EVOLVING GOVERNANCE SPACES:
COAL LIVELIHOODS IN EAST KALIMANTAN, INDONESIA

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ABSTRACT

Coal mining carries significant impacts for surrounding livelihood practices. Yet, in order to explain how specific impacts become grounded within a particular community, attention must be given to the complex assemblage of socio-political and economic forces operating at the local scale. As such, this paper builds upon 3 months of field research in 2010 to describe the impact of decentralized extractive resource governance at coal mines near the rural coastal village of Sekerat, East Kalimantan. Employing evolutions in political ecology research, the analysis focuses on the evolving governance 'space' in order to explain how institutional analyses of resource extraction governance and livelihood governance can be integrated to understand how scalar processes construct a range of real and perceived impacts which condition the decision-making modalities of local villagers. A case is then made for giving greater consideration to the importance of temporality and materiality to explaining how land-based and wage-labour livelihood practices have become 'reified' within the local village.

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DISCLAIMER

I have taken great effort to ensure the accuracy of the findings presented in this thesis. However, I wish to acknowledge the potential that some of the information presented here is incomplete, as I am privy to only limited amounts of information as an outsider to the village of Sekerat and Pt. Kaltim Prima Coal (KPC), Pt. Darma Henwa (DH) and Pt. Perkasa Inakakerta (PIK). Inconsistencies, errors, or misrepresentations, if they exist, were not intentional, and I apologize and take full responsibility if they have occurred.

CHAPTER 1- INTRODUCTION

1.1 Mining and livelihoods: Creating a governance space

There is no doubt that livelihood practices surrounding open-pit coal mines are affected by extraction operations. The massive inflows of capital and people, the development of infrastructure, and the changing land use schemes often occurring in some of the most remote places in the world can radically transform the lives of local residents who must adjust to new economic, social and environmental circumstances. Worldwide, these kilometre-deep and wide mines collectively extract hundreds of millions of tonnes of thermal coal resources to electrify the ever growing industrial, residential and commercial demand of the global economy. At the same time, it is said that these coal resources, valued at billion dollars, resting under local villagers' feet can offer these same people the opportunity to spark to life the latent energy of local communities improving their wealth and well-being on a path to development.

But it is never that simple. This is especially true in the case of Indonesia which is still riding the wake of one of the most significant social and political transitions in the country's modern history; the end of President Suharto's 'New Order' era and the formal decentralization of fiscal and representational power. This rescaling of political power has authorized a slate of new and entrenched actors engaged in guiding the direction of livelihood opportunities. Despite the far-reaching effects of decentralization reforms, village level decision-making cannot be considered without reference to the influential forces evolving from the regulatory system governing resource (coal) extraction. However, rural village-level livelihood decision-making is also the product of a complex of dynamic social, environmental and economic forces which promote, restrict or solidify specific livelihood pathways. As such, the challenge remains to

understand how this complex of forces—those informing resource extraction and those informing livelihood choices—come together to shape the impacts of the mines at the local level.

Once we begin to understand how these governance systems operate in conjunction, it will become clearer that the impacts of resource extraction are fluid and are constantly being produced and reproduced over time. An archipelago of more than 17,000 islands teeming with abundant natural capital—e.g. crude oil, spices, and timber—the country has long been a site of resource extraction even predating its magnetism to colonial Europe in the 1500s[1]. The province of East Kalimantan is particularly experienced with large-scale resource extraction. Including the oil wealth that drew the sackings by Japanese WWII military of Balikpapan's port, the gold mine bungle of the world renowned Bre-X scandal and the world's second largest open-pit colliery in Sangatta, there is a rich history of resource wealth amongst these tropical forests. Today, while the massive decentralization in political and fiscal authority are said to have caused mineral and extractive sectors to see diminishing total foreign investment— falling from $29 US billion in the late 1990s to $7 billion US in 2007 (O'Callaghan 2010)—coal projects continue to charge full steam ahead. With huge macro-level infusions of investment rolling in from multi-billion dollar coal mining and resource conglomerates (China Daily 2009, Financial Times 2010a), the question remains as to how current coal extraction projects in an era of formal decentralized political and fiscal governance is impacting the livelihood practices of predominantly small-scale local farmers and fisherpeople who have relied upon the natural resource base to support their well-being.

This concern is at the heart of this research. Specifically, the thesis seeks to understand how the introduction of open-pit coal mines operating in the midst of an evolving state-wide

[1] Van Bemmelen, R.W. "The Geology of Indonesia." Oxford University Press, 1982; p.275.

decentralization structure might reconstitute the social, economic and political rules and regulations informing local livelihood practices. Leading from the methods developed in Blaikie and Brookfield's 1987 *Land Degradation and Society*, the research deploys a modified political ecology 'chain of explanation' approach to understand how the relocation of key components of political autonomy to local and regional governments has provided opportunities for local livelihoods to engage, embrace or combat the range of impacts potentially induced by local coal mining projects. Further, it employs three evolutions of political ecology's chain of explanation theoretical framework which attempts to understand the potential autonomous capacity of institutional bodies and political stakeholders, the manner in which scale producing 'moments' determine the impacts for the local level, and how the biophysical nature of the extracted commodity and the local ecosystem are important for understanding how specific outcomes at the local level 'stick' and become reified (c.f. MacKinnon 2010).

1.2 Putting the Mine in Context

With the ousting of the formerly centralized and autocratic political governance system of ex-President Suharto, political autonomy and fiscal responsibility across Indonesia has been dramatically re-scaled and placed into the hands of regional and provincial level bureaucracies. At the same time, spaces for civil society activity and freedom of press have been bolstered as well. Further, continued engagement in international and regional commodities markets and international trade has enabled foreign markets and multinational corporations to inform production practices, extraction operations and corporate social responsibility (CSR) norms. These components – the political decentralization of control and action, the economic openness – have ostensibly created a new spaces of action for non-governmental organizations, local government representatives, business managers, and individuals to debate, manage, inform, and

instruct how daily life and livelihood activities should and will be conducted. That is, not only will the mine (the big hole in the ground) inform how ecological, economic and social change occurs at the local level, but there are many more 'moments' during which this mine will be made 'political' (Rangan and Kull 2009).

Despite the liberating sense of autonomy, power and freedom that are said to accompany political decentralization reforms, there is rarely a clean break from the past. Instead, many of the former social, political, economic and natural forces that helped shape the actions of villagers in the past remain in place today. At the micro-level, the histories of the villages, its people's practices, and the biophysical environments in which extractive operations occur are temporally fluid yet also provide a 'fixity' that is crucial in shaping the opportunities open-pit mining operations influence livelihoods. At the macro-level, the central government of Indonesia remains active in seeking to maintain their grasp over the rents, royalties and redistributive powers that accompany these billion-dollar industries (Hamilton 2005). Further, the power of multinational corporations operating in the thick of the jungle or at the peaks of mountain ranges provides enough isolation (backed with substantial financial clout) to make these companies the 'de facto governments' providing social, infrastructure and education support for surrounding villages with greater efficacy than the national or even regional governments can (Banks and Ballard 2003). As a result, reading decentralized governance structures as inherently capable of re-locating local decision-making capacity in the hands of local citizens or regional governments evades the nuanced and inherent and strategically scaled impacts of coal mining for local decision-making occurs. Thus, it remains necessary to interrogate what impact wide-scale decentralization has had for communities where the intimacy of mining firms and continued

authority of the central government both remain persistent forces in guiding the operation of open-pit coal mining.

1.3 Decentralization Reform in Indonesia

The prevalence of corruption in Indonesia has been a critical element of the political landscape for decades (Robison and Hadiz 2004). During the Suharto era (1966-98), the country was rife with corruption, collusion and nepotism through most, if not all, sectors of the economy and political governance. The persistence of corruption across Indonesian society became characteristic of daily life in Indonesia but rarely discussed due to tight media, civil society and political restraints the government held primarily through military enforcement and abuse. The Asian economic crisis of 1997 (*krismon*) provided the context, though not the instigation of, political restructuring as the event was accompanied by significant social and political upheaval that affected Indonesia more strongly than most other countries in the region (Hefner 2000). The crisis visited real devastation for Indonesia's poor, including its rural livelihoods (Sunderlin et al. 2000) and gave opportunity to voice increasing anguish and discontent that was present throughout the country for many years on issues of environmental damage, social inequality and political repression. Efforts to disassemble the networks of corruption became a top priority for the incoming Habibie government who faced increasingly restive resource-rich provinces (Forrester 1999). The cases of civil unrest and prolonged secessionist conflict in the relatively wealthy and natural gas-rich province of Aceh and the copper and gold mines of Irian Jaya were two important examples, but other provinces such as East Kalimantan and Riau were also growing restless with the central government's elite siphoning of vast wealth created in their provinces only to be left with the social and environmental impacts (Aspinall 2007). As a result of this period of political transformation, the entrenchment of this network of corruption—

through appointing military officers within the executive, vetting political party candidates and the use of roving BriMob police patrols—underwent a great shock in the *reformasi* era which fundamentally transformed the political power structures of Indonesia.

The ensuing decentralization reform, a cornerstone of the post-Suharto transition, was established specifically through two new laws. The Law on Regional Autonomy (No. 22/1999) ceded extensive authority to all Indonesian provinces, including, *inter alia*, authority over the exploitation of local resources, control of forestry, plantations, fisheries and small-scale mining. This was a drastic recalibration of Indonesian governance systems as previously control over policy creation, implementation and review were performed by the central government with directives and regulations to be carried out by regional units. As such, a much stronger regional presence was developed to inform the creation of regional development policies, political leaders, and environmental regulations. Yet despite this, the central government was determined to maintain strong legislative control over planning of national development, conservation, efficient use of natural resources and regulation of mines and energy (Hamilton 2005: 48). As a result, the regional autonomy legislation provided greater powers for authorities at the sub-provincial level—the *kabupaten* (regency or district) and *kotamadya* (city or town)—and less at the provincial level in managing these affairs. However more recently, a new national Mineral and Coal Mining Law (No. 4/2009) has begun to cede mineral permitting rights to local and regional governments where the mine sites are located, as well as the potential for the national government to place ceilings on the international export of coal. While these reforms are only beginning to take root, decision-making with regards to resource extraction remains within a number of political levels.

The second law, the Law on Intergovernmental Fiscal Relations (No. 25/1999), provided for the control of resource rents, local taxation, etc. to remain within those provinces from which they came. In terms of resources revenue control, the law directed 80% of income derived from forestry, fisheries and mining to remain within these provinces, which in 1999 accounted for 8% of total government revenues, or a total of approximately $1 billion USD/year (Clark and Clark 1999). This measure was aimed to ensure a major stake in funds derived from these resource projects would quell increasingly agitated populations over the control of their destiny. Beyond the resource-related outcomes of these reforms, these decentralization efforts were also strongly internationally supported as a way of disabling the corrupt Suharto-era networks perceived to play a role in the financial crisis and provide democratic reform and freedom in the daily lives of Indonesia's more than 230 million inhabitants.

Despite the efforts to localize control over the governance of regional activities across Indonesia, the reforms were hasty and often characterized as unclear with overlapping areas of authority with the role of mining regulation unclear (McCarthy, 2004 and KPC 2001). While efforts to allow local regulations and permit concessions granting were in writing, similar documents also allowed for a continued role of the central government to guide conservation area designation (a contentious aspect in determining where mining was allowed to be carried out), environmental regulations and mining contract permitting. Part of this confusion existed due to the hurried manner in which the reforms were drafted and passed through legislation, but it was also due to the ongoing desire to re-write national mining legislation which had been in existence 1967.

1.3.1 Decentralization and Livelihoods

Governance is referred to as the "formation and stewardship of the formal and informal rules that

regulate the public realm, the arena in which the state as well as economic and social actors interact to make decisions" (Hyden et al 2004: 16). With regards to the governance of resources, decentralization aims to improve resource allocation, efficiency, accountability and equity (Larson and Soto 2008) by empowering those who possess the greatest specialized and disaggregated knowledge of local environments (Andresson and Ostrom 2008). However, in practice the desired discretionary power and downwardly accountable representative authority is often rarely fully achieved due to central state reluctant—and strategic—transition from power (Ribot, Agrawal and Larson 2006). Further, the impacts decentralization carries is also dependent upon the relative strength, capacity and resources of the newly empowered stakeholders in relation to other stakeholders engaged. However, the political capacity of decentralized governance stakeholders to exert normative regulatory influence does not necessarily adhere to one predominant stakeholder (e.g. the state, the mining firm), but instead a coalition of actors compete, cooperate, and dominate to produce contested and dynamic outcomes, many of which are often unintended by the complex of stakeholders. In this vein, it reflects Foucault's thought that government, "the conduct of conduct", does not lead to the common good, but instead to an end that is convenient for each of the things governed (Foucault 2000: 211 in Watts 2004a). In our story, the 'things governed' are the land, wage-labour and fishing components of the local village livelihoods within Sekerat, Indonesia.

As discussed in the following chapters, the redistribution of power involved with decentralized governance carries real implications for livelihoods. Livelihoods are the suite of practices comprising the capabilities, assets (including both material and social resources) and activities required to 'make a living' (Carney 1998). These practices are shaped by access to opportunities which are, in part, conditioned by social relations, institutions and power relations

that differentiate the availability to include particular resources into livelihood strategies (de Haan and Zoomers 2005). It is important to understand livelihood outcomes not as directly ascribable to structural forces connecting external economic or technological processes with local level impacts (Bebbington 2001), but instead by viewing these factors in conjunction with the role local level social and political action plays in informing livelihood pathways (Neumann 1992). The local level (the 'everyday', cf. Rigg 2007) is a political melange of influences and interjections from official (state), advocacy (NGO or local institutions) and the everyday (local actors and community relations) which work together to inform and distort the opportunities available for individuals and households to access and put to use the resources necessary to sustain a livelihood. Even further, the environments in which these activities take place are also important components that inform the range of possibilities that are practical and perceived as being sustainable or worthwhile. In the end, we must understand how these varying governance priorities come together and work to inform the production of coal, as well as the production of livelihoods.

1.4 Livelihood Change at an Indonesian Coal Mine

Despite the macroeconomic growth potential and the vast resource rents and royalties, Indonesia's large-scale resource extraction projects have carried an enduring legacy of social turmoil and environmental damage. Natural gas development in Aceh province and the copper and gold mines of Irian Jaya are two of the most prominent examples of the potential for conflict and environmental ruin. But predicting the impact natural resource extraction projects have on surrounding communities is far from a simple casual flow of structural impacts. While resource extraction—and open-pit coal mining in particular—carries a multitude of potential impacts on the local environment (deforestation, soil loss, species disruption, air particle pollution, etc.) and

social communities (conflicts over leadership, land ownership, livelihood change, community coherence, 'sinful' activity, etc), fleshing out the exact ground-level impacts requires going beyond broad-brush categorization of structural or 'ontological' impacts (i.e. inflows of capital lead to corruption) and understanding that impacts occur at ontological, epistemological and interpretive moments. As such, identifying how changes of the biophysical and the social work in conjunction with one another that occurs also through the social reading and remaking of the landscape that inform the complex dynamics of livelihood change.

The point of departure for this analysis is a small, rural costal village of Sekerat in the Indonesian province of East Kalimantan 60 km north of the equator. Since its founding in the early 1950's, the villagers of Sekerat near Pt. Kaltim Prima Coal (KPC)'s 'Bengalon' coal pit site in East Kalimantan, Borneo have long relied on the fisheries of the Makassar Straits, the low-lying tropical rainforests and the fruit and vegetable gardens villagers cultivated within these forests. But slowly since the early 1980's, coal mining companies have begun making their presence known. With the exploration and eventual commencement of coal extraction and export from Pt. KPC's 'Sangatta' pit some 35km southwest of Sekerat, the influence of mining has initiated and supported the transformation of livelihood practices directly through mining company community development programs, infrastructure development, and mine-based employment. With the commencement in 2004 of Pt. KPC's 'Bengalon' site pit directly north of the village, Pt. Darma Henwa (the contractor provided full rights to operate Pt. KPC's Bengalon concession) has expedited this transition by constructing a coal conveyor belt through the village down to the beaches near the sub-village of Sekerat-Sekerat[2] where coal is stock-piled and

[2] The village of Sekerat is composed of four sub-villages, discussed below. The brunt of fieldwork was conducted in the sub-village of Sekerat. When referring to the sub-village, the moniker Sekerat-Sekerat will be used. When referring to the collection all sub-villages, the moniker Sekerat will be used.

shipped off to waiting tankers to export it to predominantly Asian markets. More recently in 2007, a second pit mine also began operation under control of another firm, Pt. PIK, (the coal mining operator of the Pt. Bayan Resources run contract area) to the west of the village. In the wake of these developments, livelihoods have changed. Hundreds of villagers in this small village have found wage-based employment at the mine and with its many supporting companies and industries; land speculation became rampant with villagers searching for opportunities to be compensated following numerous land purchases and payouts; and traditional farming and cultivation practices have faded away or been re-engaged in increasingly capital intensive endeavours, while also seeing economically or socially marginalized villagers creatively making their way with a slew of activities.

If one were to summarize this past paragraph on the livelihood impacts of an open-pit coal mine in the rural backwaters on a tropical island in Indonesia to a friend, these impacts would probably not come as a surprise. “Sure”, they might say, “a big project like that with sudden inflows of people, money and technology, it is obvious these powerless rural villagers would take up jobs with the company, try to grab whatever compensation they can get and would eventually leave their quaint practices of old behind.” (And quite possibly, “Isn’t it *so* sad those companies do that those poor folks?”). And when we look at the story of how these practices came to be, we do see that some of the factors involved in this process *have* constrained and guided some of the outcomes that we are seeing. *But*, we also see that the processes responsible for these outcomes are not as inevitable as it seems and, in fact, that much more opportunity for autonomy and contingency exists than one might assume. Specifically, the space created for civil action, local institutions and the historical practices in the village which inform this transition shows us the importance of understanding how the political work of the stakeholders involved in

this process, especially in the wake of decentralization reforms, *is* playing a crucial role in determining livelihood outcomes. As a result, we see that this story does not seem so inevitable.

It is in this observation that this thesis seeks to illustrate how the decentralization of political autonomy and fiscal spending power has informed for the impact of coal mining on the livelihoods of local rural villagers. More specifically, how the opening of political decision-making opportunities for the stakeholders of mining projects has worked to re-form the governance 'space' of restraints and opportunities of livelihood activities in Sekerat's sub-village of Sekerat-Sekerat and craft the range of possibility that make 'sense' for those living within this place. This understanding must include a sense of how this particular 'governance space'; a modality in which a real and material world is terra-formed and populated with a separate system of cognition modelled through government[3] practice (cf. Watts 2004). To understand how this 'space' has come to be, with particular reference to the changing governance context initiated by decentralization reforms, theoretical attention must be paid to the structured methods in which varying scales of change are interpreted by villagers as constraints and opportunities placed upon their pursuit of various livelihood pathways, but also how these interpretations then take the form of specific practices and outcomes.

