campbell's determination to secure land rights, Bulkan (2013) states Guyanese Amerindians might well lack secure land tenure, as is the case for indigenous peoples in the nearby Belize and Suriname (Bulkan, 2013).

After Burnham was elected in 1964 and Independence was gained in 1966, the U.S. Government, again through the CIA, continued to provide substantial funds to both Burnham (PNC) and D'Aguiar (UF):

In 1967 and 1968, 303 Committee-approved funds were used to help the Burnham and D'Aguiar coalition contest and win the December 1968 general elections. When the U.S. Government learned that Burnham was going to use fraudulent absentee ballots to continue in power in the 1968 elections, it advised him against such a course of action, but did not try to stop him. (Office of the Historian, 2009)

After this first rigged election in 1968, Burnham ruled in an increasingly autocratic manner, and all subsequent elections were rigged in favour of the PNC until 1992 (Bulkan, 2013, Colchester, 1997). Since there was no risk of being defeated, Burnham no longer needed votes from any ethnic group, and the PNC had less incentive to act on the promises made to Amerindians about land claims and other issues in the process of gaining independence (Bulkan, 2013).

Two incidents shortly after independence strained Amerindian-coastlander relations. A few Amerindians were involved in a secret convention held at the Kabakaburi Amerindian Reservation in April 1967, which endorsed Venezuela's territorial claim to a large part of Guyana. Then in 1969 there was the "Rupununi Rebellion" (also called the "Rupununi Uprising"). This attempted secession of the Rupununi (just three years after Guyana gained Independence) was led by the settler ranching families with the support of a small number of Amerindians. The Guyana Defence Force was flown in and quickly put down the rebellion; they torched ranches and many rebels (both ranchers and Amerindians) were killed (Baines 2005, p.6; Colchester, 1997, p.50; Colchester et al., 2002, p.118). Thus began "a time of shortage, political persecutions, and consequent population movements" (Farage, 2003, p.116). These "punitive actions against the Rupununi's economy and population were long lasting" (Bulkan, 2013).

Bulkan (2013) further notes that although only a small number of Amerindians took part in these two incidents, “those events fed coastlanders’ negative stereotyping of Amerindians, then cast as traitors and anti-national.”

On October 5, 1992, Guyana held its first internationally recognised free and fair elections in thirty years, which was won by the PPP (Embassy of Guyana, 1998). PPP then won majority governments for the next two decades. A Partnership for National Unity (APNU) was a coalition of many political parties, including PNC, formed in 2011 to contest the 2011 election. The PPP, renamed the Peoples Progressive Party/Civic (PPP/C), won that election, but lost its parliamentary majority (Nohlen, 2005).

Today, the Amerindian population in Guyana is lower than before contact with European colonizers, and Amerindians are a minority in their ancestral territory, but it is a large minority that is growing. Amerindians are the fourth largest ethnic group, at 9.2% of Guyana’s population in the 2002 census (Beaie, 2007). The rest of the population breakdown by ethnic group is as follows, from largest to smallest percentage of the total population: Indo-Guyanese, 43.5%; Afro-Guyanese, 30.2%; Persons who identified as “Mixed Heritage,” 16.7%; and people of Portuguese, Chinese, and Caucasian heritage make up less than 1% of the population (Beaie, 2007).¹⁰² Amerindians also have the largest net growth rate (Government of Guyana & UN Country Team, 2011) of approximately 3.5%, versus 2% for the other ethnic groups of Guyana, “which have a strong tendency to emigrate for economic reasons to northern countries” (Bulkan, 2013). The Amerindians population has quadrupled in the past 60 years, increasing from an estimated 16,000 in the mid-1940s (Peberdy, 1948) to approximately 70,000 in 2002 (Beaie,

¹⁰² The total population of Guyana from the 2012 census was documented in a preliminary report, released in 2014. However, the ethnic breakdown was not included in this preliminary report, hence why 2002 census data is used here, from the full report released 2007 (Beaie, 2007).

2007). Thus, the Amerindian population is growing both in total numbers and in its percentage of Guyana's total population, which could give them considerable political clout.

However, recently, Bulkan (2013) argued that Amerindians were not organizing to exercise their political power to achieve their collective interests. She noted that the coastlander approach to the interior lands where Amerindians are the majority remained extractivist and exploitative. Amerindian iconography was still being appropriated as national symbols, yet the national ethos remained one of assimilation of Amerindians into mainstream Guyanese society (Bulkan, 2013). Further, she argued that while the PPP/C did not have a majority in Parliament, this only "slightly dented the two decades of near-dictatorship by the governing [PPP/C] party. That party is accustomed to using controls on information under democratic centralism¹⁰³ to minimise interactions with civil society including Amerindians." Further,

the coastlander-based party in power [PPP/C] has been working to disrupt cohesion among Amerindian community leaders. The government uses a variety of funds to reward community leaders who will sign pre-prepared resolutions at the statutory National Toshias Council meetings, and denies funds to leaders and communities that protest at government neglect and mismanagement of the traditional areas claimed by the indigenous peoples. (Bulkan, 2013)

Bulkan (2013) concluded that "unlike the late 1950s and early 1960s, Amerindians lack the political clout that would allow them to define and realise their own ambitions and plans in Guyana."

However, a new chapter may be opening for Amerindians in Guyana. For the 2015 general election APNU and Alliance for Change (AFC) formed a coalition which narrowly won the general election in May 2015, thus ending the PPP's 23 year rule (GECOM, 2015; Marks,

¹⁰³ "Democratic Centralism, as practised by the party in power, overrides valid legislation and regulations at the direction of Cabinet officers on the grounds that implementing the law would not be in the national interest. No criteria are ever provided for what that overriding national interest might be. Democratic Centralism also involves one-way communication in which the government presents its preconceived intentions to the passively listening citizens" (Bulkan, 2013).

2015). One of the first actions by the new government was to change the name of the Ministry of Amerindian Affairs to “Indigenous Peoples Affairs Ministry”, in accordance with the preference of Amerindians to be referred to as indigenous people (Demerara Waves, 2015).¹⁰⁴ Sidney Allicock, from Surama (see 1.5.), became the new Minister of Indigenous People’s Affairs. The Ministry is reviewing the Youth Entrepreneurship and Apprenticeship Programme (YEAP), which Allicock states used Amerindian youths hired as Community Support Officers (CSOs) to support the former government’s political goals rather than to train the youth and to serve their communities (Gina Webmasters, 2015). Minister Allicock said the new government is seeking to develop more structured programmes to encourage development of Indigenous youths, such as plans to expand the Hinterland Scholarship Programme, and a request to have the Bina Hill Institute Youth Learning Centre in the North Rupununi accredited. Bina Hill would provide skills training in tour guiding, botany, logistics, and other skills set, that emphasise “sustainable utilisation of the eco-system” for economic activities and benefits (Gina Webmasters, 2015). See more about Bina Hill in 1.6.

Another important consideration for Amerindians in Guyanese politics today is Guyana’s divergent desires to be a competitive player in the global economy, and yet pursue an ecologically sustainable model of development (Chung Tiam Fook, 2013). The former PPP/C government of Guyana attempted to unite these divergent development paths into one ambitious course (Chung Tiam Fook, 2013). It will be interesting to see the decisions of the new APNU/AFC government.

¹⁰⁴ In 2005, three Amerindian NGOs lobbied for the term to “indigenous people” to replace “Amerindian” in the Amerindian Act. The PPP/C government did not comply. Two of the three NGOs also still use the term Amerindian. At the time of my fieldwork, participants used the term Amerindian for more than Indigenous People, therefore I use the term Amerindian in this dissertation. See more details in Bulkan (2013, p.1-2).

At stake is Guyana's own spectacular biodiversity, as well as the positive impact Guyana's rainforest can have on mitigating climate change – if they stay standing. Guyana is particularly rich in healthy rainforest ecosystems. Within the current global context of an impending climate crisis, these forests are essential for worldwide efforts to prevent catastrophic climate change. Thus, Guyana and its international benefactors developed a broad-based strategy framework for mitigating climate change and deforestation: the Low Carbon Development Strategy (LCDS) (Chung Tiam Fook, 2013). LCDS is based on the United Nations Framework Convention on Climate Change's (UNFCCC) Reduction of Emissions through Deforestation and Degradation (REDD+).

LCDS is particularly salient for Amerindians who are the main inhabitants of Guyana's healthy rainforests. These forests are essential for many Amerindian's livelihoods and lifeways.¹⁰⁵ Proponents of LCDS claim it represents “a win-win solution for a broad spectrum of stakeholders involved with forest management and development at global, national and sub-national levels, including governments, commercial actors, Indigenous and forest peoples, donor nations and institutions; conservation NGOs, and the global community” (Chung Tiam Fook, 2013). However, Chung Tiam Fook (2013) argues benefits are not so clear for Guyana's Amerindians due to competing stakeholder interests, endemic corruption within Guyana, and “market ethos”.

¹⁰⁵ Lifeways in this dissertation refers to the customary way of relating and living in North Rupununi communities and to how people are ecologically positioned and relate to other beings and natural entities within their local environment. See **Appendix A**.

APPENDIX E: Encountering the North Rupununi

The following is a narrative account of my experiences in Makushi communities in the North Rupununi. It describes the journeys, both physical and intellectual, that lead to the pursuit of this PhD, and the molding of the research questions and design. My first visit to Makushi communities was in 2006 as a volunteer. I immersed myself in Village life and honed skills that later served me in my fieldwork. In 2009, I completed my comprehensive exams, which included studying how to conduct ethical research with indigenous communities. This line of reading brought me to the concept of Ethical Space (Ermine, 2007), which became the ethical framework for my research. In 2010, I spent four months in the North Rupununi on a reconnaissance. I observed North Rupununi Wildlife Club (NRWC) activities, asked community members for input about the proposed research, and adjusted my Thesis Proposal and research design accordingly. I conducted the data collection in 2011. I conclude the chapter with the oral histories of the Clubs and observations of Club activities. The following narrative account and observations are drawn from field journals from 2006, 2010, and 2011.

E.1. First Journey on The Red Road, 2006

Rupununi Red Road

Sun drenched dusty road

Rain drenched washed-out road

The toughest love you'll know¹⁰⁶

I breathe in the red dust, even through the bandana covering my mouth and nose. The red dust covers my clothes and skin. I taste it. It is in my lungs. The red dust covers me and is inside me. The red dust permeates every cell of my being. In Georgetown, friends told me if I drank the

¹⁰⁶ From my song *Rupununi Red Road* (2012).

“blackwater” (see Appendix A, Glossary), I would always come back to Guyana. I suspect if you breathe in the Rupununi Red Road dust, you will always return to the Rupununi.¹⁰⁷

It was February 2006, and I had finally returned to Guyana. Guyana, the green jewel I had fantasized about since I was old enough to understand that there were other places far away, and that my far-more-than-Nanny, Edna, had come from there. It was not just fulfilling a childhood dream to visit Guyana, I also wanted to make a personal connection with Edna’s family in Georgetown, the capital. But I went to Guyana as a volunteer with Youth Challenge Guyana, and was sent to the North Rupununi, far South of Georgetown.

You can fly to get to the Rupununi, but it is expensive. Most Rupununi people take The Road. The Road is a red laterite dirt artery that goes south from Guyana’s coast into the North Rupununi, and then crosses into Brazil (see map of Guyana, **Appendix B**). The Road was completed in 1919 to bring the cattle from the Rupununi to market in Georgetown (Melville, 1956, in MacDonald, 2014). Today, The Road connects to a paved highway in Brazil. But throughout the Rupununi, the unpaved Road cuts through rainforest, and as it winds further South, through savannah. In the dry season, it is dusty and has large potholes, “washboarding,” and questionable wooden bridges over rivers and streams. In the rainy season, it becomes muddy, prone to spectacularly huge puddles, and even washes out. Modes of transportation that can handle The Road are 4x4 vehicles, motorbikes, horses, sturdy bicycles, and walking (of course). The “Big Bus”, a cross-country coach service run by Intracerv, ceased operations in 2012.¹⁰⁸ Thus, the only ground public transportation available as of 2015 is by minibus (van).

¹⁰⁷ Cf. Wilson (2005, p.13) whose Wapishana friends told her that drinking creek water and eating local meat would mean “the Rupununi lifestyle and its people become part of who you are.” Makushi friends told me in 2011 I would return to the Rupununi because I had eaten laba (**Appendix A**, Glossary).

¹⁰⁸ This happened during my data collection, and so I had to fly in and out of the Rupununi. At first we were told it was a service interruption with a possibility service would be discontinued if The Road was not improved (for example, Stabroek News, 2011). Then in 2012 service was official discontinued as listed on tourism sites (for example, rupununi.org, 2014).

Minibuses are the most affordable way to move people and goods into and out of the Rupununi. There are also some big commercial trucks that go on The Road, especially old military trucks like Bedfords, to transport goods. Some Villages have one of these big trucks, and use them to transport people to events as well as to transport goods. All modes of transportation can be dangerous due to the rough state of The Road and to the wooden bridges over rivers and streams that can break. The minibuses in particular can be dangerous depending on the driver and the conditions. Between and within villages, motorbikes and bicycles are popular because automobiles are impractical, and few local people can afford 4x4s. Given the rough state of The Road and the expense of flying, access to the Rupununi is still somewhat restricted. There is a police checkpoint just before entry into the Iwokrama forest. Iwokrama monitors road traffic use and types of traffic for this section of The Road that winds through the Iwokrama forest .¹⁰⁹

In 2006, the organization I volunteered with, Youth Challenge Guyana (YCG), sent its volunteers into the Rupununi in the back of Bedford trucks. Volunteers endured a 16-hour (or more) mostly overnight trip into the North Rupununi. In our truck, ten of us and all our gear lurched along the bumpy road. The blue tarps covering the back protected us from the sun, but not from the red dust, the incessant deafening engine drone, and from the daytime heat. Sleep was impossible. Even when daylight finally broke, we could barely see the North Rupununi landscape through the tiny back opening due to the thick red dust cloud behind the truck.

When I first jumped down from the Bedford in Parishara (enroute to Nappi), I was struck by the savannah landscape, all the smiling children attentively watching our arrival, the cattle and goats in the distance, and the homes with Ité palm leaf roofs. The savannah is relatively flat,

¹⁰⁹ My understanding is the checkpoint and road monitoring keep track of how many vehicles and people go through the Iwokrama forest area, and to help prevent poaching and other illegal activities, but I have not found published documentation of these goals. When I caught a ride on an Iwokrama 4x4 doing monitoring in January 2010, they also recorded and picked up litter along the road and recorded any animals and birds they spotted.

and the land stretched out from horizon to horizon all around us. From a distance, the savannah looks like lush pasture. Up close, however, you can see that the pale green tough tall savannah grass grows sparsely, in tufts out of the dry hard red laterite earth. There were some groves of small twisted trees, some bearing jamoonies, a fruit that looks like an oval plum, such a deep purple it looks black. When I had stepped off the plane and onto the tarmac in Georgetown a week before, I was hit by the humid heat, and my body relaxed. I felt home. The heat in the Rupununi in February, during the dry season, is different. It is a dry heat, and there isn't much shade from the brutal Equatorial sun.

E.1.1. Nappi

We volunteers spent four weeks in Nappi village (see Map, **Appendix B**) and also delivered programming to the satellite villages of Parishara and Hiawa. At the time, Nappi had a population of less than 1000 people, who were mainly Makushi. As of 2010, Nappi, with its satellite communities of Parishara and Hiawa, had a population of about 1,500 residents and held title to 23,595ha (236km²) of land.” (Nycander et al., 2010). Nappi is on open savannah, but lies along the foothills of the Kanuku Mountains and within walking distance of the rainforest and Nappi Falls. Most of the homes had traditional Ité palm leaf roofs, but there were some with imported tin roofs. The homes were fairly far apart, and most had a garden and mango and coconut trees. At the time, there was no running water or electricity in Nappi, except for a couple of generators that were used to power a TV and VCR for occasional movie nights. Everyone used hammocks to sleep in. In the centre of the Village was the Primary School, Community Centre, newly opened Village Office, two newly built outhouses, and a giant old mango tree where children and adults alike “limed” (the Guyanese term for hanging out) and met. We volunteers stayed in a building with concrete walls and a tin roof where foreign teachers stayed

when they lived in Nappi. There were three rooms and a kitchen, and the ten of us slept three or four to a room in our hammocks. Nappi village was where I learned to string up a hammock with a mosquito net. And where I learned I cannot sleep in a hammock. This is very unfortunate, because it is convenient to be able to sleep in a hammock! If you “walk with your hammock,” you are welcome to stay pretty much anywhere in the Rupununi: you simply ask permission to tie it up under shelter. Since I couldn’t sleep in my hammock, I slept on the floor under my hammock and mosquito net on my therm-a-rest (a self-inflating sleeping pad).