1.5 Theoretical Approach: Political Ecology as a Framework

At its heart, this thesis seeks to link processes and projects with outcomes. While it is often easier to point out a problem or a success than it is to explain how the situation came to be, outcomes can be better explained by methodically approaching the issue in question. Political

[3] Government here is not 'the state', but instead the multiplicity of authorities which sustain forms of power in security and regulation of things and men's relation to them (cf. Foucault 2000 as cited in Watts 2004). In our case this refers to those actors/stakeholders involved in the production of coal, as well as other actors informing activities of local villagers at these coal mine sites.

ecology has often been used to provide such an approach when deciphering how society and nature work to inform one another. Specifically, the approach laid out by Piers Blaikie and Harold Brookfield in their foundational work, *Land Degradation and Society,* has been at the center of many analyses of environmental change for more than 20 years. The political ecology approach acts as an analytical 'toolkit' that assembles various fields of inquiry that developed across the social and 'hard' sciences and humanities, but have come to define a sub-field of geography which this analysis will build upon. The focus of Blaikie and Brookfield (though more so than other manifestations of political ecology research) on the roll that political economy and power relations plays in structuring environmental and social outcomes is particularly relevant when understood within the context of decentralization reforms.

The importance of local livelihood practices is particularly useful within this method. Blaikie and Brookfield put this (local decision-making more specifically) at the centre of their 'marginalization and degradation thesis' which focuses on the 'land manager' as key to understanding the *local* reality. Starting with the local manager, one works their analysis up through a causal 'chain of explanation' investigating the surrounding social relations, biophysical conditions, historical genealogies and political economic forces that inform the decision-making realities. From there one can explain how a range of social, political and environmental forces guide villagers' decision-making repertoires, and can often result in environmental and livelihood outcomes such as ecological destruction (e.g. land degradation, deforestation, etc.) and social turmoil (e.g. conflict, famine, etc.). Within this (and more heavily within the so-called 'liberation ecology' studies) one can discover not only the processes involved in creating these outcomes, but can also provide insight into the political action that can re-work or replace negative outcomes with alternative or more just outcomes. Such an approach is quite relevant

and has been quite useful in explaining how open-pit mines can lead to livelihood change in the context of large-scale political decentralization (Bury 2008, Bury 2004, Bebbington 2000).

However, despite the utility of these approaches, it remains difficult to make sense of the role of autonomy (actors) and structure (processes) and how they create environmental and social outcomes. While this thesis does not make any claims to come close to tackling this storied debate, it will provide some engagement with both components in order to understand what persistence there may be in a context where autonomy and freedom appear to take a leading role locally. More specifically, this means (in a very small way) bringing in conversations about the role of materiality and the biophysical in structural political economic processes as a means of understanding how increasing autonomy may remain hamstrung to the structural conditioning of processes beyond agential control. Recent writings within the loosely collaborated 'resource geographies' literature (Bridge 2010, Huber and Emel 2009, Bridge 2008, Perreault 2006, Baaker and Bridge 2005, Watts 2004a, Bakker 2003, Bridge 2002) have sought to show the importance of the relation between economic process and biophysical materiality and the manner in which these components shape the governance of resource production and how these economic processes directly inform the 'conduct of conduct' giving rise to these environmental and social outcomes. These works have been part of the ongoing discussion within, and outside of, political ecology literature on the dubious role ecology is perceived to receive within the analysis of these environmental and social outcomes (see Walker 2005). As such, resource geography writings have given important insight into the creation of what Watts refers to as a 'governance space', as described in his studies on the oil industry in Nigeria (see Watts 2004b), in which specific modalities of thought become pervasive, and perceptions and actions are crafted and conditioned to accord to the overriding function of the project (in our case coal

mining) which has brought the specific governance space into being. In the end, it is this governance space which is critical to understanding the some of the components of current local *perception* of environmental and social change which end up informing livelihood decision-making with the important impact of creating and recreating current and future environmental and social impacts arising from coal mining within this local community.

1.6 Research Questions and Methods

The regulatory space—the governance context—evolving within the village of Sekerat is heavily informed by the political transition following the 1998 fall of the Suharto regime. These reforms are influential in informing the local level political dynamics surrounding large-scale resource extraction projects and are central to understanding the livelihoods witnessed. To understand this space, this thesis will look at the role of relevant 'stakeholders' (multinational mining firms, national, regional and local governments, and grassroots actors) from the ground level perspective of 'everyday life' of those who inhabit these locales The multiplicity of stakeholders is preferred over individual actor-oriented analyses (e.g. Bury 2008) to understand local level impacts as "there are no specific sets of actors representing clear and definable scales; rather, different 'spaces of engagement' yield different scalar attachments by different social actors" (Huber and Emel 2009) . In order to understand this regulatory space operating within the village, the research sets out to answer three specific questions:

1. How is the range of local village livelihoods evolving?
2. How do extractive resource governance systems influence local livelihood practices?
3. Which stakeholders are responsible for shaping this extractive resource governance system?

By asking these questions, it should provide better insight into understanding why it is these villagers do as they do and whether this regulatory space is sustained by 'process' or whether

practices can be reconstituted through autonomous action, or if a combination of the two is best suited to understand livelihoods in Sekerat-Sekerat.

As such, this text is not intended as an attempt to determine the relative strength of competing institutional structures (i.e. scales of legal and regulatory instruments, cultural practices or geographical features[4]) responsible for transforming these forces. Instead it will attempt to illustrate the numerous influences shaping outcomes in order to better assess the perennial challenge of understanding the roles of agency and structure in creating social and natural landscapes. As such, this frame reflects the spirit of Michael Watt`s work, mentioned above, which looks at the broader political economies of change as a means of understanding local instantiations of outcomes and social/environmental change. From this, I argue, we can come to find away how local land ownership, local representative institutions, the mining firm, and civil society engagement restructured after decentralization reform come together to shape the range of impacts witnessed, and then grounded through temporal and material components of the village and mine. Together these factors have played the most dominant roles in determining the opportunities, pathways and conditions in which villagers adapt, resist and produce their livelihood practices.

1.6.1 Methods

In order to answer the above research questions, it is necessary to provide a detailed description of local livelihood practices. However, as the intent of the research is not solely to illustrate the daily practices of local rural villagers, the livelihood descriptions will serve as a means to view the operation and consequences of coal mining governance. This approach provides an opportunity to view political stakeholder's role in creating, abstaining from, or distorting

[4] For an analysis on the importance of geography as an institutional structure, see Hayter and Barnes 2005.

opportunities in the local community and how the structure and function of coal governance can enable or disable relevant forms of power in guiding the rules informing livelihood practices.

Such an approach requires both documentation of livelihood practices and the perceptions of those affected on why and how they come to undertake those practices. With this in mind, it would follow that the style of institutional ethnography could be gainfully adapted here. The institutional ethnographic approaches seek to understand the implicit, unspoken assumptions and agreements which constitute the underlying patterns of social life—in our case, livelihood practices—within a specified case study (Babbie 2008: 328). Differing from the naturalist mode of reporting on the way that it 'really is' in the village, an ethnographic approach is more intent on "identifying the methods through which understanding occurs" (*Ibid:* 324).

1.6.2 Institutional Ethnography

Livelihoods—the suite of practices comprising the capabilities, assets (including both material and social resources) and activities required to 'make a living' (Carney 1998)—acts as our 'point of entry' (cf. Smith 1999) from which to view the confluence of forces enacted through the governance of coal production. This approach is quite appropriate as it recognizes that social relations, institutions and power relations are central to the differential availability to include particular resources into livelihood strategies (de Haan and Zoomers 2005). In this sense, institutional ethnography provides an opportunity to link decision-making at the local, individual level to larger social and economic trends within the village.

Developed in the early 1980s by sociologist Dorothy Smith, institutional ethnography focuses on 'textually-mediated social organization' (Devault 2006). Arising from the belief that technologies of social control are increasingly and pervasively textual and discursive (Smith 1999), it seeks to show how people in one place are aligning their activities with relevances

produced elsewhere (Devault 2006). Commonly using work as a key 'day-to-day' activity for its substantive focus, it builds upon the concession that institutional ideologies typically acknowledge some kinds of work and not others. Analyses then proceed by way of tracing the social relations—connections among work processes—people are drawn into through their work and how texts and documents work to incorporate actions and activities into the service of a more powerful institutional influence. As such, Smith's formulation of the "ruling relations" is not a heuristic device and does not simply point to "structure" or "power," but instead refers to an expansive, historically specific apparatus of management and control that arose with the development of corporate capitalism and the activities which supports its operation (Devault 2006: 295).

While there is great utility in using this method to draw out the forces shaping the work experience, the intent of the following research is to replicate the style of this approach, rather than adopt the method in its entirety. Since the research seeks to understand how the *range* of institutional forces operating within the system of coal governance come together to support, or work against, the operation of coal mining, it is less relevant to track the influence of a pivotal institutional ideology within the community because, under the assumption of the author, there are a number of forces working at different scales aligned through the intersection of livelihood governance and resource governance models that stretch beyond the local actions of one predominant actor/force informing local experiences. Nevertheless, it lends from the institutional ethnography approach in that analyses starts with the personal experiences of individuals then proceed is to uncover the institutional power relations that structure and govern those experiences (Babbie 2008: 328). In our case, uncovering institutional powers will rely upon analysis of relevant regulations, rules and guidelines that are exercised and brought to the

attention of the researcher throughout the ethnographic research. By comparing local perceptions with the rules and actions in play, we can begin to see how the institutional components of coal mining governance is knit together with the institutional components governing livelihood practices.

1.6.3 Data Collection

An institutional ethnography requires data collection of both villager perceptions of the influence governance actors have in shaping livelihood opportunities, as well as comparing these perceptions with the codified rules, regulations and guidelines informing actors influence within the community. Both needs can be achieved through participant observation and key informant qualitative interviews, while also documenting the rules and regulation in writing. These will allow for documentation of local perceptions, as well as a detailed discussion of the roles played by different stakeholders with regards to the governance of the coal mine. As a result, we are provided with a way of comparing local livelihood practices with the actions and influences of the stakeholders operating within the coal mining governance space.

Data collection began after the first week of January 2010, when I enrolled in language courses in Yogyakarta, on the island of Java in Indonesia. It was here during 4 weeks of intensive language training that I met with a local contact at the University of Gadjah Mada, Professor Pujo Semedi. Professor Pujo was able to refer me to one of his undergraduate students, Manggala Ismanto, who accompanied me to the field site to translate the interviews and mediate the data collection process.

After the end of language training in the first week of February, we traveled to Samarinda, East Kalimantan to meet with local JATAM members who provided us with village contacts upon our arrival at the Bengalon mining pit. JATAM (Jaringan Advokasi Tambang) is

an Indonesian mining advocacy network concerned with human rights, gender, the environment, indigenous people and social justice in relation to the mining, oil, and gas industries[5]. It was at their office in Samarinda that a local member was able to direct us to a former university student and JATAM-member originally from Sekerat village, the location of the Lubuk Tetung coal stockpile and port for Pt. KPC's Bengalon pit operations. The former student/JATAM member, Bang Anton, was able to provide us with a room to rent at his parents' house that is located along the beach of Sekerat-Sekerat sub-village.

The in-field data collection took place between late-February and early May in 2010, for approximately 10 weeks of participant observation and key informant interviews within the village Sekerat, primarily within its of sub-village of Sekerat (Sekerat, Sekerat). Another 2 weeks were spent prior to arrival registering with local government and mining company officials operating at the selected village sites as well as conducting interviews with community development and empowerment employees with Pt. KPC in Sangatta village, 20km west of the Bengalon pit. These interviews provided background information of the village scene as well as the activities and rationalities of the mining company in relation to their "Community Development and Empowerment" activities.

1.6.4 Participant Observation

Participant observations were carried out for a range of activities within and around the village. These activities included crab fishing, bird trapping, high school teaching, deer trapping, and security postings, amongst others. These occurred throughout the village and the surrounding area at the convenience of local villagers. The observations were conducted with willing

[5] http://www.jatam.org/english/index.php

participants that had either invited us to join them into their places of work, or those who we asked to accompany. All interviews were facilitated by an interpreter. An effort was made to cover the widest range of practices possible, however there were many restrictions. Most important was the restriction on accompanying villagers into their work at the coal mine pits. Due to strict safety requirements, there was little room for accompanying researchers. Nevertheless, efforts were made to include wage-based, income-based practices and subsistence practices, as well as activities taking place within and outside of the sub-village. In total, 8 different activities were undertaken through participant observations, each preceded and followed by qualitative interviews. These provided insight into the interviews that we had with other participants within the village throughout the time in the field. Gender was also taken into consideration. However, despite a numerous efforts to engage in observations with numerous villagers, research was only able to include two female of the eight respondents.

Questions were not pre-determined and instead evolved around the specific practice in question. However, the questions were aimed at uncovering the history of the practice, intervening forces influencing villagers' engagement, reflections on the future of the practices, their attitude/perceptions and feelings toward the practice, as well as encouraging the villagers to contrast the practice with others within and beyond the village.

1.6.5 Qualitative Key-Informant Interviews

The qualitative interviews were pursued through two approaches: interviews with coal mining stakeholders and interviews with local villagers about village livelihoods. The former took the approach of trying to parse out the relevant stakeholder's role within the community in relation to coal mining, while the latter sought to describe and elucidate perceptions on the activities undertaken by villagers and migrants within and outside of the village. The interviews with

mining stakeholders took on a more formal interview style. With villager interviews, the style was more informal and instead encouraged the villagers to talk about specific themes or issues which had been brought to our attention by the participant observation, other informant interviews or through pre-interview readings and secondary research.

Formalized qualitative interviews were first conducted with mining company's 'Community Development and Empowerment' department officials. There were 3 interviews which provided information about the "community development and empowerment" practices the company had been engaged in with the community since 1992, but the topics and questions were mostly directed at current activities.

Once in the field, qualitative interviews were conducted with village elders in order to gain approval of our presence and research within the community. While permission was given, elders and elites did not suggest or encourage us to speak with specific individuals. Instead, we relied on a key informant—the mother of the house where we stayed—to first direct us to individuals within the village that may be interested in speaking with us or sharing stories of interest. From there we used snowball sampling to direct us toward other participants. Beyond this, we also engaged with many other respondents who sought us out to speak with us, or who decided to speak with us because of their curiosity in speaking with a foreigner.

While numerous interviews were conducted, 27 were used as the basis of this research. The number was restricted to those which provided sufficient depth of information that was collected from the interviews. Since interviews were usually informal in nature, it was often difficult to get a unified amount of information out of all interview participants. As such, a number of interviews were not included within the final data set used for analysis. However,

efforts were made to maintain a balance of gender, income and range of practices in order to provide a broad overview of the range of practices undertaken in and around the village.

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The thesis will now proceed by next exploring the theoretical position of political ecology used within the following analysis. From there, the third chapter focuses on the context of our case study with relation to decentralization reform and coal mining as it pertains to Indonesia. The fourth chapter summarizes livelihood practices within the Sekerat and leads into chapters 5, 6 and 7 which analyse the field research findings beginning with land in livelihoods, wage-labour from working with the mine, and then fishing which have been affected through mining. Following this, the theoretical framework is reanalysed with reference to the field observations and chapter nine concludes on the project as a whole.
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CHAPTER 2 – POLITICAL ECOLOGY: A THEORETICAL APPROACH

2.1 Degradation and Marginalization: Political Ecology as a frame

At its heart, political ecology—a dynamic epistemic and trans-disciplinary approach—seeks to critically understand human-environment relationship by focusing on the role of power and politics in the making and remaking—destruction and construction—of nature (Robbins 2004). Political ecology, though often described as "resistant to precise definition" (Bridge 2002), has developed into a diverse and dynamic field of study which offers its applicants a conceptual toolkit with explanatory power in understanding the confluence of social and biophysical forces informing land use and landscape transformation processes. The seminal texts of Piers Blaikie (1985) and Blaikie and Harold Brookfield (1987) have remained central in the evolution of the political ecology research approach and have outstripped their progenitor field of cultural ecology (Walker 2005). Specifically, their work on marginalization and land degradation has provided great insight and explanations of the reflexive relation between society and land (and more broadly the environment) and the role power relations play in mediating that relationship. While the work focuses primarily on land degradation with a specific outcome of linking political economy with the 'mining' of soils (Bryant and Bailey 1997), Blaikie and Brookfield's approach has been applied in environmental processes beyond the specific focus of land degradation, including urban ecology, policy work and marine environments to name a few.

Critical within this line of study has been the methodological approach of working through a 'chain of explanation'. This approach centres the analysis on the local land manager (typically a rural peasant or farmer) who finds him/herself responding to political, social, and economic data independent of the intrinsic properties of the land they employ (Blaikie and

Brookfield 1987: 3). As a result, land managers face a great deal of complexity trying to interpret various data—especially the difficult to interpret ecological data on the sensitivity and resilience of the soil (or other aspects of the biophysical world)—to inform decision-making processes. Then, in order to better understand the social influences guiding ecological management (an often overriding effort within much of current political ecology analysis), Blaikie and Brookfield cast these biophysical and social forces within various geographical scales stretching above the land manager—personal relationships, the village and communal level then expanding toward the national state and world economy—which shape, enable or restrict a range of practices one will pursue. Further, these processes are also set within a temporal context of social and environmental change.

As such, typical analyses commonly rest upon these three core focuses (cf. Neumann 1992): (1) a 'bottom-up' approach on 'the producers who work the land' and the immediate social forces which influence their everyday practices; (2) a micro-focus on villagers existing in a web of social relationships which link them to larger political economic structures which extend beyond the locale; and (3) the importance of historical analysis in understanding the development of social relationships and their subsequent links to degradation.

Within this approach, the analytical focus rests heavily on the forces that construct decision-making capacities and opportunities of the land manager. This framework lends heavily from Marxist political economy which cast the material productive forces (i.e. relevant technologies of production including machinery, capital, land, labour etc.) of an economy responsible for creating social relations of production that in turn stratifies knowledge within different scalar levels of production (Hughes et al 2003: 45-6). More specifically, the political ecology approach acknowledges that a "spatial unfolding of political economy…[used to

explain] the variations of the social relations of production" plays out across various scales, which inevitably "impinge upon the range of choices land managers have" (Blaikie and Brookfield 1987: 66). From this spatial unfolding of political economy (which is more heavily a focus within geographical political ecology research), three types of marginality become relevant: economic, ecological and political economic[6]. These two specifically social (economic and political economic) forms of marginalization are then described which often induce marginalized groups into ecologically marginal areas or force their productive activities to engage with these ecological components in ways which may not allow them to respond to the sensitivity or resilience of the biophysical system in question within a specific historical and geographical context. As such, the access to resources or assets is controlled and the opportunities for land managers to react to the dynamic requirements of the land they work are greatly constricted. In the end, land managers in the "third world" (primarily, though many analyses also focus on the "first world") are seen to suffer from a set of related symptoms which combine the outcomes of land degradation, political and economic peripheralization, stagnant production, outmigration and poverty (Blaikie and Brookfield 1987: 18). In practice, pushing beyond the ecological margins does not always occur. While there are important ways in which autonomy and management, of the land in this case, is restricted, the ability of land managers to employ a range of activities such as capital inputs like fertilizers or pesticides, the development of community resource management schemes, crop rotation or management innovations often allow these ecological boundaries (perceived or otherwise) to be expanded, breached and reformed. The ability of margins to be stretched is what has made up much of political ecology

[6] The Economic margin is land production at the marginal unit where the value of inputs reaches its breakeven point in terms of value of output. The ecological margin is an area where a plant reaches a killing stress, but would expand if the stress were removed) and political economic margin (where groups are marginalized in decision-making or policy consideration).

research in the interloping years since Blaikie and Brookfield's original works were published, and it is to some of these evolutions that we now turn.