This is when I learned to bike between villages on the sturdy Brazilian Monarch bicycles, easily recognizable by the circle in the center of the frame’s main triangle. A few other kinds of bikes found their way into the Rupununi. But one characteristic was consistent: bicycles in the Rupununi never have brakes. And there are hills, and the roads are gravel or dirt. I became adept at borrowing bikes to get between the villages (instead of walking), and I learned to stop without brakes, and to not be injured (too often) on steep downhill paths. This served me well later in my data collection when I reached most of my interviewees via bicycle.

We volunteers attended the official opening of the Maipaima Eco-Lodge,¹¹⁰ later renovated in 2013. Part of the opening ceremony was at the ecolodge, and part of it was in the center of the Village, outside the Village Office. This was the first time I saw Makushi people wear their traditional clothes (woven from locally grown and hand-spun cotton, and decorated with parrot feathers) and perform traditional Makushi songs and dances. The Opening was at noon when the sun is harshest. There was no shade near the Village Office. Despite wearing a

¹¹⁰ In this dissertation I use the Oxford Dictionary spelling of “ecolodge”, which is also used by The International Ecotourism Society (TIES, <http://www.ecotourism.org>). However, several ecolodges in the Rupununi use the “eco-lodge” spelling in their proper names, including Maipaima Eco-Lodge. Therefore I use their spelling for their proper name.

hat and sunblock, a small area of my chin that was not shaded by my hat was burnt raw by the sun, and it required a week to heal.¹¹¹

The Maipaima Eco-Lodge was an experiment for Nappi to determine whether they could have economic development and create jobs within the village in an environmentally sustainable way through eco-tourism. Surama Village's Eco-Lodge had been established for a few years at this point and was a successful example in the Rupununi. Foster Parrots Ltd. funded the construction of Nappi's Eco-lodge (Foster Parrots Ltd., 2011b). The motivation of Foster Parrots was for Maipaima to "offer an economic alternative to hunting and trapping of parrots and other wildlife for the pet and zoo trades" (Foster Parrots Ltd., 2011a). American members of Foster Parrots were there for the opening. I did not know it at the time, but this organization had also started a Roots&Shoots (R&S) Club in Nappi, which is the humane education program I volunteered with in Tanzania. During this 2006 stay I also did not know that Nappi had a Wildlife Club.

E.1.2. Yupukari

After four weeks in Nappi, we shifted over to Yupukari Village (see map, **Appendix B**), with a population about 500 people, mostly Makushi, and title to 13,740ha (137km²) of land. Yupukari is situated on a hill located about 1.5 km from the Rupununi River, and offers stunning views of the Kanuku and Pakaraima Mountain Ranges. (Nycander et al., 2010, p.20). Most of us volunteers experienced a minor culture shock. A year prior to our arrival in March 2006, there was little difference between other villages in the Rupununi and Yupukari. North Rupununi villages at that time had no electricity, no running water, and certainly no access to computers or

¹¹¹ This incident changed my way of navigating the Rupununi savannah landscape. Sunblock is not enough to protect my light skin if I must be without shade between 10am to 2pm. Therefore I usually have a kerchief or hood draped over a wide-brimmed hat, or carry an umbrella, making for interesting attire while biking!

the Internet. Then in 2005 an American family, the Taylors, arrived in Yupukari. Dr. Peter Taylor initiated the black caiman monitoring project which continues to this day. Alice Taylor (now Alice Layton) spurred the construction of the library, stocked it, and trained its staff. The library was equipped with solar panels to power six laptops (later more), and they obtained Internet access via satellite. Local villagers were trained to use the computers. Ms. Layton also encouraged the founding of Rupununi Learners Incorporated (RLI) in 2007, and she was a founding Board member of the US based Rupununi Learners Foundation (RLF), a USA non-profit founded in 2001 (Rupununi Learners, n.d.).¹¹² The two organizations work closely together in Yupukari, therefore, as per local parlance, will be referred to collectively as “Rupununi Learners,” unless there is a need to specify an organization. The family also built a large home in the traditional Makushi way with locally made and fired mud bricks and Ité thatch roof with a large kitchen and common area where local people were welcome. This house was named Caiman House, and it became a village hub. Caiman House later evolved into the headquarters for the ongoing caiman monitoring project, and for an ecolodge that was built next door. In 2006, we YCG volunteers stayed at Caiman House.

At the time, Ms. Layton wished to improve the welfare of Yupukari’s dogs and cats. Dog and cat welfare is often very poor in the North Rupununi. Many people are not able to feed their domestic animals, there are rarely veterinary services available, and there did not appear to be a tradition of treating dogs and cats with local, traditional medicine. Some people treat dogs and cats very harshly. Therefore, many animals are sick and they tend to die very young. Locals

¹¹² The Board and membership of RLI is composed of Rupununi village residents. RLF’s Board is composed of USA residents. RLF and RLI “collaborate to manifest a holistic approach to environmental conservation, encompassing wildlife research, education, economic development and cultural preservation” (Rupununi Learners, n.d.).

enjoy puppies and kittens, but often homes cannot be found for these animals, so they either die or become strays that can cause problems for villagers.

Ms. Layton was considering bringing a veterinarian into Yupukari to offer spaying and neutering of the local dogs and cats. But she only wanted to invest the time, effort, and money into the idea if community members bought into it, and if they would actually have their dogs and cats spayed and neutered. She wanted to survey Yupukarians and find out how many people would be interested in the veterinarian's services. I was interested in animal welfare, and the connections between human and environmental health with animal welfare. And it was part of my mandate as a YCG volunteer to help with this kind of task. Consequently, we agreed that I would design a questionnaire that would ask specifically about villager's willingness to spay and neuter their cats and dogs to answer Ms. Layton's question, and I would include items more generally about animal welfare and villagers' attitudes and beliefs about animal welfare for my own interest.

Two community members offered to help with the project as community collaborators. Nancy¹¹³ was one of the first villagers trained to work as a librarian at the library. Nick¹¹⁴ worked on the caiman monitoring. Both young adults were fluent in Makushi. They helped me design and pilot the items on the questionnaire, and then one of them accompanied me to each interview. The questionnaire could be completed in less than 15 minutes, so rather than set up a specific time in advance, we would pick one sector of Yupukari, head out by bicycle early in the morning, and stop by as many households as we could. If someone agreed to participate, my community collaborator would go over the questions with her/him, and translate into Makushi if needed. Participants either filled the questionnaire out themselves, or one of us would fill it out

¹¹³ This is her pseudonym as she later participated in my research on the Club.

¹¹⁴ Name changed to protect his identity.

based on their oral instructions. Most questions were either yes or no, there were a few scales from 1 to 10 to assess to what degree participants agreed with a statement on animal welfare and local practices with animals, and there were spaces for comments.

Some people filled the questionnaire out quickly and we would be on our way, but some people were interested in the topic, and I “gaffed”¹¹⁵ with some participants for up to an hour after the questionnaire was done. I was fascinated with these conversations, and with simply getting to spend some time immersing myself in the daily life of people in Yupukari. I had made friends in Nappi, and had eye-opening conversations there, but administering the questionnaire gave me a reason to go to people’s homes and ask them questions that were deeply meaningful to me, and then listen to their views with rapt attention. The data was intriguing, and the process of collecting it was equally intriguing. I gained some perspective on the daily rhythm of life in Yupukari, and of the possibilities and constraints in Yupukarian’s lives. I observed firsthand their interactions with each other at home, with domestic and wild animals, and with their local environment. I came away from the experience with a deep appreciation and admiration for the Makushi way of life. This was also my first opportunity to sit with indigenous Elders and feel reverence, respect, and gratitude to listen to their profound and deep Indigenous Knowledge (IK) and Traditional Ecological Knowledge (TEK).

I also had experiences and gained skills that would serve me later during my doctoral research. I further improved my Rupununi biking skills, especially being able to converse with my community collaborator, plan where to go next, and all the while avoid being killed along the treacherous dirt or gravel trails with no brakes. I listened intently, and developed my ear for local terms and ways of speaking. I learned how to speak in a way that local people would understand me, despite my Canadian accent. This meant speaking more like local people, which was natural

¹¹⁵ Guyanese term for informal friendly chatting. See **Appendix A**: Glossary.

for me given my upbringing with Edna,¹¹⁶ and finding creative ways to explain terms that weren't used in the area. I honed my skill for building rapport with interviewees. I laughed a lot.

I learned how essential and helpful it is to have a community collaborator. They were guides, and helped me navigate the geographic, cultural, and linguistic terrain. My collaborators knew everyone, knew where they lived, and knew when they were likely to be home. They already had rapport and trust with potential participants. They knew what to say to pique the interest of a potential participant, and how to explain the purpose of the questionnaire in a compelling way. When needed, they translated from Makushi to English and vice versa. And they ensured better communication. Although I was diligent and persistent and listened carefully, I still misunderstood at times. Sometimes this was immediately apparent, and my community collaborator would come to my rescue to clarify what an interviewee meant, or to clarify what I meant to communicate to an interviewee. Sometimes it was not until we debriefed after we left a participant that I realized I had misunderstood the participant. And with all humility, I realize there are some misunderstandings that were probably not caught.

I also learned about the challenges of having a community collaborator. Sometimes they didn't show up due to family obligations, or changed the timing of our outings, and there were not able to get a message to me. Sometimes they didn't approach certain potential participants because they did not get along with them. Sometimes we misunderstood each other. But the most interesting and important challenge is that my community collaborator could bias the data through influencing the responses of participants. One of my collaborators in particular had strong opinions about some of the questions on the questionnaire, and I found they¹¹⁷ sometimes

¹¹⁶ See 1.3. Situating the Researcher.

¹¹⁷ In these small communities, knowing the gender of someone mentioned in this narrative could be enough to reveal the identity of someone who wishes to remain anonymous. Therefore, in some cases I use the

tried to influence participants' answers. Sometimes this was obvious (such as when they argued good-naturedly with their mother, and then put their own numerical response, rather than hers!), and sometimes it was more subtle. And if the conversation were in Makushi, it was unlikely I'd know if a participant was being persuaded to modify a response. Consequently, I learned that even the most well-meaning and honest community collaborator might have their own agenda, and this could bias the data. Since these community collaborators did not have training about research methods, they did not know that it was inappropriate to try to convince a participant to modify her/his answer, and that in fact, the researcher should be neutral and non-judgemental so that a participant is free to express her/his true opinion.

Noticing this behaviour in my collaborator caused me to check myself, for when we observe something like this in others, we do well to ask if we are doing the same thing. We must remember that we are ALL subjective observers, and to be honest with ourselves and the readers of our work that we are imperfect and biased subjective observers who often do have desired responses. We may hear what we want to hear. Hence, in 2006 I gained practical experience to complement the theoretical understanding of research ethics and the ethical dilemmas about being a researcher that I had explored in my Master's in Bioethics.

I was intrigued with the data from the questionnaires, and I wanted to learn more about the Makushi's beliefs, attitudes, and behaviour toward non-human animals. The questionnaire revealed that once people understood what spaying and neutering was, they were keen to ensure that their dogs and cats were spayed and neutered. The lives of many dogs and cats seemed harsh, and there seemed to be unnecessary suffering. However, according to the questionnaire, this was not because local people did not care or were deliberately neglecting the needs of their

plural "they" and "them" instead of the singular he or she and her or him to help protect identities, although it is not grammatically correct.

domestic animals. Rather, most people indicated they thought animals felt pain and that this mattered to them. However, they did not have the resources to provide the type of care that dogs, cats, horses, cattle, and goats require to be healthy. Suffering animals are unlikely to be humanely euthanized. Unlike in Western nations, one could not take one's animal to the veterinarian to be euthanized. One had to kill the animal one's self, and so most people would leave an animal to die. There was a distemper epidemic at the time, hence there were a fair number of paralyzed dogs who died lingering deaths. And many people did not know what kind of care their animals needed, since there was little education about animal care available.

The questionnaire focused on attitudes, beliefs, and behaviour towards domestic animals, and it sparked my interest in how the Makushi's relationship with wild animals impacted conservation of local natural resources. For example, people were reluctant to kill a dog, even if it was suffering from a lethal disease. But these same people were efficient hunters and fishers. I wanted to learn more. The local Wildlife Club had started the year before, and it would have been a good way to learn and an ideal volunteering experience for me. However, I did not know about the Club in 2006.

In short, administering the questionnaire in 2006 foreshadowed and prepared me well for my doctoral fieldwork in 2011. I gained useful skills, and knew to discuss research ethics with my community collaborators so they would be less likely to influence participants' responses.

E.2. The Path of Engaging with Indigenous Knowledge, Ethical Space, and Allyship, 2009

I knew I wanted my research to be on environmental education in Guyana, because I wanted to conduct research that was useful for the conservation of Guyana's beautiful and biodiverse wild spaces, and also useful to the field of environmental education. In January 2009 I was searching for a program to study. I had hoped to study R&S Clubs, and two Clubs were

listed in Guyana in the R&S online database.¹¹⁸ I was surprised to see that one of the R&S Clubs was listed in Nappi. But there was no response to my attempts to contact both Clubs. I was not able to find the story of the other Club but did learn about the Nappi Club in 2010. Foster Parrots had started an R&S Club in Nappi around the time that Maipaima Eco-Lodge was also being built. When I was there in 2006, that Club existed, but I did not hear or observe any trace of it or Nappi's Wildlife Club. Similarly, in 2006 I also did not know about Yupukari's Wildlife Club. I would have volunteered with any of these three clubs when I was with YCG in 2006. I found out later from sources in Nappi that they felt Foster Parrots had founded the R&S Club without enough consultation with the community. While the ecolodge was being planned, built, and opened, there were members of Foster Parrots in Nappi, and apparently they ran activities. R&S Clubs are required to have an adult Matron or Patron, and so Foster Parrots selected a community member for this role before they left. According to Guy Fredericks, the deputy toshao in 2006 (he later served as toshao of Nappi), the community did not support the selection of this person and thus did not support them¹¹⁹ in the role of Matron/Patron (G. Frederick, personal communication, May 25, 2011). This contributed to the Club becoming inactive, and this is likely why I did not know it had existed until I found it listed in the R&S database.

I was also applying for an International Development Research Centre (IDRC) Doctoral Award to fund my anticipated fieldwork in Guyana. This required a local organization to partner with me. I sent one of my email queries to Iwokrama. Dr. Raquel Thomas (now Thomas-Caesar), Iwokrama's Director of Resource Management and Training, responded to my email query about potential programs to study and potential partnership. She wrote that Iwokrama had established an environmental club program in the Rupununi, the North Rupununi Wildlife Clubs (NRWC)

¹¹⁸ In 2009, there was an online database that listed R&S groups by location. It is no longer online.

¹¹⁹ To help keep this person anonymous, I am not disclosing their gender by indicating whether the person was a Matron or Patron.

(personal communication, March 4, 2009). I was delighted about the opportunity for my doctoral research to be in communities I had visited in 2006. Dr. Thomas connected me with Samantha James, Iwokrama's Community Education and Awareness Manager, who was the key staff person supporting NRWC. Iwokrama was interested in research being conducted on the program, and agreed to be my local partner.

I was excited to have the opportunity to study such an interesting program. However, I also realized that I was not going to be conducting my research in Georgetown, as expected, where I had personal connections. I would be working with mostly Makushi communities, and as I learned more about the history of research *by* non-indigenous researchers *on* indigenous peoples, I became frankly appalled. I was alarmed and concerned about how I could conduct ethical research with indigenous peoples. My supervisory committee agreed it was important to engage with these concerns, and so my Comprehensive Exam readings and questions included Indigenous Knowledge (IK) and environmental education (EE), and I explored ideas about genuine and constructive ways non-indigenous people, like myself, could engage with indigenous people through research.

Edna died in Georgetown while visiting her family in August 2009. Words cannot adequately express my pain and sorrow. It happened very quickly while I was in Brazil, and I could not get to her deathbed in time. I attended her funeral in Georgetown on behalf of her family in Ottawa and all her friends there. I wondered if it was still wise to conduct my research in Guyana given how painful it was to lose her, and her death ignited fears in some of my family members that it was dangerous for me to be in Guyana. Despite these concerns, I felt my love for Guyana and desire to conduct research that would be useful for indigenous communities to

protect their ecosystems and lifeways was undimmed. I decided to forge ahead with the research in Guyana, as planned.

As I crafted my Thesis Proposal, I became more and more intrigued and engaged with Ermine (2007)'s concept of Ethical Space, as described in **3.2.3. Research Framework: Ethical Space**. I was influenced by Wilson (2008) and chapters in the anthology *Alliances: Re/envisioning Indigenous and non-Indigenous Relationships* (Davis, 2010). Consequently, I decided that to truly act in alignment with what I believed to be ethical research with the Makushi, I should go to the North Rupununi on a reconnaissance, with my draft Thesis Proposal, and modify the Proposal as needed following consultation with community members. Since I had lived in the North Rupununi in 2006, I knew it was not possible to meaningfully engage with community members without going in person. It would have been inappropriate to send my Thesis Proposal and ask for feedback. This approach would have severely restricted who would be able to provide feedback since very few people there had access to the Internet and printers at the time. In any case, academic documents were not the way to engage most community members. Sending the written Proposal would have been a particularly inappropriate and ineffective way to obtain feedback from Elders. Rather, it was best to go and talk with community members about the proposed research, and listen and take notes about their views. I also knew from e-mail correspondence with Iwokrama staff that the time I was proposing for my reconnaissance, January to April 2010, was at the peak activity time for the Club. In addition, the annual Wildlife Festival, a key event for NRW, would take place in April.

E.3. First encounters with Wildlife Clubs, 2010

I returned to Guyana in January 2010 and spent the first week in Georgetown, graciously given a desk to work at by Iwokrama in their Head Office. I then travelled to the Rupununi on

Intraserv's "Big Bus" in January 2010, and stopped first at Iwokrama's Field Station (near Kurupukari, see **Appendix B: Map of Guyana**).

E.3.1. Iwokrama Field Station

The rainforest at Iwokrama's Field Station is stunning, and there are ancient petroglyphs carved into the rocks at some points along the river. There was a weekend training course running at the time for Tour Guides, which I was invited to join. It was excellent, and I had the opportunity to observe the high quality training available to the mostly Makushi tour guides. I was impressed by the skills and knowledge of many Iwokrama tour guides and senior staff. I was grateful for the walks in the forest that focused on botany. This education helps guides to not only be able to identify plants, but be able to talk about the natural history of plants and their uses. It was explained to me that this added more educational value to the tours that guides gave to tourists, and increased tourists' satisfaction. Birders are the most common tourists, and often want to see specific birds. Even if tourists did not see the bird species they hoped to see, they were more likely to be pleased with the tour if they learned about the fascinating characteristics of the trees and other plants. I talked with a few Iwokrama staff about the Wildlife Clubs and about the future of the North Rupununi people and ecosystems.

Fairview Village is within the borders of the Iwokrama conservation forest, since Iwokrama takes an inclusive, social justice oriented approach to conserving and managing the Iwokrama forest (Chung Tiam Fook, 2011) which, unlike the "Fortress Approach" to conservation (see **Appendix A: Glossary**), does not force indigenous people off their land. Fairview is within walking distance of the Field Station, and it had a Club. I arranged to go visit with the Club's Coordinator. She told me the Club was not very active at that time, which she

attributed in part to the then President being out of the village boarding at Annai Secondary School.

E.3.2. NRDDDB and the Bina Hill Institute

The North Rupununi District Development Board (referred to by locals by the acronym NRDDDB) and the Bina Hill Institute for Research, Training and Development (BHI) are both on the same compound at Bina Hill, which is close to Annai, the largest community in the area. BHI founded the Bina Hill Institute Youth Learning Centre (BHI-YLC) and Radio Paiwomak.¹²⁰ Bina Hill is named for ‘bina,’ one of the local terms for charms usually fashioned out of plants, but sometimes made from animals. Bina are used by indigenous peoples throughout South America and “are believed to contain special properties that can be harnessed by humans if treated well, used for specific ends and administered in formulaic ways” (Forte & Makushi Research Unit, 1996, p. 149). The NRDDDB office is on the ground floor of a large multiuse two-storey pale-blue building. Also on the ground floor is a central common area with desks where community members and staff and researchers from partner organizations can use one of the coveted desks, power their laptops from NRDDDB’s generator, and use the satellite internet. There is also a room with a separate entrance that can be rented to researchers and other visitors. This is where I usually stayed while in the Bina Hill area. The dream catcher in the doorway bears witness to the period from 2002-2007 when BHI partnered with Ghost River Rediscovery on an indigenous youth exchange program. Aboriginal youth from Canada came to Bina Hill, and Makushi youth in turn voyaged to Alberta (Wihak, Hatley, Allicock, & Lickers, 2007).

¹²⁰ There can be some confusion when locals say “Bina Hill” whether they mean the place, Bina Hill, or one of the organizations. In this Dissertation, I will use: “Bina Hill” for the place, “BHI” for the Bina Hill Institute for Research, Training and Development, and BHI-YLC for the Bina Hill Institute Youth Learning Centre (see **Appendix A: Glossary**).

Most of the upstairs of the NRDDDB building is another large common room with the walls only up to waist level with views of the rest of the compound. The NRDDDB compound is a regional hub, and this upstairs room is a key meeting place that can be equipped for audio-visual presentations. It is where the NRDDDB holds its bimonthly meetings, where Iwokrama hosts the Centralized Meeting for NRWC delegates to plan for the Wildlife Festival, and where many other meetings are hosted. Upstairs is also where Radio Paiwomack 97.1 FM broadcasts to the surrounding communities. It is the only community radio station in Guyana. In the evening, Radio Paiwomak broadcasts a mix of local announcements and news (often delivered to the radio station as handwritten notes in Makushi or English), as well as music and programming from elsewhere.

The main BHI building is a large two-storey (a traditional Makushi circular building with an Ité or Kokrite palm leaf roof; see **Appendix A - Glossary**) with a main room on the ground floor for classes, several smaller adjoining rooms for storage and smaller group work, and where students sometimes stay. The upstairs is an open space with wooden railings under the palm leaf roof. It has a complete 360° view of the compound, the savannah that surrounds it, and the tree-clothed hills nearby. BHI-YLC teachers teach in this building, and often work at the NRDDDB building. BHI-YLC's Mission Statement is:

To build the capacity of the Youth of the North Rupununi and Guyana by developing leadership skills, fostering a love for the indigenous culture and the management of the environment, while expanding upon the existing social and cultural framework, thus preparing them for life in an ever-changing world. (North Rupununi District Development Board (NRDDDB), 2011)

BHI-YLC trains youth in several areas: Natural Resource Management, Forestry, Wildlife Management, Agriculture, Tourism, Business Studies, Life Skills, Traditional Skills, Basic Computer Skills, Mathematics, and English. It is a non-accredited two-year residential

program, and students are given a certificate upon completion. Former students have gone on to higher institutions of learning such as the Guyana School of Agriculture, or have been employed by Iwokrama.

During the first few weeks of my stay at Bina Hill, the teacher for the Wildlife Management stream of BHI-YLC's programming was not attending to teaching, and BHI-YLC had not found a solution to the problem, so I agreed to be a substitute teacher. It was a privilege to teach and get to know the bright young students in the Wildlife Management stream. Since students come from all over the North Rupununi, it gave me an opportunity to get to know some former Club members from many different Clubs, and to reconnect with a friend from Yupukari who was now attending BHI-YLC. It was also challenging since the students varied widely in their age and the quality and length of their previous education. I had no curriculum or lesson plans to go by, so it was quite time consuming for me to teach, because I had to prepare materials from scratch. I ascertained what they had been taught previously by reading students' notes. News of my substitute teaching reached the teacher, who then suddenly returned, which ended my teaching duties. I continued to enjoy the camaraderie of my former students throughout my stay in 2010, and was able to catch up with some of them during data collection in 2011.

The compound next door to NRDDDB-BHI is Annai Secondary School, one of only two secondary schools in the North Rupununi, where children from all over the North Rupununi attend. The communities of Wowetta, Annai, Kwataman, and Aranaputa are close enough for students to commute home, but students from other communities board in dorms on the compound during the school term (see **Appendix C – Map**).

NRDDDB, BHI, and Iwokrama staff located at Bina Hill were important resources. They advised me about logistics (especially transportation), introduced me to key NRWC

stakeholders, and were helpful in sharing background information on the social contexts of the area. They and the community members I conversed with at Bina Hill and in the eight communities I visited in 2010 gave important feedback about my proposed research. Thanks to their suggestions, I was able to tailor the research proposal to attempt to address the concerns, needs, and interests that communities had about the NRWC program.

E.3.3. Trips to Surama

I was fortunate to be invited by Emily Allicock, one of the staff members at NRDDDB, to stay at her home in Surama over a few weekends in 2010. Ms. Allicock had quarters in the NRDDDB building, but Surama is her home. Surama had a population of around 280 in 2010 (see **Appendix B: Map**). The trip between Bina Hill and Surama is one and a half to two and a half hours (or more) depending on the vehicle and the condition of The Road. It is too far and the road too uncertain for a NRDDDB staff member to commute daily, therefore, at the time, Ms. Allicock stayed at Bina Hill Monday to Thursday night, then Friday after work would get a ride to Surama, and return to Bina Hill on Monday morning. The first time I went to Surama, on Friday 29 January, I piled into the back of Ms. Allicock's brother's ancient Landrover with about 10 others and all our luggage. The other passengers were mostly Annai Secondary School students from Surama who were glad for the opportunity to go home for the weekend. The trip was slow but pleasant as it was late afternoon and cool. I watched as savannah turned into rainforest, The Road winding north through tall trees with spectacular canopies. At Surama Junction, we turned off the main road on to what became my favourite ride in the Rupununi: the road into Surama, cut through rainforest, like a tunnel of emerald green light filtered through the leaves. Then we emerged from the forest and into Surama Village just before sunset, and up the hill to Ms. Allicock's place.

People congregate at Ms. Allicock's because on her compound she has a small shop, a generator, and an outdoor benab where they watch a TV with satellite channels. It was a great place to lime and meet people to learn about the Wildlife Club. Sure enough, that very night I was introduced to a key former Club member, Edwin,¹²¹ a former Executive member who at the time had taken on a mentor-type role with the Club, along with another young man who was a former member. At the time, Woodpecker,¹²² also a young man and a former Club member, was President of the Club, instead of a Club member. Edwin invited me to go birdwatching the next morning (Saturday) at 6am. Since I was interested in climbing up to the Surama Mountain Lookout, he said we could see if any Club members would like to take me up. He told me he joined the Club when he was a small child, then left it for a few years when he worked for Iwokrama. At the time, he was working as a guide within Surama, and was able to help with the Club. He was very enthusiastic about the Club, and felt it had had a positive impact on his life. Shortly before, he had attended training on River Otter Monitoring arranged by Iwokrama, and he hoped Surama might start monitoring the giant river otters in the nearby Burra Burra River and Tiger Pond.

On 30 January 2010, I awoke at dawn to join the Club at 6am. The Club members were gathered in the early morning mist on bleachers under a huge tree, next to the primary school and facing the village's football field.¹²³ This is a central place for people to meet and for public gatherings to take place, like Market Days, parties, and sports competitions. There were three youths, Woodpecker, Edwin, and Shawn, and an Elder, Umbrella Bird. Umbrella Bird is a very experienced birdwatcher and guide. He joked, "I'm illiterate, I was trained in Nature," referring

¹²¹ Most names are pseudonyms to protect identities, except for community members who gave permission to have their real names used.

¹²² Pseudonym.

¹²³ Called "football" everywhere else, it is called "soccer" in North America. Football is popular in the Rupununi and in the rest of Guyana.

to his traditional upbringing and training to be a hunter. There were about 20 children aged 7-12 year old, about the same number of boys and girls. I was told this was a small turnout, since most children in the village are Club members. As we walked to the start of one of the trails they use, the adults explained their method. The birdwatching was supposed to be for one hour, 6-7am, every Saturday. The birds were sighted and then the names called out by the most experienced birders, usually Umbrella Bird, Woodpecker, or Edwin. Each Club member was supposed to bring a notebook and write down all the birds that were called out. About half the children that day had something to write on. Some of the boys were quite obstreperous. Woodpecker told the Club members as we headed out, “y’all are not to be flicking grass!”¹²⁴ However, some young boys hit trees with sticks and damaged other plants. These boys did not appear to be engaged in the birdwatching, and the adults did not appear to address their destruction of the plants. Consistent with these observations, at a Centralized Meeting (see next section), the Club’s President reported that a challenge for their birdwatching was that “some Club members just don’t care, and go play.”

Despite the commotion, we saw many birds, especially on the part of the trail that is on the savannah at the edge of the rainforest. Many birds were sighted on or near the trees, close enough that many people were able to identify them with the naked eye, but far enough away that to observe their behaviour or confirm a tricky identification, binoculars were required. Umbrella Bird had a bird identification book, and he and Woodpecker had binoculars. Some of the children kept very close to Umbrella Bird, and listened intently. At times he would point something out and pass his own binoculars to a child so he or she could see. For some interesting identifications, up to half the children gathered around him as he showed them the bird

¹²⁴ The grass species on the savannah produce grass leaves that are so sharp and rigid, they can be flicked like tiny spears to injure other children or to spear insects, like grasshoppers.

identification book and spoke about the bird. He knew the common English, the Scientific, and the Makushi names for the birds.

This birdwatching outing gave a snapshot of a community with an active Club carrying out the activity autonomously and with several adults to support the activity. On Saturday 20 March, a week before the 2010 Wildlife Festival, I observed another birdwatching outing. It was along a different transect, there were two instead of three young adults helping, and two other visitors attended. Otherwise, it was very similar: lead by Umbrella Bird, with a similar turnout of Club members (around 20, an equal number of girls and boys, aged 7-12), and a similar range of engagement. Again, a few young boys appeared unengaged and mildly disruptive. About half the Club members had materials to record the birds that were called out. Two Club members stayed close to Umbrella Bird and offered identifications themselves. None of the Club members had binoculars or a bird identification book, so occasionally Umbrella Bird would offer his binoculars to a child, and at times most of the group would gather around Umbrella Bird as he shared his knowledge about a bird. His teachings seemed to springboard off the entry in the bird identification book.

I heard that the Club had regular meetings but did not observe a meeting in 2010.4.3.4.

Centralized Meeting

The main goal of Centralized Meetings is face-to-face planning of the Wildlife Festival with stakeholders. The Meeting is held at Bina Hill, in the NRDDDB building. There is usually one Meeting in October and another in February. I attended the Centralized Meeting that occurred from 13-14 February 2010. The theme of this Meeting was 'Climate and Our Environment.' The stakeholders who were invited included Club members and adult Club volunteers, staff from Iwokrama, the Guyana's Environmental Protection Agency (EPA),

Conservation International (CI), and a member of the Makushi Research Unit (MRU). An invitation was also extended for presentations about local projects (some projects at the time were about caiman, arapaima, and sustainable forestry). Other goals of this Meeting included providing training and presentations for the Club members and adult volunteers about the environment and about personal development (such as a presentation about public speaking). It was hoped that the Club delegates would share what they had learned with their Club's members upon return to their home village. There were also presentations and training geared towards improving the functioning of the Club, such as a presentation and a birdwatching outing by the Iwokrama Outreach Team about improving birdwatching.¹²⁵ Two Club members and the adult Club Coordinator were invited to attend the Centralized Meeting. Most Club members who attended were the President or another Executive member. Iwokrama funded and organized the Club delegates' transportation to and from the Meeting, and it provided accommodation and meals during the Meeting. Each Club brought a contribution of a pound of farine¹²⁶ per delegate.

At the Meeting, one delegate from each Club presented their Club's activity report for the period since the last Centralized Meeting in October 2009. Activity levels of the Clubs varied widely, with some Clubs having very little to report, to a few Clubs reporting weekly birdwatching, periodic fieldtrips, activity on projects, and fundraising activities such as Market Days. There was discussion on the overall theme for the 2010 Festival, and "Biodiversity: Our Best Security" was co-created from the ideas presented by attendees, and then selected by voting. There was also a discussion, facilitated by Ms. James, about the activities and workshops to take place during Festival, about the Culture Nights on two of the Festival's evenings, and logistics,

¹²⁵ The Outreach Team then visited most communities over the next few weeks before Festival, and these visits always included birdwatching. See next section.

¹²⁶ Farine is the parched grated form of Cassava, the staple in the North Rupununi. It can be eaten as is or soaked in hot water to soften it, or soaked and fried with other ingredients. See **Appendix A: Glossary**.

such as transportation, the route for the parade leading to the opening ceremonies of the Festival, etc. Along with attending all of the Centralized Meeting, I had the opportunity to converse with the delegates who were from Clubs from all over the Rupununi about my proposed research and what they felt would be important to study about the Clubs, and to make connections for future visits to some of the communities.

E.3.5. Adventures with the Outreach Team, February – March 2010

After the Centralized Meeting, Iwokrama's Outreach Team was scheduled to conduct their outreach to visit all the Clubs. At the time, the Outreach Team visited villages at least once a year, usually between January and March, which is the period leading up to Festival. In 2010, there were two young men employed by Iwokrama as Outreach Officers, Nicco and Henderson.¹²⁷ Outreach to the Clubs was one responsibility in their portfolio. For Club outreach, they reported to and worked closely with Iwokrama's Community Education and Awareness Manager, Ms. James, and used Bina Hill as their base for outreach and then for co-managing the Wildlife Festival. At other times of the year, they were based at Iwokrama's Field Station. In 2010, the Outreach Team visited the communities closest to Bina Hill by commuting by bicycle or by a 4x4 vehicle. For the communities Yupukari, Kwaimata, and Masssara, the Team made a trip from 16-19 February using a 4x4 truck. For communities even further away and best accessed by river (Apoteri, Rewa, and Crashwater), they travelled by motorboat.