2.2 The Evolution of Political Ecology

Since *Land Degradation and Society* first appeared more than 20 years ago, the theory has been applied, expanded, critiqued and remolded. Throughout this time, the reinterpretations of their thesis have evolved in a number of directions. One of the important directions of critiques and evolutions that is particularly relevant for the research conducted within this thesis has been the work that has evolved around the development of Blaikie and Brookfield's 'chain of explanation'. Specifically, issues have been raised with the construction of scale which informs the theory's explanatory function as well as the way in which structural components of relations of production or biophysical components are given consideration in creating social and environmental change. This latter concern, of the over-reliance on the biophysical, has primarily arisen in many of the post-structural critiques which have given much greater consideration to the use of discourse and individuals' perceptions around environmental and social impacts in order to understand how Blaikie and Brookfield's 'land manager' interprets their surroundings in the process of remaking their local landscape.

For the purpose of situating the present research within this body of work, I raise three of the reworked and expanded aspects of Blaikie and Brookfield's marginalization and degradation insights. These aspects focus specifically on ways to explain how coal extraction in a decentralized governance framework constrains and directs local villagers' decision-making practices with regards to the creation and management of specific livelihood practices.

2.2.1 The Role of Agency

One aspect in political ecology writing that has received considerable attention surrounds the claim that Blaikie and Brookfield's original analysis placed too much emphasis on 'the fundamental constraints placed on human agency and creativity by political and economic processes' (Warren et al 2001). With such a heavy focus on the structuralism of Marx's material forces of production, detractors argue that the autonomy of the local actors and their ability to incorporate or engage with these structural processes are not given enough respect in analyses. The result is that too little analytical focus is directed toward the complex ways in which this structural power is contested, resisted, and negotiated within the political context of the household, the workplace, the state and other areas (Jones 2008, Peet and Watts 2004). From this, increased attention has focused upon more nuanced interpretations of power *relations*[7] which included struggles over access to resources at the state level (Doolittle 2004, le Billon 2000) and the household level through gender, class or wealth struggles (Rocheleau 1996). These analyses have included a decisive post-structuralist focus (Jones 2008), with attention directed toward the discursive strategies to tactically employ language to exert influence within power relations (Sundberg 2006, Vandergeest 2003, Li 1999). Even still, there also remains a focus on more tangible sources of power through social movements (Forsyth 2004) and the 'politics of resistance' (Scott 1985) which often manifest around forms of identity claims and solidarity. As a result, efforts to understand the multiplicity of actors able to express, engage and contribute to the dynamic political process of power relations have taken on a greater role in many iterations of recent political ecology research (Peet and Watts 2004).

[7] This is in opposition to a one-way power application, typically projected from larger, more economically and politically powerful actors like the state or international corporations, or world currency or commodity prices.

The question of agency and local level autonomy is particularly pertinent within the context of decentralization reforms which aim to formally empower and enliven a range of local political actors to engage within the process of determining the environmental and social impacts and activities that are carried out within a village. As empowered local institutions come into the fray of conducing and cajoling the economic and political processes, alternative modes of political action may develop in response to formal (though potentially uneven) integration of relevant stakeholders and thus requires historical and cultural analysis to provide insight as to which institutions and groups are able to contest or embrace or combat the structural trends experienced. Particularly, the development of relatively informal protest or resistance by grassroots actors or coalitions of citizens as well as the more formalized institutions are particularly salient means through which these autonomous forces can be applied, especially with relation to mining (Bebbington et al 2008).

2.2.2 The Role of Scale: The Politics of Scale

The second discussion—a long standing issue within geographical studies—at the centre of the evolution of political ecology theory is the concern over the role of scale and its implications for social and ecological impacts (Brown and Purcell 2005). While the progress of scalar concepts have received much attention within the field of urban governance (Brenner 2001, Swyngedouw 2001), political ecology's engagement with the concept has also been rich (Huber and Emel 2009, Rangan and Kull 2009, Bassett and Zimmerer 2003). In particular, Blaikie and Brookfield's use of scale in their 'chains of explanation' has been attacked for lacking specificity in its theoretical application in terms of scale as level (vertical hierarchy) or extent (horizontal impact or extent) (Marston et al 2005) and its position in the research as either an epistemological or ontological category for analysis (Neumann 2009). The latter concentration of

political ecology research of scale as metaphysical often results in the 'fetishization' of scale, by treating it as *the* object of inquiry, as opposed to the underlying socioeconomic phenomena which produce scalar effects (Bridge 2002). That is, it is important to understand that "the theoretical and political priority" in scale research ''never resides in a particular geographical scale, but rather in the [social] processes through which particular scales become (re)constituted'' (Swyngedouw 1997: 169 as cited in Brown and Purcell 2005). That is to say, scales—such as 'the local'—are not inherently imbued with a sense of importance in determining social and ecological impacts, but are instead instilled with importance through particular social processes. As such, these specific social processes, like the institutional components engaged in coal mining, are given increased primacy in understanding how specific impacts arise at specific scalar levels.

Yet even this position drifts too far toward scale as existing only within a social realm—though not as statically as other analyses—and hence does not provide balanced integration of ecological and social processes across multiples scales for analyzing landscape and socio-spatial outcomes (Rangan and Kull 2009). Instead, it is important to acknowledge that numerous processes *produce* scale and scalar impacts. . Neil Brenner's distinction of the politics 'of' scale is useful in shedding light on two some of the confusion that arises over scale. He employs two types of scale: the singular sense (politics *within* a scale) and the plural sense (politics *between* scales) (Brenner 2001). Within the latter 'plural' sense, there arises within a scale "an embeddedness and positionality within relation to other scales" that creates a specific "modality of hierarchization and rehierarchization through which processes of socio-spatial differentiation unfold *materially and discursively*" (*ibid.: 600* italics added). Brenner goes on to state that the

development of these scales occurs from particular kinds of political-economic and socio-cultural activities which see

> "shifting organizational, strategic, discursive and symbolic relationships between a range of intertwined geographical scales…[with]…ramifications of such interscalar transformations for the representations, meanings, functions and organizational structures of each of those scales." (*ibid*: 600)

That is to say that focus on the production of various geographical scalar processes—for our purposes, political decentralization and the relation of the biophysical/material in informing relations of production—can help explain how scale-specific modalities (i.e. decision-making) translate and make 'political' the ecological and social impacts that are operationalized with respect to particular projects (i.e. coal mining). Such a vision of scale allows the research to move beyond the easily presumed macro-micro, global/local binaries that assume away agency of the local and instead point to the processes that empower the relative influence of particular scales. From this, instead of deciding whether or not scale is ontological or epistemological, the more astute observations of Rangan and Kull (2009) see scale produced by three moments of action:

Production of Scale	
Moments of Action	Processes of Scale Production
Operation	Ontological – e.g. Combinations of space, time and power that shape social and biophysical processes whose forms are recognizable but never completely determined.
Observation	Epistemological – e.g. produced through measurement and control by policy makers, researchers, governments, etc which focus on particular social groupings or biophysical entities that determine the resolution of the underlying processes.
Interpretation	Translation – e.g. produced through discourses

	of how some statements and explanations emerge as knowledge or 'truths' which are used to give particular meanings to a physical and social reality.

Table 2.1: The Production of Scale (Rangan and Kull 2009)

Rangan and Kull claim that too often in political ecology, these three scale production moments are collapsed into the category of social construction of scale. Thus the challenge in relation to scale is for political ecology to

> "adopt scopes of analysis that encompass ecological change as an integral part of the human processes of regional transformations and differentiation imbricated in daily life and livelihood practices, in development schemes and plans for improvement, and in emotional attachments to place." (Rangan and Kull 2009: 42).

As such, while the structural forces of ontological impacts seen in financial flows, a big hole in the ground, new roads and new people; these must not be our only site of analysis in interpreting social and environmental change. In order not to overemphasize the role of scale as a function itself, we need also to focus on the processes that give rise to these scalar effects. With that, we turn now to the insights of resource geography.

2.2.3 The Role of Nature: Resource Geographies

The final evolution applied here, which carries from the scale conversations above, has congealed around a dynamic within the sub-field of resource geographies. From this field, the role of biophysical nature has been given a renewed importance for the above mentioned moments of scale creation within political ecology analysis. While the intent of this paper was not to engage in any formal quantitative discussion of biophysical properties of the environment, the characteristics of the land, local ecology and the resources being extracted must be a part of a political ecology analysis investigating extractive resources impacts upon local community

livelihoods (Huber and Emel 2009, Bakker and Bridge 2005). Much has been discussed on the role of the biophysical in political ecology analyses (Walker 2005, Bakker and Bridge 2006), and it is the intent here to include the thoughts of a few authors on how political reformulations impact the material world and how the material world informs political, social and ecological transitions.

The specific level of analysis chosen is also quite relevant in determining how these biophysical characteristics play a role in livelihood opportunities. In relation to extractive industries wage-labour opportunities, a primary concern is the implication of the land-based character of resource production on the opportunities for achieving scale economies as well as structuring the nature of technological development (Prudham 2005). That is to say that the qualities of the resource being extracted plays an influential role in where value is created amongst a production chain, and thus carries implications for the social relations created through the material productive force of a particular industry. Further still, regional assets (meant here to refer to natural characteristics of resources and the environments in which they are found) can be pre-conditions for development if they provide economies of scope and scale that can deliver regional advantages insofar as they can complement the strategic needs of trans-local actors situated within global production networks (Coe et al. 2004). These advantage can also be limited by three factors: (1) the balance of power between different actors in the chain of production; (2) the scaling up of production, refining and transportation which raises the capital intensity of production, and entrenches the position of existing actors by increasing barriers to entry, though conditions for competition can create opportunities where skills are standardized and there are transport and/or labour cost advantages; and (3) if economies of scope in the exploration phase of production are dominated by global firms (Bridge 2008: 408). While the

third issue does not necessarily apply within the context of coal mining where mining juniors can play a significant role in bringing resource sites into production, these considerations have important implications for understanding the determination of the social relations of production. Specifically, it speaks to the manner in which the biophysical environment and resource characteristics *and* the opportunities for political power exertion within the resultant social production of the resource are both engaged in the process of guiding environmental and social outcomes. In the words of Bakker and Bridge, it is

> an acknowledgement that the 'things' (commodities, bodies, biophysical processes) that make a difference in the way social relations unfold are not pregiven substrates that variably enable and constrain social action, but are themselves historical products of material, representational and symbolic practices." (Bakker and bridge 2005: 18)

As such, , the biophysical characteristics of the resource and the location in which it is produced carries structurally casual implications for livelihood opportunities, while also remaining open to the iterative influence of political action occurring within the production process. Such a perspective creates a role not only for the nation state, local governments, multinational corporations and civil society actors in the political actions informing local outcomes, but also engages with the organization of firms within the production process of resource extraction.

Taken together with the above brief discussions of agency and scale, the component developed through insights of resource geographies attention to the material qualities of the biophysical incorporated into methods of production leave this developed political ecology framework in a strong stance in order to explain the village livelihoods of Sekerat. Specifically, it emphasizes that we cannot engage with the agency of actors (whether human or non-human) without examining the 'geometries of power' which structure production (Swyngedouw 2004). It argues that structure is not an inherent discrete entity that lies outside of agency, but rather that

agency becomes an emergent property of network associations tied to (social and biophysical) structure (Bakker and Bridge 2005: 19). As a result, the agency of political actors at particular scales seems to be tied, in some ways, to the physical qualities of nature and thus relevant for understanding the ways in which political action is performed. Such a conclusion carries real implications for the structure of governance schemes, specifically decentralized forms, which attempt to empower the authority and freedom of local-level decision makers who operate within the sites of extraction.

2.3 Application of Theory: Coal Mining, Decentralization and Livelihoods

From these theoretical expansions of Blaikie and Brookfield's original analysis, considering material aspects of particular industries (which carry 'real' ontological impacts), political governance organizations (which inform the observational focus of describing impacts), and the local perceptions informing livelihood practices (which interpret and translate the range of impacts experienced) are required in explaining the attendant social, economic and ecological outcomes. More specifically, while mining projects carry potential specific environmental and social impacts, the influence of environmental regulation, corporate social responsibility or royalty sharing requirements that arise from decentralization schemes and other political assemblages also have markedly different outcomes than regions that do not require or enforce these regulations (Bridge 2002). That is, not only can these policies regulate the types of technologies used that would potentially inform the accompanying 'material productive forces', but they also allow for a range of actors to actively contribute to the political process informing local level decision-making. This then requires attention to the local physical environments of resource extraction, as well as the qualities of the resources being extracted, and the temporal period in which the material impacts have occurred in order to contextualize or restrict the kind

of agency which newly empowered actors within decentralized governance schemes are able to carry out.

From this, the utility of Blaikie and Brookfield's marginalization and degradation work offers potential in explaining local livelihood impacts. Specifically within the context of resource extraction governance, paying close attention to political economic and socio-cultural activities—such as political decentralization and open-pit coal mining—is useful in defining the socio-spatial impacts that manifest into scalar influences which we see operating through political ecology's 'chain of explanation'. These political, economic and social activities give us an explanatory frame from which to focus our specific scale of research (on the local community) which will provide insight into the production socio-spatial differentiation and accompanying modalities which inform the process of economic and political economic marginalization central to the marginalization and degradation thesis. Indeed, Peet and Watts (2004) have noted that the politics of ownership (often at the centre of decentralized reforms which devolve responsibility and ownership of resources) must be central to political ecology to give the approach some analytical flesh. Specifically, governance structures can work to determine how "control and access of resources or property rights are defined, negotiated and contested within the political arenas of the households, the workplace and the state" (Peet and Watts 2004: 12).

As such, the political, economic and social processes which give life to this differentiation must be considered in detail if the modalities of thought that inform livelihood practices are to be described and understood. The resultant institutional and regulatory spaces in which livelihood knowledge and practices are encoded, negotiated and contested are products of these political economic and socio-cultural activities, specifically their resultant governance

structures, which work to determine access to livelihood opportunities as well as the relationship between access and decision-making (de Haan and Zoomers 2005).

2.3.1 Rural Livelihoods

Rural livelihood practices are diverse, contingent and dynamic. They vary within and across spatial scales and temporal periods, while adapting to numerous sources of possible stress and shock—ranging from seasonal changes, weather events, demographic changes, family health status, crop failures and social conflicts amongst others. Further, depending upon the political and socioeconomic context rural peoples find themselves in, the level of commoditization, monetization or commercialization of their practices opens them to a variety of other dynamic socioeconomic forces. Ranging from currency inflation/deflation, commodity prices, production quotas or changes in market demand, these pressures work in concert with the above dynamic forces to complicate the process of 'making a living'. As such, rural livelihoods have been described as one of the most vulnerable sectors of a society (Rigg 2007).

Large scale resource extraction projects, infrastructure development, or industrial development can rapidly change both the physical and economic landscapes and corresponding opportunities for local livelihoods (Bury 2008, Ballard and Banks 2003, Padoch and Peluso 1996). Specifically, when multi-million and billion dollar resource extraction projects occur in remote, rural environments, the surrounding communities often rely heavily upon the natural resource base to support and sustain local wealth and wellbeing. Further, due to the vast horizontally spatial character, these projects often encroach upon, or resettle, surrounding population's land-base which is often a central element underlying rural population's livelihood practices. As such, the environmental impact of these projects guided by the considerations of

socio-political and political economic structures, as discussed above, can weigh directly upon the very source of individuals' wellbeing.

To help decipher some of this dynamic process, a definition is required. Understanding livelihoods as the "suite of practices comprising the capabilities, assets (including both material and social resources) and activities required to 'make a living'" (Carney 1998) provides a strong framework to *describe* livelihood practices. More critically, however, in order to understand how and why these required 'capabilities, assets and activities' come to be, it is productive to focus on the complex assemblage of forces *governing* the 'everyday' of rural life (c.f. Rigg 2007). This is valuable because it provides insight on the processes *and* outcomes of livelihoods which occur where "there are embedded and contested governance contexts, where politics and power relationships must be at the centre of any analysis" (Scoones and Wolmer 2003). Such a description of livelihoods commonly relies upon ethnographic descriptions of individuals' engagement and perceptions of these regulatory forces, both discursive and material, that flow from national and local governments, corporations, individuals, civil society groups, cultural norms, environmental locales, resource characteristics, etc which are interpreted through individual translations which politicize these forces and lead individuals to remake their surrounding biophysical and social environments in line with normative stances. Such an approach can offer great explanatory insight into the ways these material and discursive forces act as they do.

The description of livelihoods used here is theoretically minimal. This is justified as the focus on livelihoods is secondary with a more specific intention of describing the ecological and social outcomes in the regulatory space evolving under the decentralization structure with respect to the operation of coal mining. I believe this approach will prove more fruitful by

contextualizing the current empirical observations within the village and providing an opportunity to explain the array of livelihoods as an indirect impact shaping local social and environmental outcomes of coal mining. Key within this will be the use of the perceptions of local villagers as they attempt to reconcile and navigate the institutional governance space arising from both resource extraction activities and those informing livelihood activities. As such, a description of the nuances of local livelihood practices will concretize the focus on the structures which give life to the complex set of forces and decision-making logics that make livelihoods difficult to categorize and simplify and inevitably explain the re-creation of local outcomes.

In whole, the political ecology approach developed above provides us with a useful framework to assess and explain many of the local livelihood realities which have been observed within the village in East Kalimantan. Further, it links these observations with an understanding of how decentralized governance structures play a role in crafting and conditioning the manner in which coal-mining projects impact local communities. The approach developed in Blaikie and Brookfield's focus on marginalization and degradation—and the various evolving compliments within and beyond political ecology—positions the analysis well to make sense of, and tease apart, the trends and perceptions informing environmentally and socially influential projects. Further, it also provides some insight when seeking a useful mode of engagement for policy and political action to better manage or contest local social and environmental impacts as they currently—and may one day—occur. And to do this, we must now turn to a more detailed understanding of how the resource extraction governance system functions within Indonesia.