I was invited to volunteer with the Outreach Team. Consequently, I visited communities near Bina Hill with them and went on the 16-19 February outreach trip to Yupukari, Kwaimata, and Masssara. For the February outreach trip, our group was composed of the two Outreach Officers, Nicco and Henderson, a volunteer who was a guide at Iwokrama and former Club

¹²⁷ Pseudonyms. See section 1.6. about funding of the Outreach Team.

member, Gerry, and a driver, Jake.¹²⁸ We five and all our gear were piled into a battered old Toyota pickup truck. There were two seats inside the cab, so Jake and Henderson rode inside, and Nicco, Gerry, and I were in the back. There was a board laid across the back so we could sit on it and face forward, holding on to any handholds we could find on the top or side of the truck's cab. My favourite spot was on the right hand side, and it was exhilarating to watch the savannah roll by (see **Figure E.1.**).



Figure E.1: View of The Road while on Outreach, February 2010

The Outreach Team's approach for this trip was to arrive at a village in late afternoon or early evening, set up our hammocks, and have dinner purchased from locals. The next morning, they would lead a birdwatching outing from 6-7am. Mid-morning during the school day, the Team would present for around an hour to the grade 4 and 5 students¹²⁹ at the village's primary school to inform students about Iwokrama's activities, show documentaries about local projects, and talk about the upcoming Festival. The Team would then engage the students in a hands-on activity. This hands-on activity changes depending on the theme of the Outreach. For this trip,

¹²⁸ All names are pseudonyms.

¹²⁹ I was told the grades that Iwokrama targets changes each year.

the theme was climate change, hence the “Carbon Activity” was used. Then in the afternoon after school, the Team met with the local Club to educate the Club members about that year’s environmental topic (in 2010, it was climate change), remind them about the upcoming Festival, and troubleshoot with them about any problems the Club might be having, or resources it might need. Since I was there, I was asked to give a brief presentation about my proposed research on NRWC, and about my past experience with R&S in Tanzania, so that the Club members could learn about a program similar to their Club. The Outreach Officers also requested performances for Club members during the Club meetings, and so in some communities I performed with my LED poi, and in some (like Massara) I sang.

The Outreach Team adapted the basic format, above, to tailor their approach for each community. For example, in Kwaimatta (on February 18), the teachers had all the students attend the presentation rather than just the grade 4 and 5 students. They said their school was small and they did not think the other grades would concentrate on their lessons if the grades 4 and 5 had the presentation inside the school. In Yupukari, the presentation to the grade 4 and 5 students took place in a large outdoor benab outside of the main building. There was no other building to use to separate the students attending the Outreach presentation from the other students in Kwaimata, so the Outreach Team agreed to present to all students. The students were not answering their questions at first, then the Outreach Officers offered colourful pencils to students who answered questions. More students then responded to their questions.

The birdwatching outings I observed while with the Outreach Team were similar to what I observed in Surama with respect to the timing and structure: 6-7am, along an established route, and the birds’ names were called out for Club members to write down, the ratio of girls to boys was about equal, and Club members were 8-12 years old. Some differences were: there were

more binoculars and bird identification books, so Club members could share binoculars themselves, and use the books; and Club members seemed quite engaged in the activity, with only a few children appearing to be distracted. The biggest difference was that there was no Elder present on these birdwatching outings. And the birds were identified (usually by Nicco or Henderson), but no additional information was given about the birds, such as their behaviour, natural history, or traditional stories about them. It was difficult to gauge how well attended the birdwatching was in Kwaimata and Massara because I only observed one birdwatching with the Outreach Team. In Yupukari, the birdwatching with the Outreach Team had the largest attendance I observed in any community in 2010 and 2011, with around 40 children and youth attending (the birdwatching I observed in Yupukari on 6 February 2010 without the Outreach had about 25 children and youth participate). The Massara Club appeared to be well equipped with binoculars and bird identification books. Interestingly, of the seven communities in which I observed birdwatching, only Massara required using a motorboat to get to the birdwatching trail. In the other six communities, the adult volunteers and Club members could simply meet at a designated spot and walk to at least one of the established birdwatching trails.

The Outreach to communities near Bina Hill was similar but the Outreach Team did not need to stay in the communities overnight, so commuted to the communities for the meetings or presentations by bicycle or 4x4. The Club in Toka was no longer active in 2010, therefore there was only a classroom presentation, and no birdwatching or meeting with the Club. In Rupertee, there was no electricity at the meeting place with the Club, thus less use of technology (videos played on a laptop), and instead, the Outreach officers did more troubleshooting with Club members about their Club.

4.3.5.1. Yupukari. In 2010, Yupukari's Club appeared to be very active. I informally interviewed the President, Secretary and current and past Coordinators and other stakeholders during two trips to Yupukari in 2010: the one described above with the Outreach Team; and another visit on my own just before the Centralized Meeting, from 5-12 February. They described an active Club that conducted almost weekly birdwatching, had previously done pit-trap monitoring, held regular meetings, participated fully in Festival (there are many competitions Club members can participate in), and had received awards and funding.

The President and other people involved with the Club told me Yupukari's Club started officially in 2005, relatively later than the initial founding of most Clubs in 1998. The Club's founding was spearheaded by one local girl, and was named the "Hearts and Hands Junior Wildlife Saving Club." In 2010, the Club's President was a 20 year-old youth who was a strong leader and very enthusiastic about the Club. He led the birdwatching I observed on 6 February, and assisted with the birdwatching on 18 February led by the Outreach Team. He went on to work for Iwokrama, including working as an Outreach Officer. Although the Club did not have a Clubhouse, they had their records (mostly in notebooks, and some digital files on a laptop) stored in the upstairs of the Library. The President showed me the goals of the Club in a notebook, along with rules proposed by the Club to keep Yupukari litter-free. There were also several adult volunteers to draw on. The Club appeared to have a strong foundation with local adult volunteers and Executive members, and stakeholders I spoke with felt the Club benefitted from having Caiman House and Rupununi Learners as local assets. The Club benefitted from Caiman House's staff, and from the foreigners who came frequently to volunteer at Caiman House and Rupununi Learners. These foreign volunteers were spoken of with appreciation and their contributions appeared to also be highly valued. They brought expertise and ideas that the Club could benefit

from and could form the basis for projects. Foreign volunteers also had time to contribute to organizing activities and events when local volunteers were too busy. It appeared that the strong local base, composed of community members, helped the Club to capitalize upon the opportunities suggested by foreign volunteers.¹³⁰ In other words, the foreign volunteers sparked some projects and activities, but it was the local stakeholders in the Club who then chose whether or not to tend the fire.

Another benefit of Caiman House and Rupununi Learners that I noticed, and asked about during the 2010 reconnaissance and in the 2011 Interviews, was that they appeared to support the capacity of Yupukari's Club to apply for and receive funding and obtain recognition beyond the local community. For example, in 2009, Rupununi Learners, in collaboration with Small Planet Consulting, competed for funding from ECOCLUB.com, and the Club project "Wild to Web" was selected for funding. The project's description: "Ecotourism-linked wildlife monitoring activities by the village Wildlife Club will be enhanced by a dedicated laptop and cameras. Village youth will learn to digitally document field projects, to make web pages, and upload them online"(Karwacki, 2009). The ECOCLUB award funded purchasing two digital camcorders and two digital cameras to record Club activities (such as birdwatching, pit trap monitoring, and caiman monitoring), and a laptop for video editing and online work. As part of their final report to ECOCLUB.com, the Club posted two videos about birdwatching on Youtube, including one with footage from an October 2009 birdwatching outing with the Guyana Tropical Bird Association (Karwacki, 2009). Also in 2009, Yupukari's Club won "Best Wildlife Club" at the Wildlife Festival, and it was awarded "Best Nature Club of the Year" by Guyana's Ministry of Tourism as part of celebrating Tourism Awareness Month and the theme "Promoting Quality and Sustainable Tourism" (Khan, 2009).

¹³⁰ This idea will be discussed further in **Chapter 7** - Implications for Practice.

2.3.5.2. Wowetta. The Road goes right through Wowetta Village, which is close to Bina Hill (see map, **Appendix B**). Wowetta has a population of approximately 313 (see **3.5.3.**). My first visit to Wowetta was on 2 February 2010. I borrowed a bicycle and rode over from Bina Hill (a 30 minute bike ride) to Wowetta to meet the Club's President. Then on 5 February, the Club's Coordinator came to the NRDDDB building to use the Internet, and kindly met with me as well. BHI's then Principal was Wowetta's toshao, Bertie Xavier, and he was at Bina Hill almost daily. I spoke with him as well. From these three sources, I learned the Wowetta Club was fairly active but had been more active in the past. The President told me that in the early years after the Club's founding in 2000, Community Environmental Workers (CEWs) were very helpful with the Club.¹³¹ The President said almost all of the village's children in the eligible aged 8-12 (12 is when they start secondary school) were Club members. The President said older youth were embarrassed to do "childish" Club activities, so five 16-21 year-old youths took on Executive positions (including the President). The President said the reason the Club was presently strong was because some parents had taken an interest and helped significantly, especially with bigger activities, like camp-outs. At the time, the Club was conducting bird monitoring and rain monitoring. The birdwatching was every first and third Saturday morning of the month. Unlike with Surama and Yupukari, I did not have an opportunity to attend a birdwatching outing that was not being lead by the Outreach Team. I went with the Outreach Team on 10 March 2010. We drove to Wowetta and picked up some children along the way. This birdwatching was led by Henderson and Nicco, and it was attended by the President and 11 other Club members, an adult volunteer, a foreign visitor, and our driver. The birdwatching activity occurred along The Road

¹³¹ Iwokrama's CEW program was a two-year pilot program (1999-2001) designed to increase local capacity for natural resource management (James, n.d.). Although the program was no longer funded by Iwokrama after 2002, "the majority of former CEWs continue to be actively involved in conservation and leadership activities within the communities" (Chung Tiam Fook, 2011, p.85). The CEW program was mentioned often in 2010 and 2011 and was very highly regarded by community members.

(there are other trails available as well), which, from what I could tell, was comparable to the other more isolated trails I had been on in other villages in terms of the diversity and number of birds that were sighted. The two Outreach officers and foreign visitor had binoculars (3 total), and one pair was used occasionally by a few children. However, three girls did not appear very interested in the birdwatching, and instead, brought me a seemingly endless supply of fascinating plant specimens (see Figure E.2.).



Figure E.2.. Some of the plant specimens during “birdwatching,” 10 March 2010.

This caused me to reflect on two points. First, the potential impact my presence could have on the activity I was observing. The observer impacts the observed phenomenon, such as the “Hawthorne Effect” (McCarney et al., 2007), but there were some instances during this research that I felt I was having a particularly strong impact, despite attempting to stay neutral, because the children who were disengaged with the activity (usually birdwatching) would engage with me. In this instance, these girls appeared more interested in the plants than in the birds. My presence appeared to enable them to explore botany! A year later, during the one birdwatching I attended during data collection in Surama, around half of the Club members became more interested in observing spiders than birds. These experiences caused me to consider a second

point: did Club activities meet the interests of Club members? It appeared that Club members had other interests besides birds. Were there already other activities in place to meet other interests?¹³² This also caused me in 2011 to ask participants who were former Club members what they liked and disliked about Club activities.

E.3.6. 2010 Wildlife Festival

I volunteered at the 10th annual Wildlife Festival, held at Bina Hill from 27-29 March 2010. I was assigned to conduct and document dorm inspections, be one of the art and poetry contest judges, and I performed (singing and poi) at the Culture Nights. I was excited to experience Festival, since it was the most important event of the year for the Clubs, and the peak of their activity for the year. I also felt it was a unique event for a Club-based environmental education program. I had not heard of any other program regularly bringing Clubs from different areas together for an event. I had heard many positive comments about Festival from people involved with the eight Clubs I had visited, as well as some concerns. I am grateful to Iwokrama for the opportunity to have been of service to the NRWC program and to the wider community by volunteering. It was part of how I sought to reciprocate with the Rupununi communities.

However, the workload was intense, and I was working on the IDRC funding application due three days after the end of Festival.¹³³ And I was guardian for Edna's 17-year-old granddaughter, who stayed with me for my last three weeks of the 2010 reconnaissance. I also became ill, likely from stress. Concerned about my illness (mostly rashes and severe fatigue), a friend convinced me to go to Surama's *Piamon* (shaman), who "shook the leaves" for me, a traditional ceremony. That adventure could be a whole chapter on its own. For brevity: the treatment actually burned me so severely in some place that I wore my hair down during Festival

¹³² See Chapter 7 - Implications for Practice for more discussion on Club programming.

¹³³ My 2009 application for the IDRC Doctoral Award was not successful, but they encouraged me to reapply. My 2010 application was successful, and funded my fieldwork in 2011.

to cover the back of my neck where the skin was peeling off. Still, I have no regrets to have experienced such a profoundly beautiful and mesmerizing ceremony, in which I lost all track of time while the Piamon chanted in Makushi and rubbed tree branches together so that the sound of the dry leaves created an amazing soundscape. The leaves sometimes sounded like being in a forest during intense wind, sometimes like rattles I'd heard in Algonquin ceremonies in Ottawa, and sometimes when the branches came closer to me, like the whooshing of a bird flying right at me. I learned later that the Piamon believed he enlisted the help of local animal and plant spirits who advise him on treating those who come to him. It was a *Spell of the Sensuous* kind of experience (Abram, 1996), a ceremonial encounter with the more-than-human world. But for me, the translation of the insights the Piamon gained through the ceremony into an actual physical treatment of my symptoms harmed me.

Due to the intense workload, IDRC deadline, responsibilities, illness, and then treatment of the illness, I did not have the time or energy to write extensive field notes about Festival, or to talk to stakeholders in the Clubs about their experience of Festival 2010. The following is based on my brief notes.

Because I had been at Bina Hill since January, I witnessed the tremendous amount of planning, preparation, and work that was required to hold Festival. Ms. James (Iwokrama's Community Education and Awareness Manager) undertook the majority of the work and had experience organizing several previous Festivals. The Outreach Officers assisted her with the planning and preparation, and they and a team of volunteers helped with the execution of Festival. Being a volunteer allowed me to see behind the scenes of what it required to run Festival. Once again, it took a tremendous amount of work and effort.

The logistics alone are daunting to bring together 230-250 children and their chaperones and the team of volunteers, and to house and feed all of these people for four days. Each Club was invited to send up to 15 Club members, and was required to send two adult chaperones (a woman and a man). As described previously in this Chapter, transportation can be difficult, uncertain, and expensive in the North Rupununi. There are no paved roads, and The Road is laterite and rough with potholes and washboarding. There are only a few places to purchase gasoline, and so any trip that will be longer than a few hours absolutely must calculate how much fuel will be required, where it will be purchased, and whether fuel will need to be brought along for the trip. More and more people in the Rupununi have access to motorbikes, which can transport two people (or more!). But the majority of community members in most villages do not have their own motorized vehicles with the capacity to transport 15-20 people to Festival, which would require 4x4 trucks, minibuses, or motorboats; nor the financial means to purchase fuel for a trip to Festival. Therefore, Festival organizers must fund and organize transportation for delegates to get to and from Festival. A few villages have their own transportation suitable for transporting all of their delegates. For example, Surama has several large trucks used to transport passengers or cargo, and Yupukari has a tractor that tows a flatbed. For these communities, Festival organizers provided funding for the village to use its own transportation. For other communities, Festival organizers arrange for the Festival delegates to be picked up, either by motorboat (for a few riverine communities) or by minibus.

For housing, Festival is scheduled during the Easter Holidays so that the Annai Secondary School dorms on the compound next to Bina Hill can be used to house the majority of delegates. Easter is a long school holiday in Guyana, and so Annai Secondary School students boarding there return home for the two-week holiday. This is a cost effective and convenient

strategy to house so many delegates. I was aware, however, of how much work this entailed because part of my volunteer duties were to ensure all dorm rooms were photographed and paperwork filled out before and after Festival so the dorm rooms were left in the same condition they were found in. Should there be any dispute about damages in a room, Festival organizers and the Secondary School could refer to the documentation of the initial state of the room. The dorms could not house all delegates, therefore some delegates strung up hammocks in buildings on the Bina Hill compound.¹³⁴

Feeding all the delegates required hiring cooks and purchasing food, including slaughtering a cow nearby. Clubs were required to send farine with their delegates as their contribution to keep the costs down for Festival. Delegates were each required to bring their own cup, plate, and utensils. With so many delegates to feed at the same time of day, one issue at this Festival and in past years was the long line-up and wait to get food.

Funding for Festival in 2010 was secured mainly from Iwokrama, EPA, and WWF. Along with the above transportation and food costs, there were prizes awarded for the many competitions held during Festival. These prizes included gear for sports, especially footballs and volleyballs, books, and games. These prizes were purchased in Georgetown and brought to Festival by volunteers coming from Georgetown by 4x4 to attend. Judges, workshop facilitators, presenters, and other volunteers were composed of North Rupununi community members (especially Elders for traditional skills competitions), members of MRU, and staff from Iwokrama, EPA, WWF, and CI.

The schedule of Festival 2010 was as follows. Delegates staying on the compound arrived the afternoon or evening of the 26th of March to settle into their lodgings. After breakfast

¹³⁴ As previously mentioned, it is common for travellers in the Rupununi to “walk with their hammock.” Most villages have places where people are welcome to stay, all they need to do is string up their hammock.

the morning of the 27th, each Club's members grouped together wearing their costumes and carrying their Club's banner. Each Club made a new banner every year with materials supplied by Iwokrama (fabric, paint, and brushes) which was supposed to illustrate that year's Festival Theme (2010 was "Biodiversity: Our Best Security"). The Clubs then paraded to the Big Benab at Annai, the largest benab in the area, which has a stage (including backstage areas) and stadium style seating on wooden benches on the outer rim of the circle, and plenty of room in the inner area for people to stand or sit down, and for chairs to be placed near the stage for local leaders, judges, and organizers. The Big Benab is used for performances, shows, meetings, trainings, and workshops. Once the parade arrived, the Opening Ceremony was held, with speeches. The Clubs were judged for Best Costume and Best Banner. Then the delegates were all brought back to Bina Hill for lunch.

In the afternoon, the programming began. There were presentations, and workshops on social skills. There were competitions: a quiz contest (on wildlife and the environment); sports competitions like sack races and volleyball; a public speaking contest;¹³⁵ and traditional skills competitions, such as cassava grating, archery, fire lighting, and cotton spinning. Club members also had the opportunity to submit art and poetry entries to the Art and Poetry Contest at the beginning of Festival, and these were put on display in the BHI Benab for most of Festival (I was one of the judges). There was also a Best Band Contest. Thus, the days were filled with the competitions and workshops, and then after the dinner break, there was a Culture Night held every evening at the BHI Benab, which was equipped with generator-powered sound equipment. For Culture Night, Club members, sometimes with adult volunteers, performed original and traditional songs, skits, and poetry readings. These performances were frequently in Makushi.

¹³⁵ There was no training at this Festival about public speaking, but contestants were given feedback.

This was when the Best Band Contest took place. The Culture Nights ended with forro music for forro dancing (a dance from Northern Brazil that is popular in the Rupununi).

Delegates from the communities closest to Bina Hill could commute rather than stay at Bina Hill. The Surama Club chose a different approach to Festival than the other communities that were staying at Festival. The Surama Club arranged separate housing and food for their delegates. I was told Surama village had decided upon this approach partly due to the long wait for food, and because they felt this made it easier for them to take care of their own Club members. The Surama delegates stayed on a private home's compound within a few minutes commute by truck. They slept there, had breakfast, then would commute to Bina Hill for the morning Festival activities, commute to their lodgings for lunch, commute back to Bina Hill for the afternoon programming, return to the compound for dinner, then commute back to Bina Hill for the evening Culture Night, then back to their lodgings to overnight.

Delegates returned to their home villages the morning after Festival was completed. I returned to Canada shortly thereafter to integrate community feedback into my Thesis Proposal.

E.4. Observations 2011

As described in narrative overview of the research in section 3.1., I returned to the North Rupununi for data collection in two phases, May to July and September to December 2011. Just before data collection, I made one trip down from Georgetown to Bina Hill from 4-8 May 2010 upon the request of NRDDDB to discuss my proposed research and the research partnership with NRDDDB staff in person. I caught up with some of my contacts from 2010 and discussed the upcoming research. While at Bina Hill, I was invited to Surama. I was concerned about visiting one of my research sites because my research permits were still in progress, but learned that the most important requirement for any kind of visit to Amerindian communities in Guyana is the

permission of the community itself. I sensed that some community members felt that the official process of granting permission to visit Amerindian communities managed by MoAA sometimes undermined their own autonomy to make decisions about visitors.¹³⁶

There were very few Club activities to observe during data collection, which is why these observations are presented here for context instead of analyzed and presented in Chapter 5 – Data Analysis.

E.4.1 Surama, 29 May – 11 June

Once I obtained my permits in Georgetown, I returned to the Rupununi and commenced data collection at the end of May, starting with Surama first. I met with Commando Johnson (Sir Johnson¹³⁷), who was assigned to me by the Village Council. He was fluent in English and Makushi, a retired teacher and principal who had been involved with Surama's Club at the beginning, when NRWC was founded in the Rupununi in late 1998. He moved away from Surama in 2001 to work, and then retired and returned in 2010.

Oral History of Club. Sir Johnson gave me the oral history of Surama's Club. He said that church-based schools first opened in the area in the 1950s and 1960s, and had some elements of Nature Studies in the curriculum. Then in the 1960's, the State took over schooling, and he felt Nature Studies was dropped from the curriculum and replaced with Science. He recounted that when he was in grade 6, he was in a 4H Club at his school (and still had the book from that Club). He became a teacher, and in 1988 started to integrate Nature Studies back into the curriculum as part of Science. He said that many of the teachers when he started teaching in

¹³⁶ I would like to ask Makushi people if the official MoAA process of paperwork is consistent with their own traditions, which may have taken an oral approach to granting permission to visitors.

¹³⁷ Pseudonym. As a former teacher, most younger community members tend to call Mr. Johnson "Sir Johnson" or simply "Sir", as did I.

the 1980s were Coastlanders, and he felt they did not take students out into the environment enough:

The teachers didn't really explain it in full... They had the kids draw a flower. Short term. Never really do field studies, where you go for a walk to look in the area. They just do it in the four walls. Just use imagination, even though those things are right here. Because those teachers didn't know, they weren't from here. They were afraid of harmful things in the environment.

He encouraged fellow teachers to realize "there are so many things we can do in our spare time. Not only during classes. We can go for a walk in the morning and the evening. And you'd have a different sensation of what activities is taking place in the environment" at those different time of day. Then he was part of starting an environmental club to support an experiential approach to nature studies. Thus, there was already an environmental club in Surama when NRWC Clubs were being founded throughout the Rupununi. However, Sir Johnson did not feel that original club was recognized beyond Surama. When Surama's existing club became part of NRWC, this gave it official status and recognition as a Club within the NRWC program. This helped improve the existing club's organization, and gave the club access to Iwokrama's resources and staff:

Then we were more recognized. When we started out to be a full part of the wildlife club association [i.e. NRWC], we asked assistance about how we can go about this, because at that time, Iwokrama was training rangers, field guides, you name it, to accompany tourists. And we became part of program, so we asked for suggestions, advice, to help make things happen... We get involved now, no longer by ourselves.

Shortly after Surama's club joined NRWC in late 1998, an Iwokrama staff member helped the Club to develop their birdwatching strategy, and they cut a trail in rainforest habitat to use for birdwatching. Work was being done to help preserve and teach the Makushi language and so the trail was given the Makushi name of a white-bellied pigeon frequently seen on the trail: Razaka Trail. At the time of data collection, this trail was overgrown and no longer used. The

birdwatching outings I observed were on transects that went through mostly savannah at the edge of rainforest, which did not need to be maintained the way a trail in the forest needs to be maintained.

Like others had said during my reconnaissance, Sir Johnson and family members felt the presence of the Club in Surama had drastically reduced the amount “wickedness”: young boys killing birds with slingshots for fun rather than for food. Sir Johnson also felt that since the Club was established, local children knew more about their environment, and gave the example that in the 1980s, if a visitor had asked where to see a particular species of birds, few people would have known where to direct them. But now, Club members would be able to direct the person to the right place and tell them the best time of day to find the bird. In the early days of the Club, there was a period of growth for the Club and more and more children joined, but then interest and activity decreased when the children who had been most involved went to Secondary School.¹³⁸

Sir Johnson was out of Surama from 2001 until six months before the data collection started, therefore more recent history of the Club was recounted by the Club’s current (2011) Coordinator. She described cycles of more and less activity depending on the enthusiasm of the youth involved at any given time. Surama participated in the Wildlife Festival every year, and tended to do well in the competitions. In the mid 2000s, there had been Club fieldtrips to visit Iwokrama Field Station and Canopy Walkway, and one exchange trip with Wowetta (which, during interviews, many people said had been very valuable). Other activities included picnics and overnight stays on the nearby Burra Burra River. Like other Clubs, there was rain-monitoring for a time. For a few years, the Club had birdwatching every Saturday, 6-7am, followed by a Club meeting, and every second Saturday, with a clean-up campaign (the Club

¹³⁸ This continues to be an issue, most youth aged 12-16 in Surama and other villages board at Annai or Saint Ignatius Secondary Schools and so are not available to their village’s Club during the school year.

members would pick up litter along one of the village's trails). I did not observe any clean-up campaigns in any of my visits to Surama.

Observations of Club Activities. The only Club activity that occurred during Phase 1 in Surama was a Club meeting held by the Coordinator at the primary school on 3 June from 1-2pm, which I observed. There were nine boys and seven girls present, aged 8-11 years old, sitting clumped together by gender. Apparently this was a low turnout, and the Coordinator asked those present to remind other Club members about meetings, and did a brief brainstorming on how to encourage more members to attend meetings. Then part of the meeting was spent getting feedback from the Club members about the 2011 Festival held the month before. This was in order to fill out an evaluation form sent by Iwokrama's Community Education and Awareness Manager. The Coordinator read out each question, and asked the Club members to respond. Some questions elicited more boisterous responses, but there did not appear to be any disagreement between Club members about what response should be written on the form. Once the Club members had responded, the Coordinator summarized their responses, asked if that was what they wanted to put on the form (the Club members said "yes" for all the questions), she wrote down their response on the form, and then moved on to the next question. One interesting question was whether Festival should continue to be every year, or change to being held every two years. The Club members all responded loudly to "have it every year!"

The Coordinator then shifted to regular Club business, to make plans for the next two months. She named an activity, and asked for feedback from Club members. Decisions were made by Club members voting. Proposed activities were: birdwatching, clean up campaigns, reading periods at the Clubhouse, a field trip to do giant river otter monitoring in July, and fundraisers. Club members voted to continue birdwatching every Saturday, 6-7am, and to do

clean-up campaigns directly after birdwatching every 1st and 3rd Saturday. The reading period at the Clubhouse was to give Club members an opportunity to read the books that the Club had accumulated over the years. Books had gone missing and been damaged in the past, so the reading periods now required one adult present. The Club members wanted the reading period to be on Sundays, but the Coordinator (the adult most likely to supervise the reading period) was not available then, so she offered 4-5pm on Wednesdays, and the Club members agreed. The river otter monitoring field trip was voted to be mid-July on the Burra Burra River. This would require purchasing gasoline for motorboats. The Treasurer was not present, but the finances were still reported. The largest recent expense was for Festival (as described in the section 4.3.6.. in 2010, Surama housed and fed its Club members separately from the other delegates, which incurred expenses). Club members voted to have a Market and Games Day after lunch on one Saturday a month. The next Market and Games Day, particularly to fundraise for the river trip, was scheduled for the end of June to give the Club at least two weeks to prepare and advertise the event.

The Coordinator announced that as of June, it had been two years since the last Elections, hence it was time to elect a new Executive. The Coordinator reminded Club members of their system. A candidate needed to be nominated by another Club member, and that nomination needed to be seconded. Then that candidate was expected to campaign until the Elections. The Elections were scheduled for mid July, when the coordinator said the secondary school students would be back for summer holidays. Nominations began, and three boys were nominated for positions. The Coordinator remarked, “Y’all don’t have confidence in the girls?” The girls had not participated as much as the boys in the meeting. The Coordinator told the Club members to take a blank sheet of paper home and think of other Club members to nominate. Near the end of

the meeting, the Coordinator invited me to introduce myself to the Club members and tell them about my research. To close, the Coordinator reminded the Club members about birdwatching the next day, 6-7am on Saturday 4 June, and that afterwards, the Club members were invited to go to the Clubhouse for distribution of the prizes won by the Club at Festival. This was the only birdwatching scheduled during phase one of data collection. Unfortunately, it was rained-out, so I did not observe birdwatching or the distribution of Festival prizes.

Sir Johnson and I scheduled the focus groups to be on the weekend because community members said this was most convenient and would be best to have sufficient participants. The focus groups were also a good opportunity for recruiting individual interview participants. The men's focus group was Saturday 4 June. It was the first focus group for data collection, and the first focus group I had ever conducted in the Rupununi (versus individual interviews, which I had experience with in 2006 and informally in 2010). It was a very dynamic and rich discussion, but I noticed that the eldest man in the focus group did not speak very much. I was grateful that Sir Johnson did his own debrief with the participants, and then debriefed with me. Sir Johnson explained the Elder participant had not said much because he was not as comfortable speaking in English as he was in Makushi. In the introduction period of all focus groups, participants were told they were welcome to speak in Makushi rather than in English (I always had a community collaborator with me who was fluent in Makushi). However, as this case demonstrates, participants still tended to speak in English, or to not speak. Sir Johnson said the other reason this participant was relatively quiet was that he agreed with what the younger men were saying and so did not feel the need to speak. The only thing he told Sir Johnson he would have added was that the other men said parents were not supporting the Club enough, and he felt that teachers were also not supporting the Club enough.

Sir Johnson also learned in his debrief that the participants had been pleased with the focus group and with how I was conducting the research. In particular, they appreciated the recruitment letter and consent form, that these documents made it clear that participation in the research was voluntary, informing them and inviting them ahead of time, and knowing about the plan to disseminate the research findings back to the community in an engaging, creative, and culturally appropriate way. Apparently previous researchers had not used written consent forms with participants¹³⁹.

The women's focus group was immediately after Church on Sunday 5 June. This scheduling helped to increase participation, because some women who did not hear about the focus group from my other recruitment strategies decided to participate because the focus group was occurring near the Church, and since lunch was provided, they did not need to go home between Church and the focus group. Sir Johnson did not attend the entire workshop because he was concerned his presence, as a male Elder, might discourage some women from speaking up. He did not debrief with participants afterwards, so I checked in with three participants I later interviewed individually. The Club Coordinator took the opportunity of having many mothers of Club members together to fill out an evaluation form for parents about the 2011 Festival. Her approach was similar to what she did with the form for Club members.

The community response to the research was positive. As well as the comments from the men's focus group shared with Sir Johnson, some individual interview participants explained they appreciated the use of consent forms. Although the consent form was intimidating to some potential participants, I found that the process of going over the consent form with potential

¹³⁹ A few interview participants also mentioned that they had not been asked before by researchers to sign consent forms. This does not seem appropriate, and when I return to the communities to disseminate the research findings, I will consult with each community to see if this is a concern, and if so, I will offer a workshop on the rights of research participants, if the community wishes.

participants was a learning opportunity for both parties. By June 7th, some health issues started to arise for me, but I completed my target number of interviews. My H4N Zoom audio recorder also started to wear down batteries much faster than it should have, and many interviews had to be recorded in more than one audio file. See **3.12. Limitations.**

E.4.2. Yupukari, 12 – 24 June

On 11 June I got a ride to Bina Hill and travelled to Yupukari by motorboat with toshaos who were retuning home from a meeting at NRDDDB. It was a difficult, rainy journey over the flooded savannah, and we had to overnight in Yakarinta with permission from Yakarinta's Toshao. I reached Yupukari on 12 June and immediately met with my Community Collaborator, Oswin Ambrose. Like the other communities, Mr. Ambrose was assigned to work with me by the community. Mr. Ambrose was a former Club member, a youth who spoke Makushi as well as English. This was particularly important in Yupukari because a higher percentage of the population speaks only Makushi, or may understand English but not be able to express themselves fully in English. All participants were invited to speak Makushi if they preferred, however, only one individual participant and only a few participants in the women's focus group spoke any Makushi during data collection. Mr. Ambrose did "use the Makushi" (as he put it) a few times to help clarify the intent of the research or interview questions with a few Elders.

As with Surama, the invitation to participate in the research was made after Church services on Sunday. And the toshao, R. Anthony Roberts Jr., also gave me permission to speak at the upcoming quarterly VGM to introduce myself, describe my research, and invite participation. I also met with staff at Caiman House on 15 June for advice on logistics and to make financial arrangements. Caiman House was the base for my research, where I had access to solar power for my laptop, satellite internet access, use of their printer, and it was where I held the focus

groups and a few interviews (at the request of a few participants). Caiman House was also the reason Yupukari had had a steady stream of foreign volunteers who had volunteered with the Club. During phase one of the data collection, an American volunteer with experience with similar environmental education programs in the US, Dan,¹⁴⁰ was a volunteer at Caiman House, and was volunteering with the Club. He attended Club meetings, helped organize Club events, was helping with the Butterfly Farm Project, and was the male chaperone who went to the 2011 Festival with the Club members.