CHAPTER 3 – CONTEXT

3.1 Resource Extraction, Governance and Decentralization in Indonesia

The inquiry into resource extraction and governance, with specific reference to decentralized governance, intends to understand how schemes aimed at increasing the agency and decision-making capacity of regional level actors operate in the face of large-scale disruptive projects8. While some may argue that large-scale open pit coal mines inevitably cause negative social and environmental effects, a discussion of the contextual milieu informing these social and environmental impacts is essential to explain and link livelihood transformations with coal mining operations. While the analysis stops short of an exhaustive overview of the range of governance actors engaged within the governance of coal development operating within the case study, the intent with this chapter is to provide some background to the transition toward decentralized governance structures and giving credence to specific relevant stakeholders who are transforming local realities within this village.

The following section includes a review of broader pre-decentralization governance style under the autocratic direction of Suharto's New Order era, with specific attention on its interaction with resource extraction projects. From there, it provides an overview of the decentralization process undertaken within Indonesia following the ousting of Suharto in 1998. This review focuses governance reform specifically on the extractive resource sectors and on the

[8] This review is neither a detailed analysis of the range of governance systems and their theoretical disposition, nor musing on the potential effects of centralized versus decentralized governance systems impacts on decision-making (see MacIntyre 2003 for a discussion of institutional concentration on decision-making within Southeast Asian politics).

impacts this has in the governance of coal mining projects in particular. The second half of this chapter then attempts to link decentralization and governance with ground level decision-making related to land use and livelihoods. From this, the evolution of the historical and social components which give rise to this particular 'governance space' operating within the village will provide greater perspective for understanding the dynamic village reality.

3.2 Indonesia during 'New Order' Era Rule

Indonesia has a rich historical experience with resource extraction. During the early phase of colonial rule (seventeenth and eighteenth centuries), the Dutch East India Company was a dominant force operating amongst the islands. However, at that time they were focused more upon trading spices and coffee than ruling over the local population (Ito 2011). Preferring a form of indirect rule, the Dutch relied on the traditional authority of the indigenous aristocracy for supervision of indigenous people. Thus, colonial rule gave rise to a dual structure of administration—one for Europeans and the other for natives (Furnivall 1967). As a result, efforts of the transitional Indonesian government were to provide a centralized rule to incorporate all people of the Indonesian territory.

With this, modern Indonesia's political landscape (post 1945) came to be dominated by autocratic centralized rule. The 1945 Constitution of Indonesia provides no independent sources of power for its territorial sub-divisions, which depend on the national government for funding and are subordinate to central policy and regulation (Hamilton 2005). From its founding under President Sukarno until the end of President Suharto's rule in 1998, all formal political institutions were subservient to the power of the executive. The elected House of Representatives (*Dewan Perwakilan Rakyat*- DPR), a legislative body, served to ratify decisions from the

executive but rarely provided policy initiative of its own. The People's Consultative Assembly (*Majelis Permusayawaratan Rakyat* – MPR) also operated as a kind of super-legislative assembly with more than 500 elected members and an additional one hundred "functional" representatives from provinces, the military, civic groups and political parties. The MPR is the only body empowered to amend the Indonesian Constitution, but typically it served only to legitimate the previous actions and proposals of the President provided through his yearly 'accountability' reports of the previous year (Hamilton 2005: 32). In practice, there was often little actual decision-making power devolved outside of the President's grasp.

Formally, the enforcement of any public policy was exercised through a number of laws, two in particular for our purposes, which were imposed throughout the 'New Order' era under Suharto. The first is the Basic Agrarian Law (Law No. 5/1960), or 'BAL'. The law arose from a belief that the colonial domain-theory previously operating in Indonesia had wronged the Indonesian population by limiting their rights over their traditional *adat*[9] lands (Bakker 2008). In its efforts to empower those who were marginalized by the perceived unjust division of land rights, the BAL attempted to solidify the agrarian legal system through one law that granted priority to the maintained power of *adat*. However, since the BAL was an attempt to unify land law across Indonesia, the basing of land law upon *adat* was also progressed under the premise that *adat* did not contradict national interest, national unity or Indonesian socialism or other components of the BAL. Importantly, the BAL's article 2 reflected article 33, section 3 of the Indonesian Constitution stating that "the land, waters, natural wealth contained within them are controlled by the State and shall be utilized to increase the prosperity of The People".

[9] Adat is custom or ritual practices that have become entrenched and exercised throughout local communities across Indonesia. In essence, adat is a robust form of tribal law that defied (with particular reference to property and land rights) translation to western legal precepts (see Henley and Davidson 2008 for a discussion of the revival of adat within the *reformasi* era Indonesia).

Consequently, it was envisioned that the BAL would cause *adat* to gradually adapt to national law or be absorbed and replaced by it (Bakker 2008). As such, the desire for land to maintain a social function continued to be important with the authority of the state providing people with certainty and order regarding their usage of land and natural resources. Despite this, land registration and land title were issued on an individual basis as opposed to community title as a means of deferring power to the state to manage land in ways that would provide a positive social function for the whole of the nation.

However, it is argued that under the New Order government, "the people's" interest was more closely aligned with the interests of the regime and often resulted in wide-spread distrust of the national system and continued adherence to their own traditional systems (Bakker 2008, Lucas and Warren 2003). As the New Order regime operated under a developmentalist state perspective that prioritized state corporations and development projects for the development of the nation as a whole, this often led to dispossession of land at the expense of local peoples with little benefits accruing to the local level and instead used for the operation of collusive private companies (many extractive sector industries) with the stated intent of aiding the nation as a whole.

These development projects were predominantly implemented through the second important legalisation, the Village Government Law (Law No. 5/1979). This law sought, the New Order government claimed, to sweep away colonial laws that restrained uniformity among village governments and failed to develop communities as the state determined (Bebbington et al 2006). More specifically, the law stipulated that village heads (*kepala desa*) were accountable not to their villagers, but instead to their respective district heads (acting at the behest of the Governor of the province). The *kepala desa* had only to explain the administrative requirements

to the *Lemebaga Musayawarah Desa* (LMD, or village consultative council) that was responsible for implementing social and economic projects as per presidential decree of 1980 (*ibid*). Together, both the Village Government Law and the BAL were influential in shaping the political framework through which key components of Indonesian development policy could be understood during the New Order era.

However, during this same period (1966-98), public policy enforcement was not as streamlined as it was in writing. Functionally speaking, this period is typically described as a centralized system of patronage, with political decision-making being dictated through centrally formulated decision-making made by Jakarta political elites (Robison and Hadiz 2004, Robison 1981). While reasons why this style of governance evolved is well analyzed (see Robison 1981) it appears that networks of patronage became the predominant mode of resolving most public policy issues. Though not supported formally through legal statutes and regulatory mechanisms, these networks relied upon informal mechanisms of corruption, collusion and nepotism to ensure the disparate network of regional and local authority figures upheld the central line of authority (Robison and Hadiz 2004). Further, the role of the military was also seen as critical within this process. As part of its *dwifungsi* 'dual role' mandate of development and security, the military helped to enforce Suharto's and state elite's 'developmentalist' project that provided for a growing middle class through state monopolies, a Chinese-Indonesian business class and state and military members (Gellert 2010).

Scarcely any political institutions or sector of the economy operated outside the control of Suharto's patron-client networks. The most notable beneficiaries of this style of governance was Suharto's own family, with all 6 of his children in control of an estimated $15 billion USD in assets (Gellert 2010, Hamilton 2005). These sums were primarily amassed through control

over government-legislated monopolies, such as in the clove industry, a failed national car company which was bailed out by the government, and ownership of the only road from Jakarta to the international airport (charging a toll) (Hamilton 2005).

Another important area of the economy dominated by this style of governance was the natural resource industries, specifically mining and timber. Most infamous of these resource 'barons' was Muhammed 'Bob' Hasan who owned a large timber processing company, and later became chairman of the Indonesian wood paneling institution (*Apkindo*) which had monopoly control over pricing, marketing and export of wood paneling (plywood). Long-time Suharto crony and eventual minister of Industry and Trade, he amassed enormous wealth through supporting sales of his own company and through the control of membership fees paid by plywood producers throughout Indonesia (Barr 1998).

Despite the centralized formal governance system of the Village Government Law and the BAL, the operation of an informal governing style was as notoriously characteristic of the Suharto era as were the formal institutional arrangement. Military violence, cash bribes, informal political appointments (typically of former military personnel), and other such practices were rampant. While the Indonesian state was formally structured to respect the five principles of *pancasila* (five principles)[10] to achieve the state's social, political and economic development goals, resource projects often functioned as a means of providing funding to achieve development outcomes, which allowed continued control over the social and political realities desired by Suharto and "the people" of Indonesia.

[10] The five principles are: (1) Belief in the one and only god, (2) just and civilized humanity, (3) the unity of Indonesia, (4) democracy guided by the inner wisdom in the unanimity arising out of deliberations amongst representatives, and (5) social justice for all the people of Indonesia.

3.3 Resource Extraction and Decentralization

The impact of this style of governance is aptly illustrated within Indonesia's natural resource sector. As an archipelago rich in natural capital, Indonesia heavily pursued resource extraction activities throughout Suharto's rule. These activities included fisheries, timber, and minerals, but oil, timber and minerals (specifically gold, coal, tin, and copper) sectors have received most notoriety. The vast wealth created by these projects, and the drive to pursue this style of development left a number of social and environmental impacts. While serving to enrich bank accounts of Jakarta political and business elites, politically speaking, these resource projects also managed the political disunity amongst the provinces and rival political factions within the autocratic government (Ascher 1998). Natural-resource wealth was spent by the government outside the central budget in order to assuage this political disunity among rival political groups and across numerous actors while also funding the social and economic development outcomes upon which the state's autocratic governance style rested. As a result, the price of concessions for rights to land and minerals was often set very low and led, in part, to intense exploitation in sectors such as forestry and oil (Ascher 1998).

More critically, some analysts have labelled Indonesia as an 'extractive regime', characterized by a reliance on numerous resources developmental and predatory practices in which states "extract at the expense of society" (Evans 1995 as cited in Gellert 2010). These regimes, it is argued, have significantly affected domestic patterns of accumulation and social, political and environmental conditions (Gellert 2010). This is particularly true during Indonesia's membership in OPEC[11] during the 1970s which greatly affected the socioeconomic well-being of

[11] Indonesia became a member of the Organization of Petroleum Exporting Countries (OPEC) in 1962. In 2008, Indonesia withdrew from OPEC as it was no longer a net oil exporting country.

the numerous villages which relied upon Presidential development projects, such as schools and health clinics and state-subsidized gas and stove fuel prices.

However, at the sites of these resources projects lay the various consequences of such a resource-focused governance system. Infringed and superseded land and local resource rights were the order of the day in numerous timber and mineral extraction projects. As such, the negative environmental and social consequences in the extractive regions, as well as the unsustainability of the strategy, were significant and growing in the 1990s (Gellert 2010). This growing unrest included numerous resource projects, most prominently natural gas development in Aceh and the copper and gold mines of Irian Jaya, which had been inciting conflict and causing environmental damage. In the fading days of the Suharto's New Order, this persistent civil unrest and local ire across numerous resource rich provinces would prove to be one of a series of powerful motivation in shaping the political reform of the post-Suharto era.

The Asian financial crisis of 1997-98 (*krismon*) proved to be a critical moment in Indonesia's political transition. The state drastically reshaped its governance system in the wake of economic, social and political turmoil that led up to and after the resignation of Suharto in 1998. This event provided the economic and social context in which political restructuring was made possible during significant social, economic and political upheaval. Indonesia's poor[12] were greatly affected by a huge currency devaluation and price inflation, with poverty rates climbing as much as 20% during this period (Ahmed et al 1999). While the reasons for the financial crisis vary (Corden 2007, Ahmed 1999, Krugman 1998), one of the most important outcomes of the

[12] While much of the civil unrest, protest and strife were publicized within urban centers, rural areas of Indonesia also suffered greatly during the Asian crisis period, most sharply from the revaluation of currency and fast paced inflation following this transition.

pan-Asian events was the resignation of the President Suharto and a functional reordering of political operations throughout Indonesia.

In the following melee of long awaited political reform—referred to as the *reformasi* era—one of the primary motivations behind the hastily crafted decentralization laws in 1998 and their eventual implementation in 2001 was to quell the civic and political unrest of urban poor and disgruntled provinces (Robison and Hadiz 2004). While unrest was present throughout Indonesia, it was also particularly true of Indonesia`s resource rich provinces. These increasingly agitated populations were angered by the years of watching their natural surroundings degraded while receiving little of the economic gains from these projects. While the provinces of Riau and East Kalimantan were demanding greater financial returns from the billion dollar extraction rents and royalties, some factions within Aceh and Irian Jaya were seeking to fulfill secessionist aspirations (see Banks 2008 and Aspinall 2007). Decentralization efforts were also internationally supported, for numerous reasons, as a way of disabling the corrupt Suharto-era networks which were popularly held at the time as a driving cause of the financial crisis (Thacker 2001).

Efforts to disassemble the network of corruption became a top priority for the incoming Habibie government which faced increasingly restive resource rich provinces (Forrester 1999). Decentralization was offered as an effective way to deal with the issues of increasing provincial and local level disenfranchisement as well as the corruption and collusion that seemed to permeate through the authoritarian Suharto regime centered on Jakarta (Hadiz 2004). While the Suharto regime had been increasingly devolving power near the end of the 1990s, decentralization was heavily catalyzed by the implementation of IMF conditional loans which

were required to buoy Indonesian banks' internationally denominated debts which would have otherwise bankrupted the nation (Thacker 2001).

Decentralization is hardly unique to Indonesia and should be considered as a part of a worldwide trend throughout the 1990s as with similar policy experiments occurring in both developing and transition economies in Latin America, Africa and Asia (Bardhan 2002). Part of a larger scheme of moving the operation of rules and regulations informing social, economic and political decision-making and enforcement, decentralization is part of the effort to move governance beyond the state (Swyngedouw 2005). The practice of decentralization, however, depends on the historical and social context and political system in which it is deployed. As varying styles of governance can either empower local decision-makers to have real authority, others often devolve inconsequential functions or transfer powers to local state appointees (Batterbury and Fernando 2006). The actual process itself is thus quite varied (including devolution which is more about rolling out the operation of central state policies at the local level), but is typically pursued as a political relocation of power and authority that aims to improve resource allocation, efficiency, accountability and equity (Larson and Soto 2008) by empowering those who possess the greatest specialized and disaggregated knowledge of local environments (Andresson and Ostrom 2008). Much has been written on decentralization and regional autonomy within Indonesia from the economic and political aspects of reform, but also on its impact for indigenous groups and their resurgent claims for authority within this period (Henley and Davidson 2008, Duncan 2007). There has also been a wide range of engagement within the context of decentralization's impact on natural resources within Indonesia, but these efforts have

tended to focus most heavily upon the forestry sector (Peluso 2007, Ribot et al 2006, Resosudarmo 2005, McCarthy 2004, and Barr et al 2001).

In order to understand the ensuing decentralization in the context of mineral resource extraction, two new decentralization related laws are central to the transition. The Law on Regional Autonomy (No. 22/1999) ceded extensive authority to all Indonesian provinces, including, *inter alia*, authority over the exploitation of local resources, previously centralized control of forestry, plantations, fisheries and small-scale mining. Within this decentralization, land affairs were particularly relevant as much of land titling had previously been centralized. As a result, land conflicts and their settlement have taken on a distinctly local character in which highly specific socio-legal configurations are frequently decisive factors (cf. Thorburn 2004, McCarthy 2004, Wiriosudarmo 2001).

However, despite this power shift to the regional administrative authority, the central government was determined to maintain strong legislative control over planning of national development, conservation, efficient use of natural resources and regulation of mines and energy (Hamilton 2005: 48). As such, the regional autonomy legislation provided greater powers for authorities at the sub-provincial level—the kabupaten (regency or district) and kotamadya (city or town)—in managing land and local development, however within specific sectors, particularly mining, development and land titling remained under partial or heavy central control.

The second law, the Law on Intergovernmental Fiscal Relations (No. 25/1999), enabled increased control of rents and taxation to remain within those provinces from which the funds were collected. In terms of natural resources revenue control, the law directed 80% of income derived from forestry, fisheries and mining to remain within these provinces, which in 1999 accounted for 8% of total government revenues, or a total of approximately $1 billion USD/year

(Clark and Clark 1999). This measure was in part crafted to ensure that a major stake of funds derived from resource projects would remain where they were created the greatest environmental and social impact while allowing the regions to better manage and negotiate the trade-offs of the wealth creation and environmental and social impact created by these vast resource projects.

During the tumultuous period of 1998 and 2000 in which the reforms were written, negotiated and implemented through government, these policies came to carry real implications for the country's mining and resource extraction projects. In the outer islands (typically the eastern half of Indonesia) where customary *adat* lands had been taken without acknowledgement of traditional rights for timber and mining concessions, local responses included occupations, blockades, and destruction of company assets. In total, twenty-eight mining companies suspended their activities due to political insecurity and lack of legal certainty (Lucas and Warren 2003). As a result of this period of transformation, the entrenched New Order networks of corruption in resource extraction governance underwent—at least formally—a great shock. Previously, the management of, and access to, land and resources rested upon highly formal centralized control and enforcement laws such as the BAL, the village law, the operation of Indonesia's National Land Agency and the Department of Forestry. Informally, the role of collusion and corruption in appointing of military officers within the executive, vetting political party candidates and often violent police patrols also played a critical role. While the role of specific central government institutions continues to play an important role in regulating the management and control over land and resources in relation to resource extraction, these have begun to give way to a series of new actors and power configurations responsible for managing Indonesian resource extraction. Particularly, the space created for increased civil action, local government regulatory autonomy and diverse multinational corporate social responsibility and

production operation guidelines have been empowered in this transition and are playing new and important roles in guiding the regulation of mining related activities.

3.4 Coal and Indonesia

3.4.1 Coal Mining in Indonesia's Economy

Indonesia's role in the global coal industry has vastly expanded in the past ten years and looks to continue this way into the near future. Today, the country is the world's fifth largest producer in terms of gross tonnage extracting 263 million metric tonnes (MT) each year (World Coal Institute 2010). Globally, 41% of world electricity generation from fuel is from coal, with 26% of the world using coal as its primary electricity source (*ibid*). Indonesia exports the majority of its coal, with 230MT, or 87%, going abroad, and 200MT of which is for steam production (that is thermal coal as opposed to coking or metallurgical coal[13]) making it the world's leading exporter of thermal coal (*ibid*). Indonesian coal reserves also present numerous future opportunities for continued coal production, with recent reserve estimates for sub-bituminous and lignite thermal coal reserves at 4.3 billion metric tons (*ibid*).

Coal Proved Recoverable Reserves at the end of 2005	Million Tonnes			
	Bitumous (including anthracite)	Sub-bitumous	Lignite	Total
	1,721	1,809	798	4,328

Table 3.1: Indonesian Coal Reserves (Source: World Coal Institute 2010).