Also on 15 June at 2:30pm (30 minutes after the end of the school day) there was a Club meeting just for the Executive. This is when I observed what several interview participants had already said, that a current challenge for the Club was that the President was bright, but not interested in the Club. During the meeting, he was listening to an mp3 player while the Club's Secretary and Dan attempted to discuss upcoming activities with the Executive. The next day, at 2:30pm, there was a general Club meeting. Once again, the President did not seem engaged and was even slightly disruptive at the meeting along with a few of the older boys. The Treasurer and Dan facilitated the meeting, and, with the Club members, planned events, fundraising, and to hold elections in July. There had been no recent birdwatching, and Club members agreed to go birdwatching on Saturday 18 June 6-7am.

Despite the birdwatching plan made at the Club meeting two days before, turnout to the Saturday 18 June birdwatching was low. This was the only time during phase one of the fieldwork that I was able to observe birdwatching. At 6am at the designated meeting spot at in the village's market area, it was just Dan and me waiting for Club members. At 6:05am, Dan rang the village bell (its purpose is to remind people about gatherings). By 6:15am, five Club members, all boys, had appeared, so we proceeded. Two were older boys wearing t-shirts from

¹⁴⁰ Pseudonym.

Wildlife Festival 2011. A sixth boy joined 10 minutes later. At first, only Dan had binoculars and a bird identification book. We went on a trail through mostly rainforest that leads to the Yupukari River and the landing where local children like to swim. This was the same trail used in the 2010 birdwatching. At 6:35am, a local guide and very experienced birder joined us, and his contribution was excellent. He had his own binoculars that could be shared with the Club members. Unlike in 2010, no one kept track of the birds he identified. I had a garbage bag and one Club member was keen to pick-up litter, but it seemed like many “teachable” moments were missed.

The VGM was at 9:30am that morning, and my opportunity to speak and invite participation was near the end of the meeting. Mr. Ambrose and I had scheduled the men’s focus group to be in the afternoon after the VGM, because we thought it was ideal to invite the men in the morning at the VGM for an afternoon focus group. However, the VGM went much longer than usual – until 2pm. Only one man showed up to the 3pm focus group, likely because there was not enough time between the activities, and because spending so much time at the VGM meant potential participants no longer had time to attend a focus group, too. The one man who showed up agreed to an individual interview. The women’s focus group the next day was well attended. In fact, there were perhaps too many participants, but there was no way to turn away participants. In addition, there were more participants who didn’t speak compared to in other focus groups, and this may have been because some participants were not very interested in the Club, or because some participants’ first language was Makushi and they did not feel comfortable speaking in Makushi during a conversation that was in English. This was also the only focus group in which a few participants declined to be audio recorded, which meant the entire focus group was not audio recorded. The men’s focus group was rescheduled to Tuesday

21 June in the morning, and went well. My health problems escalated just before departure from Yupukari, and I needed medication brought to me from Lethem. The evening before my departure on the 23rd, I participated in a traditional event for John the Baptist Day, which resulted in second-degree burns to the soles of my feet. This made walking painful.

E.4.3. Wowetta, 24 June – 10 July

Early in the morning on the 24th of June, I got a ride in a truck travelling to Toka, and from there hired a motorbike to Bina Hill/NRDDDB. After printing some forms at NRDDDB, I got a ride by motorbike to Wowetta (a 15 minute ride). I met my community collaborator, Donna Xavier, at the Wowetta Community Center where I was renting a room. I was too ill to attend Church on Sunday 26 June and announce the research. But there was a community meeting held early in the afternoon of the 26th of June about my research. My community collaborator felt the women's focus group should be right away, and many women present at the meeting agreed. I invited up to 10 women to stay for the focus group, and it went well, except that a few women did not speak. Ms. Xavier spoke with participants later, and they told her they hadn't spoken because they didn't feel they knew very much about the Wildlife Club, and a few were more comfortable speaking Makushi.

Unfortunately, the pesticide-impregnated mosquito net over the bed at the Community Center made me even more ill, and so I moved to the room I often rented in the NRDDDB building at Bina Hill and commuted by bicycle between Bina Hill and Wowetta for three days, then I was shifted over to a friend's compound in Wowetta. The second-degree burns on my feet became infected. I got painful abscesses.¹⁴¹ My skin rashes and allergic reactions became more

¹⁴¹ Abscesses are common in the Rupununi and are treated by waiting until the abscess is "ripe", then piercing it with the thorn of an orange tree and squeezing out all of the pus. It extremely painful and some places on the body are awkward, so someone else often does this for the patient. Upon return to Canada, I was diagnosed with methicillin-resistant staphylococcus aureus (MRSA) and put on an aggressive course of antibiotics.

and more severe. This made fieldwork difficult. Then several deaths occurred in Wowetta and Bina Hill, and upon returning from the wake of a 5-month old baby, I found out that my grandfather had died (in Canada) on 30 June. My family asked me to complete this phase of the research rather than return to Canada early for the 2 July funeral. On the 30th, a 19-year old was killed on The Road when an overloaded Bedford Truck overturned, and another baby died. Then my key community contact and host's 3 year-old niece fell into a well and died on 3 July, just before the men's focus group. The focus group was postponed, and many people in the Village were grieving. Many of them had been scheduled for individual interviews. After attending the wake and funeral (on 4 July¹⁴²), I spent two days in Surama to try to recover from the above health problems and give Wowetta community members time for healing. Upon my return, I completed a few more interviews, and the men's focus group was held Friday 8 July. Therefore, there were less interviews in Wowetta. There were also no Club activities to observe, since the Club was dormant. I looked at a few Club records, but many records had been eaten by rats or were covered in bat droppings because there had not been a safe place (like a Clubhouse) to store them.¹⁴³

I flew to Georgetown on 10 July and then to Canada early on 12 July. This completed phase one of the research.

I conducted follow-up community meetings in phase two of the fieldwork. These meetings were to share the preliminary findings, check-in with community members about my interpretation, ask if the communities felt more interviews or focus groups were needed, and

¹⁴² I wrote up this death on my blog as it caused me to question my role as a researcher. I also did this so that the community would have a written record of the circumstances of Alianna's death. The community was discussing the dangers of uncovered wells and unattended children, and how to prevent future deaths. See <http://juliecomber.com/for-alianna-part-1-well-of-sorrow/> and <http://juliecomber.com/for-alianna-part-2-a-childs-funeral-flowers/>

¹⁴³ In contrast, Surama had a Clubhouse to store paper records, and Yupukari stored paper records at the library and had a dedicated laptop with the Club's computer files on it.

have the communities decide what would be the culturally relevant and engaging way the research findings would be disseminated within the communities. None of the communities felt that more data collection was needed. Therefore, the following presentation of the data analysis of the interviews and focus groups are from phase one (except one interview from phase two).

Summary – Appendix E

This narrative sets the context for the Chapter 4. My first visit to Makushi communities in 2006 helped me gain skills and understand the context of what became my research sites in 2011. My reconnaissance in 2010 further honed the skills necessary for my fieldwork, and allowed me to learn about the NRWC program, observe Club activities in eight communities, volunteer at the Wildlife Festival, and to ask community members for input about the proposed research. I adjusted my Thesis Proposal and research design accordingly. There were few opportunities to observe Club activities in 2011, thus these observations and the oral history of Surama's Club are provided in this appendix.

APPENDIX F: Sample Letter for Permission to Access Amerindian Communities**31 March 2011**

Priscilla Torres
Bertie Xavier
Wowetta Village, Region 9
Guyana, S.A
CC: Mike Williams
Annai Village. Region 9
Guyana, S.A

Dear Priscilla, Bertie, all the other members of the Wowetta Village Council, and Toshua Mike,

I am requesting permission to do research on the Wildlife Club in Wowetta. My name is Julie Comber, and I am a PhD Student from the Faculty of Education at the University of Ottawa (Canada). You may recall I visited Wowetta several times between January and April of 2010 to learn about your Wildlife Club and get feedback on the Plan for my research (my Thesis Proposal). Many thanks to Wowetta community members for your kind hospitality, advice, and taking the time to talk with me.

My research will be on the North Rupununi Wildlife Clubs (NRWC) program. I would like to understand how the Clubs work, and what impact the Clubs have on members, and on their village. The research design is a multi-site case study. The “case” is NRWC, and the research sites will be the individual Clubs in villages, like yours. I am happy to report that as per the recommendation of several community members, my research will include Focus Groups with stakeholders in NRWC. Along with the Focus Group, I will do individual Interviews.

My Thesis Proposal was just approved by the University of Ottawa, and so now I am allowed to seek approval from our Ethics Review Board and to seek permission to do the research from individual Villages, like yours, from NRDDDB, from MoAA, and from EPA. This means the anticipated start date for data collection will be around 1 July 2011.

I am asking Wowetta’s Village council if Wowetta would like to participate in my research. If Wowetta decides to participate, the plan is to ask people if they would be interested in being interviewed in early July or Early September 2011, then do the individual interviews with up to 10 people. I will also be a “participant-observer”, just like in 2010, so will tag along for Wildlife Club activities (e.g., bird watching) and meetings. Within the first few days, I will find out who would like to participate in the Focus Group (8-10 people), which will likely occur in early September. Anyone who will be Interviewed or be in the Focus Group will be asked for their Informed Consent.

I understand that if you agree to participate, I cannot start the research until after all the necessary permissions are obtained. In the meantime, I would be delighted discuss the proposed research, discuss how we will make sure your community has Ownership, Control, Access, and Possession of any data from this project, work out a mutually beneficial plan for the research,

plan for piloting (testing) the Interview and Focus Group questions, and discuss the best way to share the findings with your community.

I feel learning more about the role Clubs play in young people's lives and the role they play in the community is important. My hope is that this research will provide findings that are useful to Wowetta, to other communities in the North Rupununi, and could also provided "lessons learned" and recommendations that could be useful for improving Environmental Education in general.

Please do not hesitate to contact me if you have any questions or suggestions about my research. Below is my abstract. Would you like me to send my Thesis Proposal? Are there any other documents your would like from me?

I hope we can work together, and I look forward to hearing from you!

Sincerely,

Julie Comber

PhD Candidate, Faculty of Education, University of Ottawa

julie.comber@uottawa.ca or [\[removed\]@gmail.com](mailto:[removed]@gmail.com)

APPENDIX G: Participant Recruitment Letter for Individual Interview

Dear _____,

My name is Julie Comber, and I am a PhD Student from the Faculty of Education at the University of Ottawa (Canada). We may have met between January and April of 2010 when I came to the North Rupununi for my reconnaissance trip. I stayed mostly at BHI/NRDDDB, and I also in Surama, Yupukari, Kwaimatta, and Massara. My goal for that trip was to learn about your Wildlife Club and get feedback on the Plan for my research. My research will be on the North Rupununi Wildlife Clubs (NRWC) program. I would like to understand how the Clubs work, and what impact the Clubs have on members, and on their village.

The research design is a multi-site case study. The “case” is the NRWC program, and the research sites will be the individual Wildlife Clubs in villages, like yours. One part of my research is to interview stakeholders, like you, to better understand what the Wildlife Program is like, what impact it has on former Club members, and what you feel the program could and should do. (There will also be Focus Groups and I will observe the Clubs in action.)

I would like to invite you to participate in my study as I feel you have much to share about NRWC. I have received Permission to do this research from the Ministry of Amerindian Affairs, from the University of Ottawa’s Research Ethics Board, and from your Village Council. Iwokrama is my Partner for the research, and my community collaborator through Iwokrama is (*community collaborator TBD*).

If you agree to take part my study you will be interviewed about your village’s Wildlife Club. The interview will take approximately an hour and will be audio-recorded to provide a record of our conversation.

Your participation in the research is entirely voluntary and you **can withdraw at any time**. This means that even if you agree at first to the interview, you can stop the interview at any point. You can ask me or *collaborator* questions at any time and you may refuse to answer any of the questions without negative consequences. We want this research to help the community, and we do not want to harm you or anyone else to achieve this positive goal!

The results of this research will be part of my PhD thesis, and there is possibility that the results will be published in an academic journal. In addition, I am committed to finding ways to share the research findings back with your community in a fun and engaging way (such as a comic book, or on radio Paiwomak). Your identity will remain confidential and a pseudonym (a “research nickname”) of your choice will be used and no identifying information will be provided in anything that is published from the research. I will have sole access to the data for analysis, and all data will be kept password protected and encrypted at all times. In addition, all data will be destroyed within five years of the completion of my PhD. If, however, you would like the audio recording and/or the transcript (written version) of your Interview, I am happy to provide you with this (this means that within five years, you would be the only one with the original recording/transcript of your interview, and may choose to do whatever you wish with it).

Do not hesitate to contact me any time if you have questions, concerns, or suggestions about this research. Please let me know if you are interested in participating by <insert date> so we can arrange an interview time.

Thank you for considering participating in this important research on your Wildlife Club, I look forward to hearing from you! I will be back on <insert date> to find out your answer, or you can email me at julie.comber@uottawa.ca .

Sincerely,

Julie

Julie Comber

PhD Candidate

Faculty of Education, University of Ottawa

julie.comber@uottawa.ca

APPENDIX H: Research Invitation Poster

INVITATION: Research on Yupukari's Wildlife Club

Hello! My name is Julie Comber, I stayed in Yupukari a few times last year and in 2006. I am back to do research on the Wildlife Clubs for my PhD (Doctorate).

You are invited to share your experiences, opinion, and ideas about Yupukari's Wildlife Club. Two Options:

- an **Interview**: wherever and whenever is convenient for you before June 20.
- **Focus Group** at Caiman House (there will be refreshments and we will have lunch together after):
 - **Men – Saturday** 18 June 3pm
 - **Women – Sunday** 19 June after Church (1pm)

If you are interested or have questions, please come see me at Kaigan House or Caiman House.

Thanks!

Julie. (julie.comber@uottawa.ca)





APPENDIX I: Informal Interview Consent Form

Title of the study: Environmental Education, Wildlife Clubs, and Indigenous Youth in Guyana

Principle Researcher: Julie Comber, PhD Candidate

Research Supervisor: Dr. Bernard W. Andrews, University of Ottawa, Faculty of Education,

Contact Information for questions or problems: Julie Comber, at Emily Allicock's, julie.comber@uottawa.ca. Dr. Andrews, 011-613-562-5800 ext.4028, b.w.andrews@uottawa.ca

Invitation to Participate: You are invited to participate in this research study because you know about Wildlife Clubs. This research is partially funded by an International Development Research Centre Doctoral Award.

Purpose of the Study: The purpose of the study is to learn about the Wildlife Clubs, to see what impact they have on the adults who were once members, and to explore what role the Clubs play in North Rupununi communities.

Participation: Your participation will be a brief interview right now or at your convenience about your village's Wildlife Club. The interview will take less than half an hour and, **if you agree** (see "additional considerations", below), you will be audio-recorded to keep a record of our conversation. If the interview is not audio recorded, I will take notes, instead.

Risks: There are no known risks or discomforts from participating in this study, but you will be may be asked about personal information. So there is a slight chance this could make you feel uncomfortable. Please remember your participation in the research is entirely voluntary and you can withdraw at any time. This means that even if you agree at first to this interview, you can stop the interview at any point. You can ask me questions at any time and you may refuse to answer any of the questions without negative consequences. Please also remember there are no right or wrong answers.

Benefits: Your participation in this study will help us understand the impact Wildlife Clubs have on the young people who are members, and on communities in the North Rupununi. The research may also help us understand how to improve Environmental Education in general.

Confidentiality and anonymity: You have received assurance from the researcher (Julie) that the information you share will remain confidential. The contents will be used only for her doctoral thesis and associated publications and your confidentiality will be protected. The data will also be stored at the Ministry of Amerindian Affairs, at your Village Council, and at the Environmental Protection Agency (see "Conservation of Data"). Your **Anonymity** will be protected because you will choose a pseudonym ('research nickname'), so your real name will never be revealed. Your Village will be named, so there is a slight chance you could be identified indirectly. Also, if you wish to be identified for a quote, then please indicate this on the next page. Please keep in mind there are some risks to being identified. Please consider this carefully before requesting to be identified, and discuss this with Julie.

Conservation of data: Julie Comber, Dr. Andrews, and Camacho Scipio will have sole access to the data for analysis, and all data will be kept password protected (electronic files) or locked (hard copies) at all times. In addition, the researchers' copies of all data will be destroyed within five years of the completion of my PhD. If, however, you would like the audio recording and/or the transcript (written version) of your Interview, I am happy to provide you with this. Please note that Guyana's Amerindian

Act 2006 and the Environmental Protection Act 1996 require that copies of the raw data must be given to the Minister of Amerindian Affairs, your Village Council, and the Environmental Protection Agency (EPA) for storage. This includes audio recordings. The researchers' copies of all data will be destroyed within five years of the completion of my PhD. If you would like the audio recording and/or the transcript (written version) of your Interview, I am happy to give this to you.

Voluntary Participation: You are under no obligation to participate and if you choose to participate, you can withdraw from the study at any time and/or refuse to answer any questions, without suffering any negative consequences. If you choose to withdraw, you can request that all data gathered until the time of withdrawal will be destroyed.

Acceptance: I, _____, agree to participate in the above research study conducted by Julie Comber of the Faculty of Education, under the supervision of Dr. Bernie W. Andrews.

If I have any questions about the study, I may contact the researcher or her supervisor.

If I have any questions regarding the ethical conduct of this study, I may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 156, Ottawa, ON K1N 6N5; Tel.: (613) 562-5387 Email: ethics@uottawa.ca

There are two copies of the consent form, one is mine to keep.

Participant's signature: _____ Date: _____

Researcher's signature: _____ Date: _____

Additional considerations:

1. I agree that my Interview can be audio recorded and understand that a copy of the recording will be kept at the Ministry of Amerindian Affairs, (MoAA), at my Village Council, and at the Environmental Protection Agency (EPA). YES ☐ NO ☐
2. If I am quoted in any publications based on this research, I would like to be asked if I wish to be identified. YES ☐ NO ☐

If YES: I understand there are possible negative consequences of being identified.
YES ☐ NO ☐
3. I would like to be invited to the follow-up meeting on the research findings (in October or November 2011). YES ☐ NO ☐

APPENDIX J: Semi-Structured Interview Consent Form

Title of the study: Environmental Education, Wildlife Clubs, and Indigenous Youth in Guyana

Principle Researcher: Julie Comber, PhD Candidate

Research Supervisor: Dr. Bernard W. Andrews, University of Ottawa, Faculty of Education,

Contact Information for questions or problems: Julie Comber, at Emily Allcock's, julie.comber@uottawa.ca . Dr. Andrews, 011-613-562-5800 ext.4028, b.w.andrews@uottawa.ca .

Invitation to Participate: You are invited to participate in this research because you know about Wildlife Clubs. This research is partially funded by an International Development Research Centre (IDRC) Doctoral Award.

Purpose of the Study: The purpose of the study is to learn about the Wildlife Clubs, to see what impact they have on the adults who were once members, and to explore what role the Clubs play in North Rupununi communities.

Participation: Your participation will be being interviewed about your village's Wildlife Club. The interview will take approximately an hour to two hours and, **if you agree** (see "additional considerations", below), you will be audio-recorded to keep a record of our conversation. If the interview is not audio recorded, I will take notes, instead. I will meet you at a time and place that is convenient for you. If you prefer that our conversation be in Makushi, a community collaborator will be with me to translate. I will hold a meeting after I have analyzed the findings to check with the people I interviewed to make sure my interpretation makes sense. You will be asked at the end of the interview if you would like me to contact you to invite you to this meeting, which will be in October or November 2011. I might quote you or describe your ideas and opinions in my doctoral thesis or other publications. Therefore, you will also be asked if you would like to review the transcript of your interview before I do this. If you would like to review your transcript, I will bring a hardcopy to you in person in September, or I can email the electronic document to you in August. Please note that email is not secure, therefore there is a risk that your confidentiality/anonymity could be breached. If you choose to receive the transcript via email, I cannot be held responsible should someone else see the transcript.

Risks: There are no known risks or discomforts from participating in this study, but you will be asked about personal information. So there is a slight chance this could make you feel uncomfortable. Please remember your participation in the research is entirely voluntary and you can withdraw at any time. This means that even if you agree at first to the interview, you can stop the interview at any point. You can ask me or my collaborator questions at any time and you may refuse to answer any of the questions without negative consequences. Please also remember there are no right or wrong answers. We want this research to help the community, and we do not want to harm you or anyone else to achieve this positive goal!

Benefits: Your participation in this study will help us understand the impact Wildlife Clubs have on the young people who are members, and on communities in the North Rupununi. The research may also help us understand how to improve Environmental Education in general.

Confidentiality and anonymity: You have received assurance from the researcher (Julie) that the information you share will remain confidential. The contents will be used only for her doctoral thesis and associated publications and your confidentiality will be protected. The data will also be stored at the Ministry of Amerindian Affairs, at your Village Council, and at the Environmental Protection Agency (see "Conservation of Data). Your **Anonymity** will be protected because you will choose a pseudonym ("research nickname"), so your real name will never be revealed. Your Village will be named, so there is

a slight chance you could be identified indirectly. Also, if you wish to be identified for a quote, then please indicate this on the next page. Please keep in mind there are some risks to being identified. Please consider this carefully before requesting to be identified, and discuss it with Julie.

Conservation of data: Julie Comber, Dr. Andrews, and Sir Camacho Scipio (the community collaborator) will have sole access to the data for analysis, and all data will be kept password protected (electronic files) or locked (hard copies) at all times. Please note that Guyana's Amerindian Act 2006 and the Environmental Protection Act 1996 require that copies of the raw data must be given to the Minister of Amerindian Affairs, your Village Council, and the Environmental Protection Agency (EPA) for storage. This includes audio recordings. The researchers' copies of all data will be destroyed within five years of the completion of my PhD. If, you would like the audio recording and/or the transcript (written version) of your Interview, I am happy to give this to you.

Voluntary Participation: You are under no obligation to participate and if you choose to participate, you can withdraw from the study at any time and/or refuse to answer any questions, without suffering any negative consequences. If you choose to withdraw, you can request that all data gathered until the time of withdrawal will be destroyed.

Acceptance: I, _____, agree to participate in the above research study conducted by Julie Comber of the Faculty of Education, under the supervision of Dr. Bernie W. Andrews.

If I have any questions about the study, I may contact the researcher or her supervisor.

If I have any questions regarding the ethical conduct of this study, I may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 156, Ottawa, ON K1N 6N5; Tel.: (613) 562-5387 Email: ethics@uottawa.ca

There are two copies of the consent form, one is mine to keep.

Participant's signature: _____ Date: _____

Researcher's signature: _____ Date: _____

Additional considerations:

1. I agree that my Interview can be audio recorded and understand that a copy of the recording will be kept at the Ministry of Amerindian Affairs, (MoAA), at my Village Council, and at the Environmental Protection Agency (EPA). YES o NO o
2. If I am quoted in any publications based on this research, I would like to be asked if I wish to be identified. YES o NO o

If YES: I understand there are possible negative consequences of being identified.
YES o NO o
3. I would like to be invited to the follow-up meeting on the research findings (in October or November 2011). YES o NO o

APPENDIX K: Interview Guide – Former NRWC Members

Participant name:

Date:

Participant's chosen pseudonym:

(Briefly review the research project. Briefly review the informed consent form. Explain role of community collaborator (when present) and option to communicate in English or Makushi.)

Researcher: “Thank you for talking with me today. The interview is now being recorded. If at any time you want to stop the interview, just let me know and we will stop the interview and I will stop the audio recording, too.”

Interview Guide Former NRWC Members

A. Exploring the meaning of “pro-environmental behaviour” and participant’s self-reported behaviour.

To begin, what does “pro-environmental behaviour” mean to you? *(During the piloting, the most suitable term was selected: “environmentally friendly behaviour”. To clarify, the researcher often used local terminology to further explain the question: “What does it look like for someone to take good care of their environment?”)*

What are examples of pro-environmental behaviour? *(Define, discuss what she/he think is “pro-environmental” behaviour in the local environment.)*

What do you think makes it difficult for people here to do those pro-environmental behaviours? *(Explore perceived barriers to pro-environmental behaviour.)*

What do you think helps people here to do those pro-environmental behaviours?

What do you do with your garbage?

How do you tend to get around (to work, school, etc.)?

Where does your food come from? (*Key: does their household hunt, fish, farm? Or do they buy food? If so, is it local or imported from the Coast or Brazil?*)

What is your home made of? (*E.g. of resource use, where do they get building materials.*)

How do you feel about wild animals? (*Explore themes of respect, conservation*)

Do you think it is OK to about burn the savannah? Why or why not?

What do you think are the most important environmental issues here in the Rupununi?

What do you think you, personally, can do about these issues?

What do you think are the most important environmental issues for the whole world?

What do you think you, personally, can do about these issues?

Vignettes

If a big foreign company came to start mining near your village and the community had strong evidence this mining would cause serious harm to the environment near the village, what would you do?

If people in your village realized that there were less wildlife to hunt, what would you do?

B. Exploring the meaning of “Positive Youth Development”

What does “Positive Youth Development” mean to you? (*During the piloting, this term was retained, however, the question was further clarified by asking “What does it look like to you when someone does well in life?”*)

How would you know if a young person is “doing well”? (*Asking for characteristics in the North Rupununi used to gauge a person’s personal and social development.*)

What do you do? (*Do they work, where, etc.*)

Do you feel you have the job or role you want?

Do you feel competent about your work habits and career choices? (*Explore part of the Competence construct, a positive view of one's actions in specific domains*)

Do you feel you are a confident person? Can you tell me more about that? (*Explore Confidence, an internal sense of overall positive self-worth and self-efficacy*)

Do you feel connected to others? What connections are most important to you?

(*Explore Connection, positive bonds with people and institutions that are reflected in bidirectional exchanges between the individual and peers, family, school, and community in which both parties contribute to the relationship*)

What does it mean to you to have “good character”? How would you know someone has good character?

Do you feel you have good character? What do you think influenced your character?

(*Character, respect for societal and cultural rules, possession of standards for correct behaviours, a sense of right and wrong (morality), and integrity.*)

Do you think it is important to be caring and compassionate towards others? How would you know someone is caring and compassionate? (*Caring and Compassion, a sense of sympathy and empathy for others.*)

C. Exploring role of Elders and Mentors

Do you speak Makushi?

What do you think has been the greatest influence on how you feel about the environment?

Where or from whom do you feel you learned most about your local environment?

Did you learn from Elders? If so, can you tell me a bit about what this learning was like? (*E.g., visit to Elder, trips on land with Elder, for how long, did Elder test/confirm what they had learned, etc.*)

Do you feel you had or have a mentor in your life?

If YES: Can you please tell me about this person? (*if not stated, ask if person(s) is/was involved in NRWC*).

Do you feel you are a mentor now? If YES: To whom?

D. Wildlife Club Experience

How long were you a member of a Wildlife Club?

Were you a member of more than one Club? If so, what was similar or different about the Clubs?

What made you decide to join a Wildlife Club?

How did being a member of a Wildlife Club impact your life?

Was there any project or action your Club did that you are proud of? What role did you play?

Do you feel participating in a Wildlife Club has an impact on kids? How would you be able to tell that a person had been affected by being a Wildlife Club member?

Do you think former Wildlife Club members are more likely do pro-environmental behaviours?

Are there any skills you feel you developed because you were a Club member? (*Competence*)

Are there any skills you feel your group developed? (*Exploring idea of collective Competence*)

Do you think being a Club member helped you get a job? Or helped you do your job?

Did you ever go to a Wildlife Festival? If so, how many times?

What did you dislike about it?

What did you like about it?

What did you like best about being a member of your Wildlife Club(s)?

What did you not like?

What would you change about Wildlife Clubs?

What do you think shows someone is a really active and engaged member of their Club?

Do you feel you were an active and engaged member of your Wildlife Club?

E. Engagement in Wildlife Club

If not very engaged:

You were a member for ___years, but you don't feel you were that engaged/active in the Club. Is that correct?

Why do you think that is? (*Prompt about parental involvement or disapproval*)

What would have helped you to be more engaged in the Club?

If very engaged:

You feel you were very engaged and active in your Club. What encouraged you to be so engaged?

Were there any barriers to your participation in the Club? (*e.g., membership dues, parental disapproval, etc.*)

Why do you think other people were not as engaged as you in the Club?

F. Find out if there were other key events/people or experiences they found meaningful that influenced participant's environmental behaviour, e.g., visits from Iwokrama or Conservation International to schools, etc.

Were you a member of a different group or club? If so, which one?

Did you feel you had a mentor because of that group?

Do you remember any visits from Iwokrama or Conservation International to your school?

Can you think of anything else that influenced your attitudes and beliefs about the environment?

G. Family Participation

Was anyone else in your family involved in NRWC? Who, and in what role?

Do you have children now? If so, are they Club members? Why or why not?

H. Any other comments about Wildlife Clubs?

Thank you for participating in this Interview. Once I have studied all the interviews, I will share my thoughts on the findings with the communities. This will be a meeting, and everyone will be welcome. Part of the goal is to check that I have interpreted the findings correctly. Everyone's ideas will be welcome. Should I contact you when the date is set for this meeting to invite you?

APPENDIX L: Interview Protocol – Non-Former NRWC Members

Participant name:**Date:****Participant's chosen pseudonym:**

(Briefly review the research project. Briefly review the informed consent form. Explain role of community collaborator (when present) and option to communicate in English or Makushi.)

Researcher: “Thank you for talking with me today. The interview is now being recorded. If at any time you want to stop the interview, just let me know and we will stop the interview and I will stop the audio recording, too.”

Interview Guide Non-Former NRWC Members

A. Exploring the meaning of “pro-environmental behaviour” and participant’s self-reported behaviour.

To begin, what does “pro-environmental behaviour” mean to you? *(During the piloting, the most suitable term was selected: “environmentally friendly behaviour”. To clarify, the researcher often used local terminology to further explain the question: “What does it look like for someone to take good care of their environment?”)*

What are examples of pro-environmental behaviour? *(Define, discuss what she/he think is “pro-environmental” behaviour in the local environment.)*

What do you think makes it difficult for people here to do those pro-environmental behaviours? *(Explore perceived barriers to pro-environmental behaviour)*

What do you think helps people here to do those pro-environmental behaviours?

What do you do with your garbage?

How do you tend to get around (to work, school, etc.)?

Where does your food come from? *(Key: does their household hunt, fish, farm? Or do they buy food? If so, local or imported from Coast or Brazil?)*

What is your home made of? (*E.g. of resource use, where do they get building material*)

How do you feel about wild animals? (*Explore themes of respect, conservation*)

Do you think it is OK to about burn the savannah? Why or why not?

What do you think are the most important environmental issues here in the Rupununi?

What do you think you, personally, can do about these issues?

What do you think are the most important environmental issues for the whole world?

What do you think you, personally, can do about these issues?

Vignettes

If a big foreign company came to start mining near your village and the community had strong evidence this mining would cause serious harm to the environment near the village, what would you do?

If people in your village realized that there were less wildlife to hunt, what would you do?

B. Exploring the meaning of “Positive Youth Development”

What does “Positive Youth Development” mean to you? (*During the piloting, this term was retained, however, the question was further clarified by asking “What does it look like to you when someone does well in life?”*)

How would you know if a young person is “doing well”? (*Asking for characteristics in the North Rupununi used to gauge a person’s personal and social development.*)

What do you do? (*Do they work, where, etc.*)

Do you feel you have the job or role you want?

Do you feel competent about your work habits and career choices? (*Explore part of the Competence construct, a positive view of one's actions in specific domains*)

Do you feel you are a confident person? Can you tell me more about that? (*Explore Confidence, an internal sense of overall positive self-worth and self-efficacy*)

Do you feel connected to others? What connections are most important to you?

(*Explore Connection, positive bonds with people and institutions that are reflected in bidirectional exchanges between the individual and peers, family, school, and community in which both parties contribute to the relationship*)

What does it mean to you to have “good character”? How would you know someone has good character?

Do you feel you have good character? What do you think influenced your character?

(*Character, respect for societal and cultural rules, possession of standards for correct behaviours, a sense of right and wrong (morality), and integrity.*)

Do you think it is important to be caring and compassionate towards others? How would you know someone is caring and compassionate? (*Caring and Compassion, a sense of sympathy and empathy for others.*)

C. Exploring role of Elders and Mentors

Do you speak Makushi?

What do you think has been the greatest influence on how you feel about the environment?

Where or from whom do you feel you learned most about your local environment?

Did you learn from Elders? If so, can you tell me a bit about what this learning was like? (*e.g., visit to Elder, trips on land with Elder, for how long, did Elder test/confirm what they had learned, etc.*)

Do you feel you had or have a mentor in your life?

If YES: Can you please tell me about this person? (*if not volunteered, ask if person(s) is/was involved in NRWC*).

Do you feel you are a mentor now? If YES: To whom?

D. For those who were not former members, main goal is to find out if there were other key events/people who influenced them about being environmentally responsible, e.g., visits from Iwokrama or CI to schools, experiences they found meaningful, etc.).

Why didn't you become a NRWC member? (*E.g. Parents? Not interested? Not enough time?*)

If was not available in village before participant was 18: Would you have joined if there had been a Wildlife Club in your village?

Were you a member of a different group or club? If so, which one(s)?

Did you feel you had a mentor because of that group?

Do you remember any visits from Iwokrama or Conservation International to your school?

Can you think of anything else that influenced your attitudes and beliefs about the environment?

E. Family Participation

Was anyone else in your family involved in NRWC? Who, and in what role?

Do you have children? Are any of them a Wildlife Club member?

F. Any other comments about Wildlife Clubs?

Thank you for participating in this Interview. Once I have studied all the interviews, I will share my thoughts on the findings with the communities. This will be a meeting, and everyone will be welcome. Part of the goal is to check that I have interpreted the findings correctly. Everyone's ideas will be welcome. Should I contact you when the date is set for this meeting to invite you?