[13] Coking is the process of using coal to heat furnaces used in the creation of steel.

Coal is an important fuel source to some 70 countries worldwide. Despite environmental concerns over its high greenhouse gas emissions, increasing demand for the energy source is projected and Indonesia is finding itself at the centre of this growth (Economist 2009). The continued and future growth of India and China (the countries number one export partner) are key to this continued growth. In 2009, China Investment Corporation – its leading sovereign wealth-fund – lent Indonesian resource firm Pt. Bumi Resources $1.9 billion in the firms efforts to double its thermal coal output (to 100MT) by 2012[14] (Economist 2009). While recent world economic stability has caused a dip in investment fervour, coal will continue to be a prized global source of electricity production. Pt. Kaltim Prima Coal (KPC)[15], the largest mine company within Indonesia operating across East Kalimantan, is primed to be right in the middle of the expected coal boom for Indonesia.

More recently, the London based investment group, Vallar, bought 25% of Bumi Resources and a 75% stake in Berau Coal Energy, Indonesia's fifth largest coal producer (Financial Times 2010a). Further, the coal investment climate within Indonesia has been characterized as a 'scramble' as firms vie to enter into the country's market, with eyes set on supplying the overseas (particularly China and India) markets' continually growing demand for thermal coal (Financial Times 2010b).

3.4.2 Coal as a Resource

Coal is a readily combustible rock containing more than 50 percent by weight of carbonaceous material formed from compaction and hardening of variously altered plant

[14] Pt. Bumi Resources is the country's largest coal mining firm and is the parent corporation of Pt. Kaltim Prima Coal.

[15] Pt. KPC is allocated wholly to PT Bumi Resources and operates both the Sangatta and Bengalon mine sites, and provides the Government of Indonesia with a 13.5% royalty share.

remains. The quality and grade of coal is an important determinant of its production use, as well as the amount of refining that is required. Coal grades are determined by the nature and content of ash and sulphur. As buried plant matter (nascent coal) endures considerable amounts of time, heat and pressure, it increases the energy, ash, and sulphur content of the coal while decreasing its moisture content (moving from Lignite to Anthracite, see Figure 3.1).

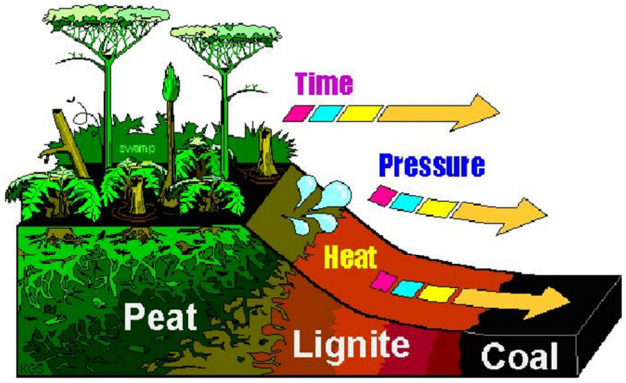


Figure 3.1: The creation of coal (Source: Union of Concerned Scientists)[16]

Coal Grade Scale: Lignite → Sub-bitumous → Bitumous → Anthracite

The higher the grade of the coal (closer to anthracite), the better its use as thermal coal which will burn more efficiently at high temperatures and heat water to produce steam for electricity production. The less compact and lower grade coal (closer to lignite) is typically used as 'coke' in the smelting of iron ore blast furnaces. Located in coal 'beds' or 'seams', the grade variation occurs depending upon the geological characteristics of the location in which it is found. Across East Kalimantan, there are many seams of high energy content coal. Pt. KPC's 'Sangatta' and 'Bengalon' concession sites contain high grade thermal coal. While only 3.4% of reserves are of company's namesake 'prima' quality coal, 70.6% is of 'pinang' variety with the

[16] http://www.ucsusa.org/clean_energy/technology_and_impacts/energy_technologies/how-coal-works.html

remaining 26% a 'melawan' variety[17]. As such, the majority of processing required with this quality coal is minimal, requiring only crushing for ease of transport[18].

	Prima	Pinang	Melawan
KPC sites content	(3.4%)	(70.6%)	(26%)
Calorific Value (kcal/kg) Air Dried basis (adb)	7,100	5,850-6,650	5,735
Total Moisture Content %	10.5	14-21	23.5
Inherent Moisture %	5.0	8-12	18
Volatile Matter % (adb)	41.0	40	38.5
Ash % (adb)	5.0	4.0-6.0	2.5-4.5
Total Sulphur % (adb)	0.7	0.5-0.9	0.2-0.6

Table 3.2: Pt. KPC Coal Quality[19]

The chemical content of coal varies across grades and will dictate different processing requirements depending on the end use of the coal (e.g. coking vs. thermal use) and any environmental regulations which exist upon the production or sale of the coal. Specifically, if coal is high in sulphur or other impurities, it is given a water or chemical bath to remove inorganic sulphur in the coal. As a result, higher sulphur content coal commonly undergoes washing to meet environmental regulations, while low-sulphur content coal typically is crushed and resized without being washed[20].

[17] http://www.kaltimprimacoal.co.id/index.php?option=com_content&task=view&id=14&Itemid=28

[18] Interview with Community Relations officer from Pt. DH, April 22 2010.

[19] http://www.kaltimprimacoal.co.id/index.php?option=com_content&task=view&id=30&Itemid=44

[20] 96.6% of Pt. KPC's coal is of low sulphur content and little of the coal undergoes the chemical or water bath process.

The characteristics of coal are also important to determining its production and development as a resource. Though a detailed analysis of the production of coal is beyond the scope of this paper, the claim here is simply that the type of coal and its end use will determine the amount of refining needed to make it a marketable good. As such, the high-quality thermal coal found across East Kalimantan located at easily accessible sites close to waterways for easy transportation has made the province an internationally desirable place to source this energy resource and has also limited the costs related to refinement and transportation needed to bring the coal to market. As such, the technology used to extract the shallow coal seams has made production fairly rudimentary, at least with respect to the distribution of the types of employment available compared to the potential for technological innovation in other mineral extraction processes (Bridge 2008) and its consequences for value distribution throughout the production process[21]. As such, this process has allowed for large profits to accrue due to relatively minimal production costs that might otherwise be incurred through less accessible or 'dirtier' coal. With the continued need for low-skill labour and high profitability, these mines are able to provide lucrative posts for those able to find labour with the mines. The average wage-rates of between 3 and 5 million Rp/mo (~$270-450 USD/mo) are a testament to this situation[22].

With these thoughts in mind—the evolution of political decentralization reforms and the nature and future of coal extraction within East Kalimantan – the following analysis of livelihood transitions and practices are better contextualized to understand and explain the changes witnessed within the village.

[21] Nevertheless, technology improvements have lowered the cost of production, and also minimized the need for increased labour (Humprris 1998).

[22] Conversations with community coal mine employees.

CHAPTER 4: RESEARCH SITE DESCRIPTION

4.1 Sekerat, East Kalimantan: A village profile

Livelihoods in Sekerat's sub-village of Sekerat-Sekerat include a diverse range of practices from wage-based employment, market-based trade to subsistence production. The introduction of coal mining in the area has been greatly responsible for the current diversification of practices. New and upgraded infrastructure, mine employment opportunities, and access to financial capital have been key catalysts in a transition from practices that were almost entirely a mix of market-based trading, casual wage-labour, and subsistent practices reliant upon the natural resource base of the surrounding area. Crucial in understanding the shift in practices is the range of social and political forces that have become enlivened within the village.

The mines and their impacts are large in both spatial and financial terms. In total, Indonesian mineral exports in 2008 were valued at $137 billion with minerals and quarrying contributing to 10.8% of this total (USGS 2008). But, three mine sites specifically are relevant to the larger village of Sekerat. The first is the 'Sangatta' concession site located about 20 kilometers west of Sekerat village in the mining town of Sangatta, the capital of East Kutai Regency in East Kalimantan. The site is operated by Pt. Kaltim Prima Coal (KPC), the Indonesian ISO 14001-registered company which was created in 1982. Pt. KPC was the local corporation created in order to allow the joint venture of British Petroleum (BP) and Australian CRA Limited (now Rio Tinto) to operate the mining concession they were initially granted in 1982. As of 2004, the Sangatta mine is now a wholly Indonesian-operated project[23], with a lease

[23] Pt. KPC is now a wholly-owned subsidiary of Pt. Bumi Resources, the country's largest natural resource firm.

of over 90,000 hectares until 2021. This site's production has been central in making Pt. KPC into one of the world's largest export collieries (Lahiri-Dutt 2006).

The second mine site is operated by Pt. Perkasa Inakakerta (PIK) to the west of the village. The site is a sizeable claim, with nearly 85 million tonnes (MT) of coal resources and another 21MT of reserves[24]. Beginning in 2008, Production was 0.8 million MT, with estimated coal production for 2009 at 1.5 million MT and targeted production of between 3 and 4 million MT per annum as production matures over the next 5 years. Pt. PIK is owned by Pt. Bayan Resources Tbk., a legal holding coal company with operations in all areas of coal production. The Pt. PIK site is a new comer compared with other coal operations in the area, but is quickly becoming an important influence within the community. It also stockpiles and ships its coal through the Lubuk Tutung port located on the shoreline of the Sekerat.

The third site, the Bengalon concession area, began operations in 2004 when the site was contracted out by Pt. KPC to Pt. DH for exclusive rights over mining operations. The site is approximately 22km north of the village area, but also stockpiles and ships coal out of the Lubuk Tetung port along the village shoreline. Pt. DH's total investment within the site is $2.6 billion USD in mining and civil engineering projects as of 2008 with production of 6 MT of coal hauled with 59 billion cubic metres of overburden (excavated material) (Darma Henwa 2009). Each of the three pit sites (A,B,C) at the Bengalon site are approximately 5,000ha in size, while only pit A has begun operations.

[24] http://www.bayan.com.sg/index.php/Reserve-Deposit.html

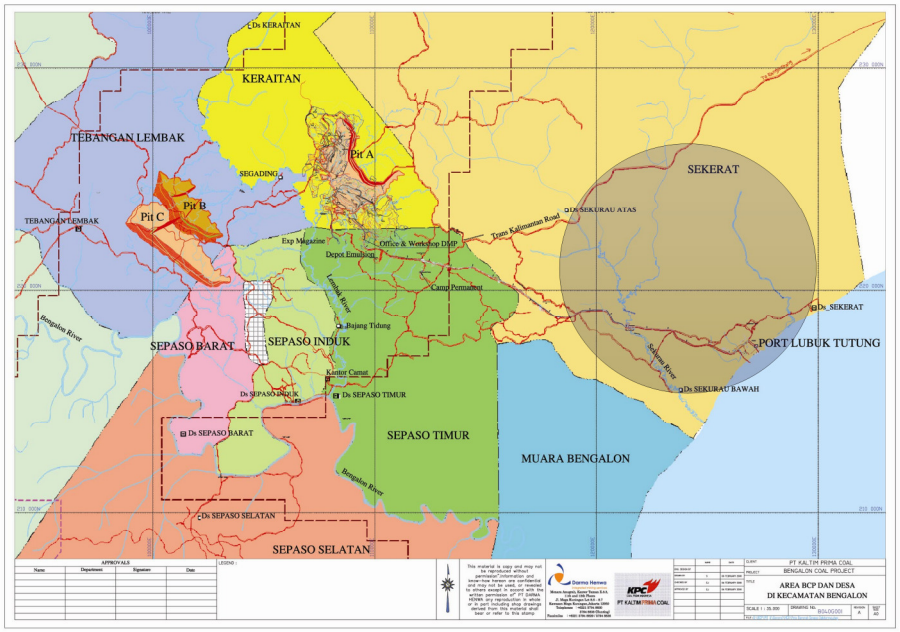


Figure 4.1: Pt. DH Bengalon Pit 'A' Location, Sekerat Village area in gray circle

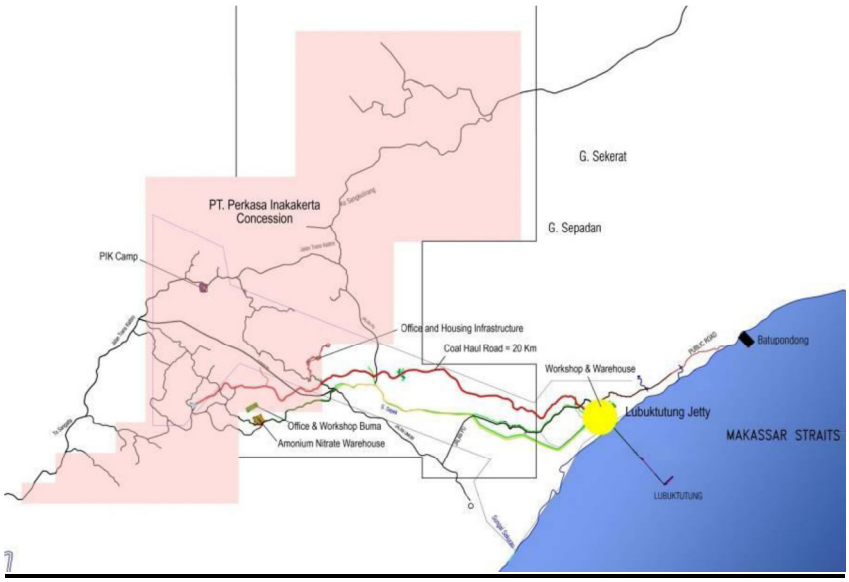


Figure 4.2: Pt. PIK Concession site map

4.1.1 Geography and Environment: Sekerat, East Kalimantan

Located on the western shore of the Makassar Strait approximately 60km north of the equator and 25km northeast of the mining town of Sangatta, the small coastal village of Sekerat has a population of approximately 2,000 people. Spread out over 276km^2, it is a sparsely populated village resting in a hilly young-generation forested area on limestone rock. Composed of four sub-villages (Sekerat-Sekerat, Sekerau-Atas, Sekerau-Bawah and Mampang), the village was established around 1957 at the Sekerau (now called Sekerau-Bawah) and Sekerat sites, with Mampang and Sekerau-Atas developing more recently.

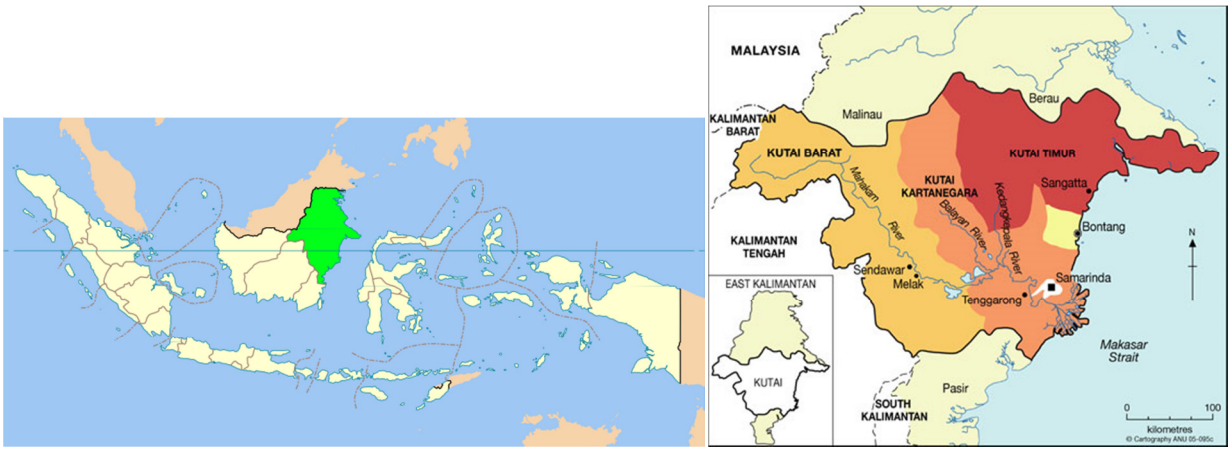


Figure 4.3: East Kalimantan, Indonesia

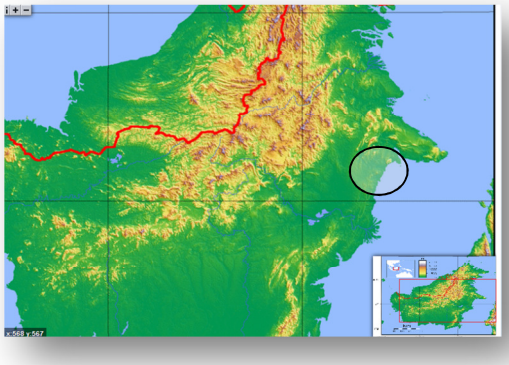


Figure 4.4: Topographic Map of Kalimantan (field site highlighted)

Source: http://mapsof.net/indonesia/static-maps/png/borneo-topography

In 1982 and again in 1997, two vast forest fires engulfed much of the surrounding area. While not uncommon, these fires had an especially large impact and contributed to ongoing human induced deforestation within the region. Like most other parts of Kalimantan, the region has experienced widespread and fast-paced deforestation; however, many tracts of forested areas remain intact or less impacted.

The district of East Kutai, like much of Kalimantan, has a high coastal population concentration with an average of 7.6 persons/km^2 compared to the inland of 0.5 persons/km^2 and borders of 5 persons/km^2 in 1997 (Swandaya 1997). During the forest fires of 1997-98, a total of 5.2 ±0.3 million ha of forest area within the province of East Kalimantan were burned to varying degrees (Siegert et al 2001). The fires were most intensive in grassland, wetlands and secondary forest (farming) areas. While the extent of the burn was not significant within the village area relative to the Mahakam river basin area, there was damage within the village area due to the high level of secondary forest cover. These damages were much higher than historical ENSO-related droughts within the area, primarily contributing to the increased amounts of deforestation and land use change which has provided higher amounts of fuel to allow for the expansion of these fires (*Ibid*).

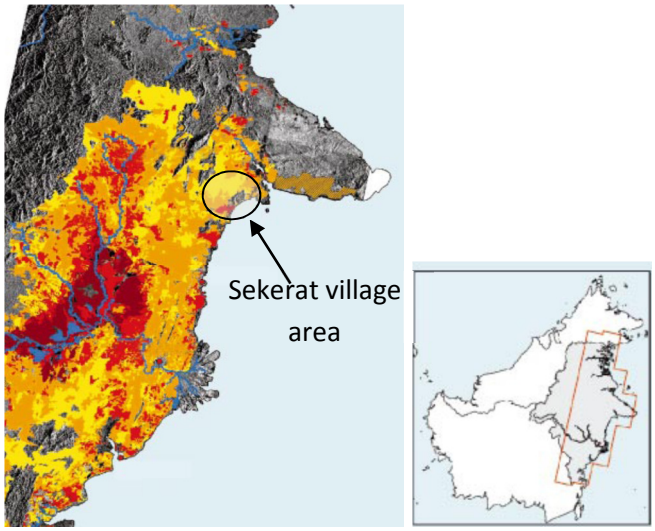


Figure 4.5: Extent of 1997-98 forest fire impact. Damage levels are as follows: yellow, moderate; orange, severe; red, total damage of vegetation; brown, total damage of trees in peat swamp forests (Source: Siegert et al 2001).

4.1.2 Village Structure

The village was first settled in the early 1950s by ethnic Kutai with support from the former capital of the region, Tenaggaron located to the west of the current provincial capital of Samarinda. Relying primarily upon a system of *kebun* gardens (a process which shifts the cultivator amongst three or four plots over an approximately 4 year periods), the village remained small due to its remoteness and a slow rate of population growth. The initial development of the village also included the integration of ethnic Bugis arriving from Sulawesi. Predominantly fisherpeople, Bugis traded with Kutai and Dayaks in the area and harvested timber (primarily ironwood) to transport logs back to Sulawesi and sell in local markets. Over the years through waves of migration, Javanese migrants also arrived, and today these three ethnic groups remain the most predominant within the village.

For years the village saw modest population growth. In the early 1980s during the exploration of Pt. KPC's Sangatta mine site, modest overflow migration occurred into the village

area. The expansion of the Bengalon mine site in 2004 was responsible for the next and largest influx of residents, increasing the population from 1,000 to 2,500 people between 2006 and 2007 alone (Kecamatan Bengalon 2009), and up from 543 in 1995 (Bina Swandaya 1997). However, as of 2009, the population has fallen back to 2,037 presumably after the initial influx of migrants in search of work for mining jobs abated.

The population is predominantly middle-aged, with more than 80% of the population over the age of 19 (Kecamatan Bengalon 2009). Gender ratios first reflected those of other mining cities, first of 1.62 males for every female in 2007, before falling back to a more modest 1.23 males for every female in 2009 (*ibid*). Family sizes remain small, averaging 3.26 persons in 2007. Education levels are also low, with more than 80% of the population completing no more than elementary school education (*ibid.*).

4.2. Livelihoods in Sekerat-Sekerat

The following section focuses on a number of dominant livelihood practices within the field site. The unit of analysis is the individual household units—recognizing the difficulty of drawing sharp lines around a 'household'—but the emphasis remains on sketching out the regulations[25] informing practices which people undertake. Beginning with a brief background of the village area characteristics, the section provides a snapshot overview of the suite of key practices currently taken up by villagers. This will be narrowed further by accompanying

[25] It should be noted that the term 'regulation' is used in a broader sense than its generic reference to formal laws and codes written up by a government. More broadly, it refers to the confluences of formal and informal orders prescribed by a person or group with authority. As such, regulatory forces can include ecological constraints, state legislated laws, or market demands for product consistencies.

detailed personal accounts—mentioned directly or indirectly by interviewees—of individual's reasons for their transition to, or maintenance of, the relevant practices.

Amongst the dominant practices, wage labour, land-based activities and fishing are the primary sites of analysis as these areas best exhibit how influential governing forces shape these practices. The impact of decentralization reforms have been significant in reconstitution of governance 'space' regulating localities by reorganizing power relations amongst stakeholders operating through different spatial scales.

4.2.1 Mining, Livelihoods and Governance: Stories from Sekerat-Sekerat

The following sections will document aspects of livelihood practices within the village of Sekerat. Land is a critical theme in understanding how livelihoods are transitioning from resource-based practices into wage-based practices, and is transforming how people view the use of the land. The second theme, mine employment, represents the newest livelihood option for local residents and has provided a fast growing opportunity of well-waged work, although newcomers are starting to find these jobs are difficult to come by. Finally, the description of fishing practices within the village will also attempt to illustrate some of the trends within a sector that is indirectly related to the impact of the mine and speak to other areas which are also transitioning in the face of mining. The following three chapters should not be understood as a definitive attempt to show how individual factors interact and inform the varying elements of village livelihoods. Instead, it is a description of livelihood trends with insight into what currently appear to be some of the most prominent intervening forces guiding livelihood opportunities and practices and the complex ways in which they are supported or discouraged.

CHAPTER 5: LAND AND LIVELIHOODS

Land is a critical element to many livelihoods within the village. Previously the source of subsistent production, today few people rely upon the agricultural productive capacity as a source of their wealth. Instead, villagers increasingly depend upon the 'unlocked wealth' of their land—its value as a commodity (Cf. de Soto 2000). While some have actively leveraged the value of their property to access financial credit, many are repositioning themselves with respect to land use in the face of forced land compensation funds gained from the purchase of their land by mining companies operating in the village. While the role of land is traditionally a critical element in rural livelihood practices, its use is being transformed within the historical context of the village and intervening actors operating within the area. Understanding how these rural communities access, own, use and transform land provides important insight into the forces engaged in shaping the function of governance within this local village.

5.1 Historical Land-based Practices: *Kebun* gardens

The historical practice of the majority of native ethnic Kutai, who remain the slight majority today, practice a form of subsistence agriculture—a *kebun* system—in which cultivators cycle amongst three or four areas to clear land (second generation use) and plant, primarily, fruit trees and vegetable gardens. While they are also occasional practitioners of swidden agriculture, the *kebun* system is more dominant and distinguishes the Kutai from the Dayak people who are less present here than in the interior of the Borneo. As the site of the village is located amongst limestone hills (~200-400m elevation) with relatively steep slopes and poor soil quality for

intensive agricultural production, plots historically tended to stay close to the coastline and in lower lying valleys.

In 1982, Pt. KPC's first coal mine project[26], the 'Sangatta Site', began intensive production in Sangatta, then a small fishing village. At that time, little formal community engagement was undertaken by the company in the area beyond the direct Sangatta pit sites. However, in the early 1990s when production finally began at the site, KPC's community development department expanded the scope and scale of community development initiatives, spreading into a 35-40km radius surrounding the Sangatta pits. At this time, the Community Development arm of KPC introduced a number of small-scale rice farming programs administered through community Self-Help Groups (SHG), referred to as *Yayasan Sekerat Prima*. Locally termed 'farmer organizations', they were developed in order to help augment the productivity and incomes of rice farmers of primarily inland populations, as coastal communities typically had relatively higher income and human development index (HDI) levels due to their higher level of connectivity with other villages. Nevertheless, the coastal community of Sekerat, along with 6 other village areas, was provided with quantities of seed/germs and financial assistance to increase and expand the land necessary for wet-rice paddies (this is in contrast to the 'mountain rice' which is grown away from the coast into the hills).

The project had modest results. While people were provided with a means to develop rice for their own consumption and small-scale trade, the crops were difficult to maintain due to the persistence of pests and laborious weeding required. Further, people were reluctant to participate

[26] Pt. KPC was established as a joint venture with UK British Petroleum (BP) and then Australian CRA (now Rio Tinto Inc). Under Indonesian mining law, international companies are allowed to explore and develop resources, but must develop, or partner with, a local Indonesian firm to carryout production, marketing, export, etc.

within the farmer organizations and its leaders would often sell the rice plants outside of their organization's members instead of providing the seeds to the farmers at a specified rate. As a result, rice cultivation proved to be less productive and desirable a practice for many of those who originally participated within the program.

Pt. KPC's "Raise the community's standard of Living in Four IDT Villages and the Village of Sepaso" Project Efforts
1. To grow and develop the SHG (Self-help Group) 2. To improve knowledge and ability of SHG's board and members in running the organization, administration, finance and household economy 3. To improve community knowledge and ability in cultivation of rice on swampland and dry land and in post-harvest 4. To improve the garden management 5. To explore basic data of community social economy 6. To arrange the development phase of the proposal

Table 5.1: Pt. KPC's Self-Help Group community development project priorities (Bina Swandaya 1997)

Following this, other strategies were devised by Pt. KPC's Community Development department, targeting the persistent challenge of augmenting low farmer incomes. This time, focus remained on empowering and training farmer groups, but also expanded to include continued diversification of business activities and improvement of livestock and fishing practices to bolster the agricultural practices. Efforts were targeted at improving community savings and financial capital, supporting human resource development, road infrastructure, health care and community, cultural and environmental appreciation (KPC 2002).

Today many of the plots within the sub-village of Sekerat-Sekerat remain un-worked and have since over-grown and the farmer organization housing built by KPC remain unused. Many of those who were engaged with the rice cultivation practices found work once the mining company began operations and were able to access sizeable and steady incomes that demanded

more of their time than was required to also maintain rice plots. However, there are a number of other villagers who wanted to maintain either rice farming or vegetable gardens but found they

Figures 5.1 and 5.2: On the left, farmer organization buildings which remain unused; right, wet-rice plots overgrown after being abandoned, becoming *sawah tidur* ('sleeping' paddy).

were unable to do so. This was primarily because crops within the village required a lot of protection from a variety of pests that would attack and ruin rice crops and continue to wreak havoc on some of the vegetable gardens. These pests, primarily wild boar, monkeys and a number of unspecified insects, were said by local villagers to be more manageable when there were more crops in the village. With fewer people working cropland in the village, there were fewer places for the pests to find the easy food they had grown accustomed to. As a result, villagers, such as Pak Eling who did not find work with the mining companies, says

> " ...harvesting crops is no longer possible in the village. There are too many pests and it is hard to find good land here...When I retire, I want to run a farm and sell vegetables like Pak Moto (a local vendor selling vegetables in Sekerat-Sekerat from his plot in Botang, 30km away)."

In other sub-villages of Sekerat, there are still villagers who operate *kebun* gardens, the occasional rice plot or banana plantation, but villagers have found it challenging to continue farming. One respondent in the more hilly Sekerau-Atas in the north of Sekerat noted that:

> People still own land, but don't use it for *kebuns*. It's because the land they own is too far away from their houses or it's [the land] too mountainous which is not good for crops. Some make *kebuns*, but its trial and error of adapting techniques to make good gardens in mountainous area. It's not good soil.

In the east of the Sekerat in Sekerau-Bawah, another respondent mentioned that they found it difficult to maintain their *kebun* as it is often 'under attack' from monkeys or wild boar. He suggested that

> since the mine has come, there is less forest for the animals and so they come to the villages in search of food.

Several village plots remain, but there appears to be a perception that it is becoming more difficult to support their practices than in the past, in large part due to the difficulty in maintaining previous practices on the remaining land and the increased difficulty related to pests. More importantly, however, is that people seem to see farming as a secondary priority, instead focusing on finding employment related to the mining operations in and around the village. New entrants to the village come in search of mine labour and only turn to farming their own plots once they have a settled job and are able to stake a claim on local land.

While the reasons for the failure of rice, and other agricultural plots, within the village are difficult to objectively assess quantitatively, Pt. KPC's farmer organization program and subsequent efforts to aid agricultural production within Sekerat-Sekerat did support the role of collective community organizations in managing the local economy with a focus on investing in the inputs and practices of land use. But in the long run, these intuitions, certainly in Sekerat-Sekerat, provided little influence in shaping the land management activities of the village, and even less when Pt. KPC returned to purchase plots in order to exploit the coal reserves of the 'Bengalon site' directly north of Sekerat and transport them through the Lubuk Tetung port at the western end of Sekerat-Sekerat.

5.2 Land Ownership and Compensation

After an initial purchase in 1996 of land at the current port site of Lubuk Tetung, Pt. KPC left the plots undeveloped with respect to mining operations until 2004when construction and operation finally began. After the second round of large-scale land compensation negotiations when the development of the Bengalon site was reinitiated, landholders were offered purchase rates greater than the original 1996 purchase of approximately 200Rp per square meter[27]. While not all villagers were satisfied with the idea of losing their means of sustenance in trade for lump sum payments or reduced payments with employment opportunities, Indonesia's Basic Agrarian Law No.5/1960 states that all land and mineral resources belong to the 'people' of Indonesia (i.e. the state) and villagers thus had no choice of maintaining ownership. In fact, one local man was nearly arrested after numerous refusals to sell his family's land. He eventually relented.

The process of land compensation has proven to be one of the most problematic and controversial within the village[28]. While often providing large lump sum payments to many villagers, it is also produced the effect of rapid transitions to new lifestyles with accompanying livelihood changes. The value of land compensation varies amongst regions, uses and often the relative strength of the negotiators. Previous plots of *kebun* land in Kutai National Park, the western extent of the Sangatta mining concession, were typically valued at around800Rp/ha (Vayda and Sahur 1996: 12). However, since it has been regulated within Indonesia that local mining companies must negotiate directly with those whose plots they purchase, the price received for the plots have been the most contentious issue and remains an ongoing issue

[27] Prices were mentioned by villagers at the historical prices. In 1998, the Asian financial crisis led to a near 4 fold devaluation of the currency from approximately 2,500Rp to $1 USD down to approximately 9,000Rp to $1 USD.

[28] This is also the case across Indonesia as mining projects cite land compensation issues as mine sites number one source of complaints and contention (Wiriosudarmo 2001: 25).

between the mine and the community. Further, not all plots of land were purchased from the people in the area. Since Sekerat-Sekerat is not (yet) a site of extraction and instead one of transit, only those who owned land at the site of the construction of hauling roads, company buildings (primarily offices and boarding houses or *kos*), or coal stockpiles, the port and conveyor belt delivering the extracted coal onto waiting barges approximately 1km offshore were compensated. As a result, compensation rates were perceived as varying widely amongst the various plots and were determined through a bargaining process by the plot holders and the mine. While local mine officials acknowledged that compensation rates differed depending on the location of the plot, its intended use and the value of the practices pursued at the time of compensation, many villagers distrusted the negotiation techniques and often felt as though they were being cheated.

The process of initiating the land purchase would usually arise when the mine company would notify the local 'Land Organization'—designated for facilitating many of the land compensation and titling functions (discussed in detail below)—of specific plots they desired for purchase at which time the Land Organization would notify the relevant land holders or determine who could claim rights over the land. While the opportunity exists for the company to leverage this power in undercutting purchase prices, it appears as though, if properly managed, the sums have provided villagers with opportunities to build in new houses, refurbished existing ones or save funds to fund their children's current and future education. Several local village residents had noted that they had rebuilt or refurbished their homes or had used the money to pay for their children's current and future education, amongst other things.

Name	Land Use	Dominant Practices	Economic Status
Pak Yudi	Sold some to mine, build swallows house (~$90,000USD), traps animals, holds remaining land idle	*Kepala Desa* (village head)	High
Pak Indra	Sold some to mine, traps animals, plans to build freshwater fish pond	Income from land sale/ labour on tankers	Middle/High
Pak Suliman	Sold some land to mine, invested in	Village adat (cultural) head (i.e. village elite)	Middle/High
Pak Coffee	Kebun/Timber collection	Mine Security Guard	Middle
Pak Ahmad	Sold all to mine	Mine Security Guard	Middle/Low
Pak Teacher	Given land, but not of productive use	Primary school teacher, small shop owner	Middle/Low
Pak Rustam	Sold all to mine	Range of practices (collects birds nests, sells fish on beach, labours in other sub-villages	Low

Table 5.2: Sample Land Compensation and Changing Practices. However, most of those who received compensation for their land were, for the first time, in possession of large amounts of capital often with little planning or insight into productive uses for the funds. While some have invested the sums in productive ways (e.g. tools, seeds, houses, education, vehicles, etc), stories of reckless spending were often told, mostly of young men, depleting their payouts on lavish activities. Whether it was renting an entire brothel for a week, buying and wrecking new SUVs, or lavish weekends at regional resorts, these stories (fact and fiction) speak to the risks faced from sudden cash inflows. Occasionally, residents had returned to the company claiming they were not sufficiently compensated and are no longer able to sustain a livelihood without further compensation or mine-based employment.

Regardless of the sufficiency of the actual outcome, there is a wide perception that villagers are under compensated for their land. Many villagers claimed that the negotiated sums they are offered are not sufficient to sustain a decent life for any significant amount of time, and often return to the company in search of supplemental payouts. Even worse, some have told of rumours about mining company representatives offering alcohol and tobacco to *Dayak* people living in the hills of the village, 'drugging' them into selling their 2ha of land for a mere 200,000 Rp[29]. While no interviews were conducted with Dayak in the area, villagers [primarily ethnic Kutai, Bugis, Banjir (from South Kalimantan) and Javanese migrants] seemed to think the Dayak were not interested in giving up *swidden* practices in search of work in mining related employment. Although unrelated to mining company negotiations, others spoke of collusion and deception on the part of village government employees who misled dozens of people to sign their name onto a petition to help assert local *adat* ownership of local land plots. Instead, the officials transferred ownership of their land to a Jakarta-based land developer with knowledge of a pending re-titling palm oil plantations or mining concessions and were then able to sell the land at 60 times the price purchased from the duped villagers. All of this to say, there is a great deal of scepticism, undoubtedly sewn in the Suharto era and continuing today, of land compensation sums and of business and government officials across the country and within the village.

The above stories illustrate that land certification and transactions have been problematic. This issue has manifested in a number of disputes. At the northeast border of the village, the adjoining village has contested and attempted to claim and develop rights to land within what Sekerat villagers perceived to be the Sekerat village boundaries. Inside the village, some issues

[29] As a point of comparison, aaverage monthly wage for security and vehicle operators at the mine is between 3 and 5 million RP/month.

have been raised over the trapping of animals on others territory or of where one's property ends and another's begins. Further, there was a story of relatives of former Muran fisher-people from Sulawesi who attempted to claim back land their relatives once used within the village. Long-time local Kutai villagers said that these original Muran were 'lent' the land in order to grow corn and cassava in order to round out their food base. However, their descendants came to claim their perceived right over the land, but with little success. This is in part caused by the numerous methods of claiming land within the village.

As new residents enter the village in search of work or land to start *kebuns* or plant crops, they are required to approach the local 'land organization' to determine where land is still 'vacant'. Across the village, land units are distinguished by two distinctions; 'dry land' or 'free land'. Dry land is land previously possessed through clearing the land (e.g. swidden or *kebun* gardening practices) which may or may not be fallow. These plots originally required local approval for the specified plot, but currently the plots have also evolved into historically established rights for a specific person/family. Contrastingly, 'free land' is land that has not yet been cleared and becomes designated to willing owners through the local Land Organization, but then also requires the plot to be cleared to distinguish ownership. The main distinction between 'dry' and 'free' land is whether the land is historically attributable to an individual or family or whether it remains under communal rule, but not individual possession.

However, such divisions are not so easy. With the fall out of the New Order era, claims on 'free' and 'dry' land were often reasserted as some villagers felt they were undercompensated or unjustly evicted from land which was titled as mining concessions, or simply took advantage of the legal uncertainty of the period. Nevertheless, with the exception of those compensated for land converted into the port, the uncertainty of claims to land ownership or title were generally

perceived by company managers and local villagers to be not as extensive as the rest of the province and much of Indonesia.