APPENDIX M: Interview Protocol – Elders

Participant name:

Date:

Participant's chosen pseudonym:

(Briefly review the research project. Briefly review the informed consent form. Explain role of community collaborator (when present) and option to communicate in English or Makushi.)

Researcher: “Thank you for talking with me today. The interview is now being recorded. If at any time you want to stop the interview, just let me know and we will stop the interview and I will stop the audio recording, too.”

Interview Guide for Elders

1. What do you think about Wildlife Clubs (NRWC)?
2. Do you have children? If yes, were any of your children Club members? Why or why not? If they were, how old were they when they started? How long did they stay in the Club?
3. Were you ever involved with Wildlife Club activities or events? If so, what did you do? What did you feel about your involvement?
4. Do you feel traditional ecological knowledge (TEK) has been incorporated into Wildlife Clubs? *(Prompt about Wildlife Festival, which includes “culture” competitions (cassava grating, cotton spinning, etc.) and “Culture Nights” performances.)*
5. If you were in charge of including TEK in Wildlife Club activities, how would you do it?
6. What does “pro-environmental behaviour” mean to you? What are some examples of pro-environmental behaviour here?
7. Do you think Wildlife Clubs influence Youth to do those pro-environmental behaviour when they grow up?
8. What does “Positive Youth Development” mean to you?
9. Do you think Wildlife Clubs promote “Positive Youth Development”?
10. I understand these are challenging times in the North Rupununi. What kind of people do you think communities here need so that your People will thrive?
11. Do you think Wildlife Clubs helps grow those kinds of people? Why or why not?
12. What role do you think Wildlife Clubs should play in your community?
13. **Any other comments or thoughts about Wildlife Clubs?**

Thank you for participating in this Interview. Once I have studied all the interviews, I will share my thoughts on the findings with the communities. This will be a meeting, and everyone will be welcome. Part of the goal is to check that I have interpreted the findings correctly. Everyone's ideas will be welcome. Should I contact you when the date is set for this meeting to invite you?

APPENDIX N: Interview Protocol – Community Leaders

Participant name:

Date:

Participant's chosen pseudonym:

(Briefly review the research project. Briefly review the informed consent form. Explain role of community collaborator (when present) and option to communicate in English or Makushi.)

Researcher: “Thank you for talking with me today. The interview is now being recorded. If at any time you want to stop the interview, just let me know and we will stop the interview and I will stop the audio recording, too.”

Interview Guide for Community Leaders

1. What do you think about Wildlife Clubs?
2. Do you have children? If yes, were any of your children Club members? Why or why not? If they were, how old were they when they started? How long did they stay in the Club?
3. Were you ever involved with Wildlife Clubs activities or events? If so, what did you do? What did you feel about your involvement?
4. Do you feel traditional ecological knowledge has been incorporated into Wildlife Clubs? *(Prompt about Wildlife Festival, which includes “culture” competitions (cassava grating, cotton spinning, etc.) and “Culture Night” performances.)*
5. If you were in charge of including TEK in Wildlife Clubs activities, what would you do?
6. What does “pro-environmental behaviour” mean to you? What are some examples of pro-environmental behaviour here?
7. Do you think Wildlife Clubs influence Youth to do those pro-environmental behaviour when they grow up?
8. What does “Positive Youth Development” mean to you?
9. Do you think Wildlife Clubs promote “Positive Youth Development”?
10. I understand these are challenging times in the North Rupununi. What kind of people do you think communities here need so that your People will thrive?
11. Do you think Wildlife Clubs helps grow those kinds of people? Why or why not?
12. What role do you think Wildlife Clubs should play in your community?
13. Is your Wildlife Club discussed at Village Council Meetings?
14. Any other comments or thoughts about Wildlife Clubs?

Thank you for participating in this Interview. Once I have studied all the interviews, I will share my thoughts on the findings with the communities. This will be a meeting, and everyone will be welcome. Part of the goal is to check that I have interpreted the findings correctly. Everyone's ideas will be welcome. Should I contact you when the date is set for this meeting to invite you?

APPENDIX O: Interview Protocol – Adult Volunteers with NRWC

Participant name:

Date:

Participant's chosen pseudonym:

(Briefly review the research project. Briefly review the informed consent form. Explain role of community collaborator (when present) and option to communicate in English or Makushi.)

Researcher: “Thank you for talking with me today. The interview is now being recorded. If at any time you want to stop the interview, just let me know and we will stop the interview and I will stop the audio recording, too.”

Interview Guide for Adult Volunteers with NRWC

1. What do you think about Wildlife Clubs?
2. Do you have children? If yes, were any of your children Club members? Why or why not? If they were, how old were they when they started? How long did they stay in the Club?
3. Why do you volunteer with Wildlife Clubs? What do you do? How do you feel about your involvement?
4. Do you feel traditional ecological knowledge has been incorporated into Wildlife Clubs? (*Prompt about Wildlife Festival, which includes “culture” competitions (cassava grating, cotton spinning, etc.) and “Culture Night” performances.*)
5. If you were in charge of including TEK in Wildlife Club activities, what would you do?
6. What does “pro-environmental behaviour” mean to you? What are some examples of pro-environmental behaviour here?
7. Do you think Wildlife Clubs influence Youth to do those pro-environmental behaviour when they grow up?
8. What does “Positive Youth Development” mean to you?
9. Do you think Wildlife Clubs promote “Positive Youth Development”?
10. I understand these are challenging times in the North Rupununi. What kind of people do you think communities here need so that your People will thrive?
11. Do you think Wildlife Clubs helps grow those kinds of people? Why or why not?
12. What role do you think Wildlife Clubs should play in your community?
13. Any other comments or thoughts about Wildlife Clubs?

Thank you for participating in this Interview. Once I have studied all the interviews, I will share my thoughts on the findings with the communities. This will be a meeting, and everyone will be welcome. Part of the goal is to check that I have interpreted the findings correctly. Everyone's ideas will be welcome. Should I contact you when the date is set for this meeting to invite you?

APPENDIX P: Recruitment letter for focus group participants

Dear _____,

My name is Julie Comber, and I am a PhD Student from the Faculty of Education at the University of Ottawa (Canada). We may have met between January and April of 2010 when I came to the North Rupununi for my reconnaissance trip. I stayed mostly at BHI/NRDDDB, and also in Surama, Yupukari, Kwaimatta, and Massara. My goal for that trip was to learn about your Wildlife Club and get feedback on the Plan for my research. My research will be on the North Rupununi Wildlife Clubs (NRWC) program. I would like to understand how the Clubs work, and what impact the Clubs have on members, and on their village.

The research design is a multi-site case study. The “case” is the NRWC program, and the research sites will be the individual Wildlife Clubs in villages, like yours. One part of my research methods is to hold a Focus Groups with stakeholders in each village to better understand what the Wildlife Program is like and what you feel the program could and should do. (There will also be individual Interviews and I will observe the Clubs in action.)

I would like to invite you to participate in a Focus Group as I feel you have much to share about NRWC. I have received Permission to do this research from the Ministry of Amerindian Affairs, from the University of Ottawa’s Research Ethics Board, and from your Village Council. Iwokrama is my Partner for the research, and my community collaborator through Iwokrama is (*community collaborator TBD*).

If you agree to take part in the Focus Group about your village’s Wildlife Club, this will be 8 to 10 people meeting for approximately two to three hours at <*insert location in village*>. There will be refreshments during breaks and a meal together afterwards. The focus group discussion will be audio-recorded to provide a record of our conversation.

Your participation in this research is entirely voluntary and you **can withdraw at any time**. This means that even if you agree at first be in the Focus Group, you can stop participating at any point. You can ask me or *collaborator* questions at any time and you may refuse to answer any of the questions (such as in the unlikely event a question makes you uncomfortable) without negative consequences. We want this research to help the community, and we do not want to harm you or anyone else to achieve this positive goal!

The results of this research will be part of my PhD thesis, and it is likely that the results will be published in an academic journal. In addition, I am committed to finding ways to share the research findings back with your community in a fun and engaging way (such as a comic book, or on radio Paiwomak). Your identity will remain confidential and a pseudonym (a “research nickname”) of your choice will be used and no identifying information will be provided in

anything that is published from the research. I will have sole access to the data for analysis, and all data will be kept password protected and encrypted at all times. In addition, all data will be destroyed within five years of the completion of my PhD. If, however, you would like the audio recording and/or the transcript (written version) of your Interview, I am happy to provide you with this (this means that within five years, you would be the only one with the original recording/transcript of your interview, and may choose to do whatever you wish with it).

Do not hesitate to contact me any time if you have question, concerns, or suggestions about this research. Please let me know if you are interested in participating by <insert date> so we can arrange an interview time.

Thank you for considering participating in this important research on your Wildlife Club, I look forward to hearing from you! I will be back on <insert date> to find out your answer, or you can email me at julie.comber@uottawa.ca .

Sincerely,

Julie

Julie Comber

PhD Candidate

Faculty of Education, University of Ottawa

julie.comber@uottawa.ca



APPENDIX Q: Focus Group Consent Form

Title of the study: Environmental Education, Wildlife Clubs, and Indigenous Youth in Guyana

Principle Researcher: Julie Comber, PhD Candidate

Research Supervisor: Dr. Bernard W. Andrews, University of Ottawa, Faculty of Education,

Contact Information for questions or problems: Julie Comber, at Emily Allicock', julie.comber@uottawa.ca . Dr. Andrews, 011-613-562-5800 ext.4028, b.w.andrews@uottawa.ca .

Invitation to Participate: You are invited to participate in this research study because you know about Wildlife Clubs. This research is partially funded by an International Development Research Centre Doctoral Award.

Purpose of the Study: The purpose of the study is to learn about the Wildlife Clubs, to see what impact they have on the adults who were once members, and to explore what role the Clubs play in North Rupununi communities.

Participation: Your participation will consist essentially of being part of a Focus Group about your village's Wildlife Club. There will be one group of men, and one group of women, with 4 to 6 people per group meeting for approximately two to three hours at Emily Allicock's benab. There will be refreshments during breaks and a meal together afterwards. **If everyone agrees** (see "additional considerations", below), the focus group discussion will be audio-recorded to provide a record of our conversation. If the interview is not audio recorded, I will take notes, instead. If you prefer to speak Makushi, a community collaborator will be with me to translate. I will hold a meeting after I have analyzed the findings to check in with the people who participated in the research to make sure my interpretation makes sense. You will be asked at the end of the focus group if you would like me to contact you later to invite you to this meeting, which will be in October or November 2011.

Risks: There are no known risks or discomforts from participating in this study, but you will be asked about personal information in a group of people in your village. So there is a slight chance this could make you feel uncomfortable. Please remember your participation in the research is entirely voluntary and you can withdraw at any time. This means that even if you agree at first to be part of the Focus Group, you can stop at any point. You can ask me or my collaborator questions at any time and you may refuse to answer any of the questions without negative consequences. Please also remember there are no right or wrong answers.

Benefits: Your participation in this study will help us understand the impact Wildlife Clubs have on the young people who are members, and on communities in the North Rupununi. The research may also help us understand how to improve Environmental Education in general.

Confidentiality and anonymity: You have received assurance from the researcher (Julie) that the written version of the information you share will remain confidential. The information you share will be used only for her doctoral thesis and associated publications. The data will also be stored at the Ministry of Amerindian Affairs, at your Village Council, and at the Environmental Protection Agency (see "Conservation of Data"). Since you will participate in a focus group with other participants, these participants will also know this information. Participants will be reminded of the importance of confidentiality and how to maintain it at the beginning of the Focus Group. Your **Anonymity** will be

protected because you will choose a pseudonym ('research nickname'), so your real name will never be revealed. Your Village will be named, so there is a slight chance you could be identified indirectly. Also, if you wish to be identified for a quote, then please indicate this on the next page. Please keep in mind there are some risks to being identified. Please consider this carefully before requesting to be identified, and discuss this with Julie.

Conservation of data: Julie Comber, Dr. Andrews, and Sir Camacho Scipio (community collaborator) will have sole access to the data for analysis, and all data will be kept password protected (electronic files) or locked (hard copies) at all times. In addition, the researchers' copies of all data will be destroyed within five years of the completion of my PhD. Please note that Guyana's Amerindian Act 2006 and the Environmental Protection Act 1996 require that copies of the raw data must be given to the Minister of Amerindian Affairs, your Village Council, and the Environmental Protection Agency (EPA) for storage. This includes audio recordings. If you would like the audio recording and/or the transcript (written version) of your Interview, I am happy to give this to you.

Voluntary Participation: You are under no obligation to participate and if you choose to participate, you can withdraw from the study at any time and/or refuse to answer any questions, without suffering any negative consequences. If you choose to withdraw, you can request that all data gathered until the time of withdrawal will be destroyed.

Acceptance: I, _____, agree to participate in the above research study conducted by Julie Comber of the Faculty of Education, under the supervision of Dr. Bernie W. Andrews.

If I have any questions about the study, I may contact the researcher or her supervisor.

If I have any questions regarding the ethical conduct of this study, I may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 156, Ottawa, ON K1N 6N5; Tel.: (613) 562-5387 Email: ethics@uottawa.ca

There are two copies of the consent form, one is mine to keep.

Participant's signature: _____ Date: _____

Researcher's signature: _____ Date: _____

Additional considerations:

4. I agree that the Focus Group can be audio recorded and understand that a copy of the recording will be kept at the Ministry of Amerindian Affairs, (MoAA), at my Village Council, and at the Environmental Protection Agency (EPA). YES o NO o

NOTE: The decision to audio record must be unanimous. If even one participant would prefer the Focus Group to not be recorded, it will not be audio recorded.

5. If I am quoted in any publications based on this research, I would like to be asked if I wish to be identified. YES o NO o

If YES: I understand there are possible negative consequences of being identified.

YES ☐ NO ☐

6. I would like to be invited to the follow-up meeting on the research findings (in October or November 2011). YES ☐ NO ☐

APPENDIX R: Focus Group Interview Protocol

The consent form will be explained, particularly the ramifications of audio-recording the Focus Group (because by Law, copies of audio recordings must be given to MoAA, EPA, and the Village Council). The decision to allow audio recording must be unanimous, otherwise, notes will be taken. Participants will then be given the opportunity to sign the Consent Form.

Ground rules to facilitate a positive and respectful space for the discussion will be established for group. This will include discussion on rules of confidentiality. The importance of confidentiality will be discussed, in particular that each individual participant should determine the nature of their participation, who knows that they participated, and how data will later be used. Participants will be told that because they are in a group, they will know who else participated in this part of the research, and they will hear things that other people contribute. Therefore they will be asked: 1. To not disclose to people who were not part of the Focus Group the identity of fellow Focus Group participants, unless they obtain permission from a fellow participant to disclose his or her participation. 2. While participants are welcome to share the content of the discussion, they should refrain from identifying what a particular participant said, unless they obtain permission from this participant to do so.

The role of the co-facilitators will be discussed, and the goal and expectations of the Focus Group. The history of NRWC will be described, and the initial goals and vision of NRWC, and current practice.

Focus Group Interview Guide**Community's views on what NRWC is doing**

1. Can you describe for me what kids are learning in the Wildlife Clubs?
2. Can you describe for me how kids are learning in the Wildlife Clubs? (*May need to prompt with different styles of teaching, such as lecture format, written exercises, independent research and presentation, experiential learning, etc.*)
3. How strong/active do you feel your community's Wildlife Club is?
4. What do you like about the current NRWC program?
5. What do you dislike about the current NRWC program?
6. What does "pro-environmental behaviour" mean to you? What are some examples of pro-environmental behaviour here?
7. Do you think Wildlife Clubs influence Youth to do those pro-environmental behaviour when they grow up?
8. What does "Positive Youth Development" mean to you?
9. Do you think Wildlife Clubs promote "Positive Youth Development"?

Community's views on what NRWC should be doing

We've now discussed what the Wildlife Clubs are doing. I'd now like to talk about what you think they should be doing.

1. Can you describe for me what you think kids should be learning in the Wildlife Clubs?
2. Should this include Traditional Knowledge held by Elders?

3. Can you describe for me how you think kids should be learning in Wildlife Clubs?
(May need to prompt with different styles of teaching, such as lecture format, written exercises, independent research and presentation, experiential learning, etc.)
4. What would need to change about NRWC to achieve the goals we just spoke about?
5. I understand these are challenging times in the North Rupununi. What kind of people do you think communities here need so that your People will thrive?
6. Do you think NRWC helps grow those kinds of people? Why or why not?
7. What role do you think NRWC should play in North Rupununi communities?

Thank you for participating in this Focus Group. Once I have looked at the transcripts from all the Focus Groups, I will share my thoughts on the findings with the communities. This will be a meeting, and everyone will be welcome. Part of the goal is to check that I have interpreted the findings correctly. Everyone's ideas will be welcome. You indicated whether you wish to be invited to this meeting on the consent form. If you have any further questions, please let me know.