5.3 The land is 'all gone'

While 'free' land is still available in the village, much of the accessible land is already claimed and cleared by villagers. Those who seek to gain access to the diminishing land base undergo the same process of possession by clearing the land, providing there is a consensus that no competing claims exist as determined by the village Land Organization. Though the size of the plots were never specifically mentioned by villagers who appeared to have only a casual estimate of their plot sizes, the general rule is that land can only be possessed if one is able to perform the labour required to managed (clear, weed, etc.) Yet, with all the controversy surrounding land ownership, it is no surprise that the land, as was frequently recounted, is essentially "all gone". Despite much of the village land being relatively difficult to access and challenging to manage pests, the area has been cleared and possessed by long-term and new village residents. The fact that the land is 'gone' is difficult to ascertain from a casual outsiders gaze. Looking over the landscape, these green hills appear to be home to a forested ecosystem cut through by the occasional twisting ribbon of orange-soiled roads.

Figure 5.3: The village hills, 'gone'

However, most of this area is at least second-generation forest growth. Part of this is due to the massive forest fires of 1997 and 1982 which ravaged much of the province and made headlines around the world (Siegert et al 2001). While these fires were thought by some local residents to be caused by villagers carelessly discarding lit cigarettes, the cause was attributed to ENSO-related droughts creating a conducive climate for the fires, which then spread rapidly due to the heavy deforestation and land use change across the province (*ibid*). While the local community was not nearly impacted as other regions of the province, the hills have also been affected by land use change, specifically the impacts of local residents clearing the land to solidify ownership. Staying close to their homes along the beach and main roads, villagers infrequently visit the land to maintain signs of ownership from other migrants or villagers eager—occasionally stealing—to find free land.

These plots are typically used by the residents as "land traps" set in order to ensure an income from potential future land purchases by Pt. KPC, Pt. PIK or other prospectors exploiting the regions numerous mineral and natural resources. Various accounts are given by villagers of

future (seemingly inevitable) plans to develop coal, natural gas and limestone around the village. Numerous stories were told, often with grand exaggeration, to the extent and the inevitability of increased mining activities in the village's future. One man spoke of a cement company possessing a 50,000 Ha exploration concession within the village which they would soon begin operations at under a 20,000 Ha extraction concession. Despite this claim, quarrying concessions for limestone are legally limited to only 10,000 Ha and the cement companies exploring in the area have not yet been identified publicly nor have been granted a production permit. Numerous others villagers spoke about the prospect of developing a second coal port, similar to the Lubuk Tetung port to the east of the village along the shoreline. As such, with the presence of several other resource extraction companies exploring in the area, expectation of future resource development have caused many to speculate on future development projects.

5.4 The Changing Role of Land

The range of land use practices amongst villagers is fairly diverse, but some trends are discernable. According to village data, the three most dominant practices in the Kecamatan (district) of Bengalon—of which Sekerat comprises more than one third the area—by land use area are community forest, plantations and 'sleeping' rice field[30] (*Table 5.3*). These statistics are difficult to assess as they did not provide sharp distinctions as to what constitutes sawah rice plots from plantations, or whether community forests included land under cultivation or free-standing forest. Further, up to date land use statistics were not available specifically for the village of Sekerat. However, the significant portion of land designated as 'sleeping paddy' is quite interesting, especially in comparison to 'living' *sawah* (paddy). Despite the very small area

[30] The term sawah in this context more than likely also refers to kebun-style gardens, as t

of land in use as *sawah* (120 ha), 166 times as much land is apparently rice field that has been left dormant or underused (20 000 ha). While this is probably over represented by villages further into the interior, it represents the scale of the transition within the district and also speaks to the transition within Sekerat.

Land Use in Bengalon District	Area (estimates)
Hutan Rakyat (community forest)	35,000 ha
Sawah Tidur ('sleeping' rice field)	20,000 ha
Perkebunan (plantations)	15,000 ha
Pemukiman (settlements)	500 ha
Bangunan Lain (other buildings)	350 ha
Tegalan/huma	350 ha
Lahan Lainnya (other land)	200 ha
Sawah (rice field)	120 ha
Total (Bengalon District)	**71,270 ha**
Total (Sekerat Village)	**~24,000 ha**

Table 5.3: Land Area by Use in Bengalon District (Source: Kecamatan Bengalon 2009)

Some villagers still want to carry on with the *kebun* gardening or farming within the village, but are hamstrung by the fact that not all other villagers want to, or *can*, continue to practice farming. One part-time contractor noted he missed farming and wished he did not have to pay for food but could instead eat it fresh rice and vegetables he grew himself the way he used to. Another middle-aged mine security guard also spoke affectionately of his life before the mine working in his *kebun*. However, he wanted to earn enough to ensure his two pre-adolescent sons could get a good education before he returned to a *kebun*. However, both men acknowledged the difficulty in reverting to their practices of old primarily due to the issues of pest control and the declining availability of land. Due to the limited ability of local villagers to continue the crops and vegetable gardens due to the presence of pests, they require that larger numbers of famers

participate within *kebun* gardening to lessen the individual impact of the pests (primarily insects and wild boar).

Many other villagers have, as they perceive it, are preparing for the inevitable. This includes leaving land in the hills or away from their houses fallow with the expectation that it will eventually be needed for expanding mining related projects or future infrastructure development. However, much of the land in and around other sites that are less likely for future mine development are receiving investments of capital into various projects (Figure 5.4 and 5.5). Shop owners are also opening up along the main town road set off of the shoreline as well as the road along the beach. While some have been disappointed about the delays on a town hall they expected to be built within Sekerat-Sekerat, others have opened restaurants, shops and boat rentals businesses along the beach to cater to tourists (typically mine employees or residents of the local mining town of Sangatta) in search of the picturesque scenery. One local fisherman opened a boat rental/restaurant/fishing company which sells fish to local tourists and mining company employee housing units and offices.

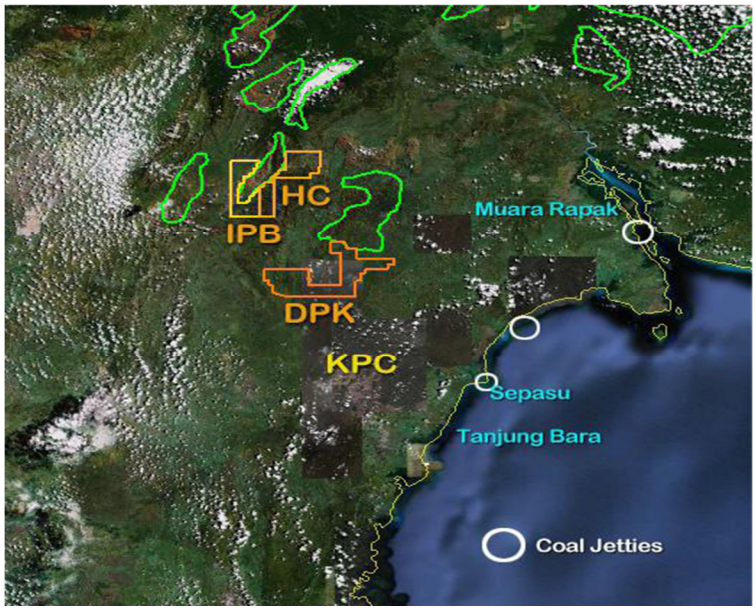
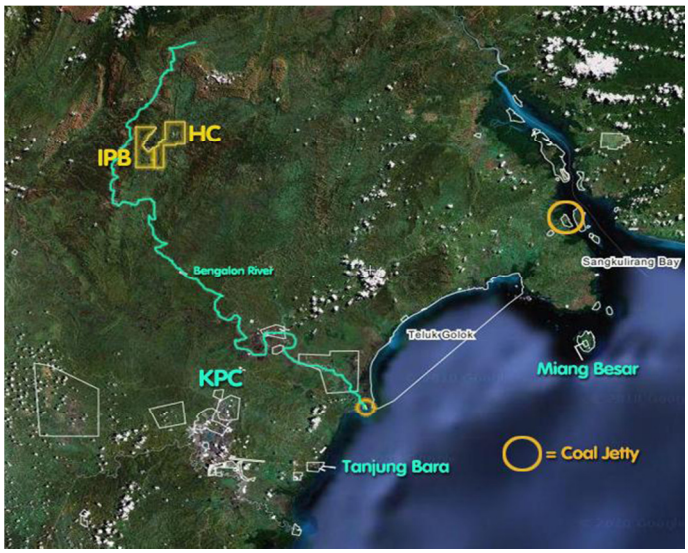


Figure 5.4 and 5.5: Future mining projects around Sekerat village and continued use of existing coal conveyor belt and port.



Source: http://www.nm-rh.com/East_Kalimantan_Concessions_Profiles.pdf

Beyond this, several villagers shared their plans of building freshwater fish ponds around Sekerau-Bawah where mangrove forests provided lucrative environments to raising and selling 'gold fish' and crab. These endeavours are capital intensive and require heavy machinery to construct these ponds, often by Bugis people from Sulawesi who own the equipment that have constructed the existing ponds in the area. These kinds of capital-intensive projects are typically only pursued by wealthy individuals, and so too was the case with the construction of the $90,000USD swallow house built within the village. These houses are designed to provide an artificial nesting environment for the swallows so that the owners of the houses can collect the nests and sell them at rates of between 1-5 million Rp/kg (approximately $90-450USD/kg).

In total, land use now rely upon intensified capital and labour inputs the land that remains under agriculture or aquaculture production. The land within and around the village areas has also benefited greatly from the construction of roads (though very rugged) which connect the

village with surrounding villages and to the Trans-Borneo Highway running across much of the island. As for the hills throughout the village, villagers claimed that they have been mostly felled, cleared and converted most commonly into speculative land holdings ('land traps') which await future compensation payouts.

More recently the desire to hold land seems to be losing its appeal as numerous ideal plots along the village road sit vacant with for sale signs on their fencing. The perceived 'mania' of land grabbing seems to have subsided for the time being, but the question remains as to whether or not these plots will hold their appeal in the years to come and what will become of the land in the meantime.

5.5 Intervening Forces: Resource Governance and Land

Understanding the complex forces influencing the role over local villagers land use and management is challenging. However, the stories above have helped identify some of the most predominant forces shaping the role of land, specifically: the mining companies (Pt. KPC, Pt. DH and Pt. PIK), the national state, local government institutions, and the biophysical nature of the village. Key reforms flowing from decentralization regulations, as well as the recently passed mining law, have been influential in enabling these actors and factors to play the static or evolving roles they do. However, the inevitable outcomes these factors produce for local land managers is tempered by their interaction with the other intervening factors, and remain dynamic and uncertain.

5.5.1 Multinational Mining Companies

The role of mining companies is a dominant contributing factor to the changing land use within the village. First and foremost is the companies' requirement for land to build hauling roads,

ports, buildings and housing units necessary to carry out their operations. Mining projects typically have the impact of creating more complex scenarios for land owning 'communities' as they shift from being relatively self-contained and known to being much more diverse and fragmented in terms of people and agendas, and residents experience loss of control, direction and security in their lives (Banks 2006). In Sekerat-Sekerat the physical displacement of villagers for these projects is critical not only as a means of separating villagers from their existing plots (they are still free to seek other land plots in the village to continue their previous practices), but it also serves to emphasize the inherent uncertainty of villagers that owning land which many claimed not to have experienced before. Also, the certainty needed to ensure national and foreign investors over land claims rights from political risk has led mining companies to definitively enforce their authority as a land holder in the village area.

Further, the initial large infusion of financial capital into Sekerat from Pt. KPC incited land transactions and enabled the newly endowed villagers to invest in a range of new practices that would not have been possible in such a short period without financial investments. The range of land use activities pursued have not all been intensive production on the land (e.g. freshwater ponds, capital intensive *kebun*, or plantations like oil palm), but the income derived from these transactions have provided villagers with capital that is being converted into a range of other livelihoods practices.

While the sub-contractor Pt. DH and the Bengalon pit did not begin operations until 2004—three years after the initial decentralization reforms came into force—the experience of Pt. KPC at its Sangatta site which began operation in 1992 is informative of the kinds of impacts the Bengalon project has also experienced. Following the decentralization reforms, the company was challenged to understand the competing lines of authority which the hastily crafted

decentralization reforms generated. However, Pt. KPC saw the areas of industrial issues, land issues and Community development programmes as being the dominant themes in which the district level government was involved with (KPC 2001).

From this, it is important to note that the turmoil of dealing with the uncertain legal environment during the initial years of the *reformasi* era and the challenges that Sangatta area villagers dealt with, Pt. KPC had an opportunity to learn and adapt future strategies to deal with the complex land claim melee that would also involve its Bengalon pit operations. As such, the actions of the local mining company should not be seen as a global strategy for dealing with local communities, but instead one that adapts and evolves to many of the local circumstances. This is an important consideration for understanding what impact corporate social responsibility programs have in shaping and engaging local development desires when the company works with the local institutions that have been empowered through the decentralization reforms.

5.5.2The State

The introduction of decentralization reform laws 22 and 25 of 1999 were influential in reshaping the impact of mining on the community. More specifically, one important aspect has been the redirection of taxation and rents from the central state to the Kabupaten (District) or the local governments which arose from the fiscal decentralization law No.25/1999. Specifically with the activation of the 1999 reforms in 2001, most all of land and building tax and coal royalties remain within the province or in the local governments (see *Table 5.4*).

Percentage of Taxation/Rents to Regency of Local Government
- 90% of Land and Building Tax
- 80 % of retribution on land and building rights
- 80% of coal royalties

Table 5.4: Taxation and Rent Distribution under Decentralization Reform

This vast transfer of resource spending power has imbued a much greater importance for local financial responsibilities of local development initiatives. Specifically, this can be seen in the decision of the district government to invest in a concrete boardwalk and public bathrooms and benches along the beach front within Sekerat-Sekerat. Further, another 6 billion Rp (~$540,000 USD) of funding was reportedly set aside to continue to develop the tourism potential of the village[31]. Such investments by the local government could carry huge consequences for the future development of land within the village and drastically redirect many of their investment and land use choices.

However this influx of fiscal responsibilities for local government has also had important consequences for the accountability of local officials. While pre-decentralization governance in Indonesia was far from accountable, *reformasi* era governance has be said to merely have decentralized and disaggregated corruption networks, rather than root them out through local accountability efforts (Hadiz 2004, von Leubke 2009). Recently, a disgraced junior tax collector in Jakarta was put on trial for having collected approximately $500,000 USD to help Pt. KPC avoid taxes between 2000 and 2005 (Jakarta Post 2010). Further, he incriminated a senior tax official for having received $1.5 million USD from Pt. KPC and admitted spending $500,000 USD to bribe police, prosecutors and judges to have his case thrown out of court the year before. As such, it is no surprise some villagers have openly accused local government officials of directing funds from government into their own pockets. One man claimed a local village elite had directed district funding into personal projects away from village infrastructure improvement. As a result, he had to undertake constant repair of his trucks used to transport furniture from larger cities into his store within Sekerat-Sekerat. Other conflicts had been

[31] This was described during interviews with local government officials.

centered on the local government elections for heads of the local community council (also known as the BPD, discussed below) and for the village government positions. Specifically, there were contentions over the legitimacy of the election of the BPD members as some 20 or so, mostly housewives, voted in the village despite the existence of hundreds of potential voters. Arguments arose as to whether the ballots should be recast (primarily by the ousted BPD head, despite the fact his constitutional term could not be extended). While the exact ends and uses of this income also include such things as water filtration systems, road construction and village supports like gas stoves for all villagers, the historical (and likely current) interpretation of the political climate is that much or most of these funds are misappropriated.

This conflict of and use of authority is also influential in the wake of decentralization reform Law No.22/1999 on regional autonomy. As Pt. KPC's own public documents noted during this transition, a Presidential decree (in effect from 1999 until the new mining law of 2009 came into force) attempted to cover the legislative 'gap' between the previous mining law, Law No. 11/1967 and Law No. 22/1999 delegation of authority. During this time, the responsibility and authority of the central government was not entirely clear. So, despite the newly distributed sources of local state funding, the role of local government remained contested and variegated across the country and does not often reflect the decentralization laws as real authority is still being worked out in practice.

The role of informal authority is important. Much of the stories told reflect the numerous tales of contradictory regulations and instructions, graft, manipulation, excessive fees, deception, fraud and confusion seen across Indonesia (Thorburn 2004: 34). Certainly the story of the Jakarta-based land developer mentioned above attests to this claim within this area. However, while much has been made of the intervening ambiguity over property rights within Indonesia

during the *reformasi era* (Laurens and Moniaga 2010, von Benda-Beckmann and von Benda-Beckmann 2010, McCarthy 2004), the situation has been different in the village due to the unique nature of the mining companies claim over land. While the certainty of claiming rights to the land remain ambiguous and variegated, often employing a number of methods to claim ownership of the land, the low population density and relative abundance of land has made it easier for claimants to exercise ownership of plots of land that might not otherwise be pliable under the former village use as agricultural land. Further, the necessity of providing certainty in attributing land tenure has provided the stimulus to solve the issue of land ownership in the village. That is to say, because many of the villagers felt their 'land traps' would likely result in future compensation from one of the current or new extractive companies, they worked to find ways to resolve the ownership dilemma.

The role of the state has been critical in ensuring ownership and rights over plots of land. While it is obvious that not only do mining companies legally require title to land, but the title and right to mine land also provides the security of tenure required to raise financing for the project (Naito et al 2001). As such, the history and geography of the acquisition of mine claims, and then relating this history and geography backward to corporate investment strategies and forward to material outcomes, can enable one to ground globalization in a particular instance (Bridge 2002: 375). Further, mining laws themselves can be seen as codifications of prevailing social relations, an instantiation of the structures within and through which corporate strategy takes place at a particular time.

From this, the three predominant ways people assert title over land within Sekerat are important. One of which, *hak ulayat,* has been less relevant within Sekerat-Sekerat. Typically translated to mean 'the right to allocation' (though not wholly encompassing the term), *hak*

ulayat is a communal land allocation system that said that individuals could never dispose of their rights over the land (Thorburn 2004: 35). This legal claim would typically be issued by an autonomous *adat* community which gives rights to clear, cultivate, forage, etc. While land can be lent out to other community members at the cost of some tribute fee, the authority (and responsibility) over the land remains with the local autonomous *adat* community which *cannot* be alienated. While there was a local *adat* leader within the village, there was no talk of *adat* rights within the village. This has most likely been due to the central authority of land ownership, in the western sense, that is enforced through mining claims and backed by the authority of the central state. As a result, this formal national legal land claim instrument has become less relevant within the local community context. So, while in writing this specific instrument may cede a place for specific kinds of authority to be exercised, in practice socio-economic projects like coal mining have actually overridden its applicability.

Specifically within our case, the role of the Community Development projects of companies in the area have played a big role in determining what type of land use projects would be conceivable and supported. While the Corporate Social responsibility projects of these companies can vary drastically, since the decentralization reforms community development programmes were reoriented slightly in order to better reflect the relationship of the company with the district (KPC 2001).

Nevertheless, the federal level state still plays a role in supporting specific land ownership regime which occurs within the area. While residents are allowed to sell and trade their land, they are also required to sell it for state sanctioned development projects (the mine) if it is deemed necessary for the operation of the project. This support for the land ownership regime operating within the village and throughout the country is specifically enforced within

this context through the use of military or police. The case of one villager being threatened with arrest for resistance to the sale of his land is an example of the federal state level authority operating within the village. Thus, there is coercion and a necessity for villagers, if required, to enter into the commodification of land in order to provide solidified ownership over the land under mining operation. With the original intervention into the village to build the coal stock pile and conveyor belt system, it required local villagers to enter into the commodification process which also put pressure onto other villagers who relied upon a stronger community based *kebun* system to protect them from the difficulties of maintaining sufficient *kebun* systems. As such, the role of the federal state is best understood when taken in consideration of the complex of forces which arise in relation to the project of open-pit coal mining.

Elsewhere, while Pt. KPC decided to commence its operation at the Bengalon pit in 2004 due to buoyant world coal prices (Pt. Buma 2010), to assume that coal prices *determine* investment and extraction is too simple of a conclusion. In the face of the new mining law (No. 5/2008), companies are now required to apply for and receive permits by provincial or local governments whose territory the project would fall within. Further, the law also begins to require that refinement of mineral sources be carried out within Indonesia or that the federal government retains the right to cap the amount of coal exported should it decide too little of the 'national' commodity is actually being put to use to meet the national (typically Java's) electricity production needs. With more than 88% of East Kalimantan's coal being produced for export, much of the investment in the province is pursued with the intent to export the product to the insatiably energy hungry Asian markets of China, Japan, Taiwan and India. As such, to infer that the role of international coal prices is the sole determinant in guiding whether or not an internationally-savvy and wealthy mining multinational are to extract resources is misled. This

belief belies the important role played by decentralization in imbuing local authorities with the right to grant or recant permits for operation within their territory. Further the federal state maintains decision-making power over some of the operational requirements of the firms and thus would incur specific costs which contribute to the profitability, and thus likelihood, of undertaking coal extraction activities.

With all of this said, the role of the federal state throughout the *reformasi* era continues to play an influential role, as is the case in the mineral sectors of most nations (Ballard and Banks 2003). By continuing to hold control over the land titling process generally and over the export levels specifically, they have created a continuing importance for themselves at the local level that continues to shape how capital infusions, land ownership patterns and land compensation payouts incentivize the land management and land use practices observed within Sekerat-Sekerat.

5.5.3 Local Government

From the above, local level government bodies within Sekerat have also been influential in managing issues related to land use and management. Specifically, the local village government legislative, the *Badan Perwakilan Desa* (BPD or village representative council)[32], has an influence over land allocation and access issues within the village. Though the local level has no formal status within the Indonesian constitution, the Sekerat BPD has come to play the larger role that the decentralization laws intended to create.

Law 22/1999 spurred the establishment of the BPD councils in recognition of the importance of attempting to develop democratic village governance within the context of

[32] The actual function of the BPD is to act as a council of elected legislative officials to guide the development path of the village. However, due to the importance of land in the development process, specifically in the context of land acquisition by the mine companies, the body activities are frequently engaged in land issues.

regional governance. While there appears to be little room available to play a transformative role in terms of shaping the local determination of land based planning or guiding the overarching development of community planning with respect to land, the BPD council has been provided with some space to actively regulate the means by which villagers are managing local land resources.

Controversially, Sekerat village has experienced a number of legitimacy issues with the local BPD elections which occur every 5 years. The controversy surrounding the recent April 2010 elections described above evolved around the seemingly powerful role these positions had, if not for controlling the management of village lands, but more for the role it has in enabling access to the monetary flows coming from the positions.

Nevertheless, the council does have an effect within the village. Following the confusion of the transition period after Suharto, the mining company in concert with the provincial government, developed local 'land organizations' which were to help solve the issue of contested land rights in an era where claims to land were highly uncertain. As such, the Sekerat land organization melded with the BPD and gave authority to one group to help manage the important issue within the village with respect to the mining companies, managing land claims and land compensation agreements.

As a result, despite its tenuous governance status, the BPD council plays a crucial role. After travelling widely across Indonesia—supported by civil society organizations (CSOs) and the national government—Sekerat BPD officials studied the operation of other BPD councils by exchanging information and experiences. From this, the BPD decided to pass local legislation which effectively capped the sale of land to 2 ha at a time, revising a district level limit of 5 ha. The regulation was an attempt to minimize drastic shifts in wealth that accompany windfall

payments from land sales. As such, villagers are incentivized to better manage their land compensation payouts as well as more slowly adjusting to the requisite changes that occur with the transition or loss of practices upon said land plots. However, the BPD also receives a percentage of each of payment arising from the sale of land from the mine company to the individual title holder. While ostensibly intended as a property tax to fund village operations and development projects, many villagers distrust the organization and believe it to be another opportunity to misallocate funds to the pockets of local elites. One local resident suggested that if the village had properly spent village funds to the improvement of local infrastructure (roads, electricity and others) and not on the $90,000 USD bird house the village head was building[33], he wouldn't spend all of his time fixing the trucks he uses to operate his furniture store.

5.5.4 Citizen Protest and Nature

With a long history of citizen action catalyzing social and political change, demonstrations at critical political junctures in Indonesian politics has played an important role in Indonesian political culture (Hefner 2000). Since the democratization and decentralizations reforms following Suharto, there has been a larger space created for all ranges of non-governmental (NGO) and civil protest to occur. As such, this has become a well ingrained strategy employed to influence the outcomes of land negotiations, as well as other development outcomes not discussed in this thesis. On numerous occasions, villagers have banded together, or passively accompanied, to protest and demonstrate at mine company roads, buildings and offices in order to achieve increased compensation or expedited negotiations on land purchase agreements.

[33] In talks with the village head, he mentioned that the funds to build this house were from outside investors and his own and friends savings. The bird house is a 3 story building which is designed to mimic the cave settings in which Swallows come to build their nests. These nest can fetch between 1-5 million Rp/kg and are most famously used for bird's nest soup.

While not always effective, the strategy has had the impact of bringing mining companies to the table in an effort to negotiate or resolve complaints.

The biophysical quality of the land has also played a role in shaping the opportunities available for land use within the village. The limestone hills of the village have made it challenging and undesirable for villagers to attempt to continue *kebun* gardening, and have forced them to search for alternative methods of cultivation. Further still, the history the village has witnessed a declining fisheries industry which previously has an important aspect of village practices. With shrimp trawling being a popular practiced which was eventually outlawed because of the impact on marine ecosystems across Indonesia, the current situation in fisheries is diverse and many have noted that the small scale fishing along the coastline has diminished making land based activities all the more attractive during recent years.

5.6 Conclusions

The role of multiple competing forces is evident in the land management practices of local villagers. With the introduction of decentralized governance reforms, the legal certainty over land ownership continues to be a point of contention within this rural and relatively remote village. Further, the slate of activities that have rearranged authority has also reshaped the roles for stakeholders which are still in the process of being defined, but will inevitably remain dynamic and fluid. As a result, competing local institutions, local 'grassroots' civic action, national state mining laws and the mining companies practices (e.g. Community Development) continue to exert direction over the role land will play within village livelihoods.

Despite all of this contingency, complexity and competing influences, these observations have identified some evident trends within the village and allow us a better grounding to avoid

the vague 'black-box' terms often used to link processes and outcomes (Bridge 2002). In terms of determining the role played by local level institutions (a key intent of decentralization), the strength of the land organization (BPD) has been bolstered by the confluence of Pt. KPC's land compensation payouts, their need for villager relocation and certainty over land claims in order to ensure investor confidence from potential political risks on investments and the remnants of national level authority over the titling. While the introduction of the newest mining law has provided increased authority for local and provincial level governments to assert land titling control (and thus the likelihood of undertaking mining projects), this law will carry scale-specific impacts which will only become apparent when the local context is provided. Further, it appears that the province and local governments are keen on ensuring persistent resource extraction within the area and will have a potentially greater opportunity to set the specific rules mining companies must follow in order to operate within the area.

However, the role of the multinational mining firms within this village cannot be underestimated. The structural impacts of mining firms have been a key influence in local villages across Indonesia, and in Sekerat, well before decentralization was implemented. One could also argue that a specific range of impacts are inevitably when such a vast and capital-intensive project takes place in a remote and rural part of any country. Nevertheless, they specific role that the mining companies have played in informing land use has become more nuanced in the face of decentralization reforms which have provided a greater role for district and local governments and civil society. While efforts by the Community Development section of Pt. KPC to strengthen self-help groups and support farmers has had a real impact on the village's institutional capacity and the management practices of farmers, the limited and difficult terrain, the abundance of pests when not accompanied by village-wide production, and the

failure of the Farmer's Organization in terms of being seen as a strong organization farmers have made the SHG's less successful in supporting agricultural land use for some villagers, despite the perceived desire of some villagers. Instead, what we have witnessed is an increased level of importance and strength of the local Land Organization in determining important livelihood trends within Sekerat-Sekerat. As such, the direct horizontal link (down from the multinationals and national state to local institutions and civil society activity) is difficult to ascertain and appears more complex and nuanced than is often stated.

CHAPTER 6 – WAGE LABOUR: WORKING AT THE MINE

6.1 Wage Labour Opportunities

Wage-based employment is not completely new to most village residents. While some wage-labour was available on small-scale banana plantations in and around the village, the majority of those with full-time wage-labour experience are primarily migrants to the village. With the commencement of mining operations at the Sangatta site in the early 1990s, most Sekerat villagers did not find work with the mine. Instead, Pt. KPC and its contractors and sub-contractors sought labourers from within the original Sangatta fishing village, or drew from numerous migrants moving into Sangatta in search of work. However, since 2004 the commencement of the Bengalon mine there have been numerous employment opportunities with the mining contractors—Pt. Darma Henwa (Pt. DH) and Pt. Perkasa Inakakerta (Pt. PIK)—and the abundant sub-contractors. Correspondingly, local employment with the mine company has expanded dramatically. Currently, 74 of the 345 Pt. DH employees working at the Bengalon mine site are from Sekerat, another 236 work locally for Pt. KPC's contractors and 292 are employed by sub-contractors of Pt. DH. This work ranges from digging and hauling operations, security, port work, catering and others (*Table 6.1*, Kecamatan Bengalon 2009). While many of the jobs have been taken by migrants who moved to the village and gained village citizenship (through means discussed below), many native Sekerat villagers have also succeed in finding work.

Company Name	Positions Available	Positions taken by Sekerat Villagers
Pt. Darma Henwa	345	74
Pt. KPC	-	236
Pt. KPC sub-contractor	-	292
	Total Positions	**602**
	Village Population (2009)	**2,037**

Table 6.1: Local Village Employment, not including employees of Pt. PIK.

Finding work in mine related posts was extremely accessible during the early years of the Bengalon site. Mine management were said to walk the streets offering unsolicited employment to local villagers with the mine. One resident, originally from Sekerat-Sekerat who relocated to Sekerau-Atas to work a *kebun* in the 1990s received a job as a security guard at a hauling road checkpoint after being approached by a *buleh* (white-skinned person) while sitting out front of a local store.

> The *buleh* came to me and said "do you want a job?" [working for the mine]. I had to show my village card and education [a high-school equivalent]. It was not hard.

The readily accessible jobs were, on the whole, a welcomed opportunity for many in the area. This hiring style was said to continue for a few months, but with the influx of migrants coming in search of work with the mine, a more formal application process was soon undertaken.

Most often villagers and migrants in search of work would approach one of the mine's security posts at the entrance to mining facilities or at hauling road checkpoints and were then instructed to ask the candidates for a proof of education and a village citizenship card. Typically, the equivalence of high school was preferred but Pt. KPC had a specific system for evaluating would-be candidates by giving priority to local villagers who had received an education locally. While the level of the candidate's education or range of specific skills would not preclude them from employment, it would determine the amount of training the candidate would require in

order to perform specific jobs. Contractors and sub-contractors however, did not undertake the same hiring system, but Pt. KPC encouraged its contractors to try and source as much of its labour force as possible from the local communities. As such, since employment is directed toward local residents, the challenge of new migrants is to obtain documentation proving they are residents. Numerous migrants often rely on local families to "adopt" those, mostly young men, who come in search of work. One family interviewed stated that they have 5 'children' who they adopted in order to enable them to claim residency and acquire the requisite documentation.

As these jobs became quite popular, many security guards were often overwhelmed by the villagers who approached them in search of a job. Many applicants were often angered at the guards for the company's perceived slow rate of adopting new labourers. One security guard told stories of disgruntled and angered villagers who came up to company office check points and wanted to speak directly to the company about job opportunities, noting that

> People were angry when I told them they had to leave their papers with me and could not talk to the company. They would yell at me and be very angry. One man also demanded three months' worth of rice from the company for the time he had been waiting to get a job with the company.

Villagers seem to hold the view that jobs were a guarantee and any attempt to slow this process was unfair. However, as the months passed and more and more villagers streamed into the village in search of work, finding labour positions for them all became untenable for mining officials.

6.2 Villagers at Work

For those who were able to find work with the mine, the jobs offered to the local residents typically fall into three categories: security post positions, machinery operation, and supporting services.

Mine Security

Mine security posts are typically assigned to older candidates who met the minimal education requirements and possessed no specific mine-related skill-sets. This work typically involves 12 hour shifts for 21days a month (often with two weeks off every three months), acting as check-point guards at the entrance to the mining site posts or at intersections of hauling roads and roads used by villagers. They did not, however, always require full education accreditation as some of those who sold their land to the mine site were offered lower prices on their land in exchange for employment with the mine company. The work requires minimal physical effort, but workers often mentioned that the long tedious hours diminished their energy levels after work hours. Typical wages ranged from about 1.48 million Rp/month (which is the mining industry minimum wage) upward to 5 million Rp/month (~$125-450 USD/mo) depending on the firm and years of experience.

Machinery Operation

Operator work (e.g. hauling equipment, dump trucks, etc.) are typically given to younger candidates who had the requisite education qualifications and who underwent the required training for the specific machinery. The education standards for this employment were stricter than security and training courses were mandatory before work could begin. Training for driving-based positions requires a three week training programs, which include 16 days of

driving instruction and 5 days of in class instruction. The salaries are nearly equivalent with security postings, but are generally better compensated, ranging from 3 to 5 million Rp/month. The work itself is said to be more physically demanding due to the constant need for concentration and the physical strain of vibration from operating the machines. However, this section of work is also said to be the one with the highest proportion of women, due to the company's (predominantly Pt. KPC) desire to put what they see as "more cautious operators" on their machinery.

Supporting Services

Other forms of work—such as shuttle operators, custodial and hospitality employment, construction of roads and infrastructure or working on the transfer of coal from barges to the inter-ocean tankers (TKBM)—fill out the predominant range of employment opportunities for villagers with the mining company. While jobs such as shuttle operators or catering and custodial work is more consistent, many others are more periodic and this means that the labourers usually have to have another source of income or work elsewhere.

Individual/Household	Position	Income Range	Use of income
Pak Nanang (Age: 40s) Family size: 4, 2 kids	Sifi (contractor services)	High	Investment in house, builds business, fishing tackle/gear
Pak Darwin (Age: 50s) Family size: 7, 5 children	Security	Middle-high	Sustains family, still owns land
Pak Coffee (Age: early 40s), family size: 4, 2 children	Security	Middle	Savings (schooling) potential future land purchase
Bang Anton (Age: 25) Family size: 3, 1 kid	Former Operator	Middle	Savings, (no longer works as operator, is now working on a fishing boat)

Bang Is (age: 22) family size: 2, a wife	Operator	Middle	Savings, lives at home with family still
Pak Eling (Age: early 40s), Familiy size: 4, 2 kids	Contractor	Low-middle	Sporadic income, used for daily needs

Table 6.2: *A selection of wage-labour employed individuals.*

For example, while the various land-based employment offers structured hours of employment (typically seven 12hr shifts over a 10 day period), the off-shore coal transfer coordination (TKBM) work is much more informal. TKBM work is coordinated by a village local at the Lubuk Tetung port in the sub-village of Sekerat. The TKBM coordinator (delegated in this case to the brother of the village head) is responsible for finding workers capable of spending a number of days (usually 4-6) living on the barges to direct cranes as they transfer the raw product from the barge onto the waiting tankers for transport. These jobs usually pay about 1.2 million Rp (~$100 USD) per 4-6 day period and the work opportunities were usually distributed amongst those with less secure livelihood practices, such as new migrants, older residents and those who could not, or chose not, to take up employment with the mine. Many of these jobs are divided amongst a common set of individuals that are usually predicated upon a connection with the coordinator responsible for filling the positions. The manager supplies the workers for the ships, but also engages in meetings with the firm relating to health and safety risks experienced by the workers. The manager usually earns around 5 million Rp (~$450 USD) per loaded tanker. As such, the local TKBM coordinator is still able to find time to engage in a range of other practices beyond the coordination work, including collecting swallow's nests from the village caves as well as owning and operating land.

However, with the mine now in operation for over 4 years now, there are very few, if any, low-skilled positions available to villagers or migrants, and most are forced to take up short-term employment with supporting firms in the area, or seek alternative activities. The case of two brothers is exemplary. The older brother first came into the village in 2005 from Sulawesi and was able to find work as a hauling truck operator due to the high availability of jobs. When his younger brother decided to move to the area in 2009, he had trouble finding employment with the mining firms and after his savings finally ran out a few months later, he was forced to return home. Later returning again in early 2010, the younger brother was still unable to find work and now pursues an ensemble of practices (including hunting crab, fish and birds from the nearby forest which he sells in local markets).

This trend is not unique as another new migrant from Sulawesi has been searching unsuccessfully for work with the mine for over a year. The recent migrant claimed to have applied with the mine firms a total of 7 times, each time being rejected for employment. Currently, he finds casual employment as a TKBM operator and as a fisherman on a local fishing boat which does not sufficiently support him and his wife and child who have come to the area in search of more sustained work. The challenge of finding low-skill and sustainable labour with the mine is increasingly difficult as operation expansion matures. However, the prospect of future pit operations or of the creation of new sites and new companies coming into the area continues to entice locals and migrants alike into the area in search of work.

The population trends of the village are a testament to this challenge. In the interim years of the mine, the population of Sekerat more than doubled in less than one year of the commencement of operations. It has since been declining as many of the expanding opportunities have diminished or have become more skill-intensive. Thus, while mine employment offers a

steady income to those lucky enough to land the low-skilled positions (as most candidates lack the skill-set to find many of the remaining positions), current income opportunities are increasingly coming from local, lower-income activities which are more erratic, less secure, and potentially intensive on the surrounding ecosystems.

Year	Village Population
1995	543
2006	959
2007	2577
2009	2103

Table 6.3: *Village population trends*

However, there is also an important sub-set of the population which have, for a number of reasons, decided not to find employment with the mine. This sub-set ranges from individuals who take issue with the impact of the mine on their environment and community, others who worked briefly for the mine and then decided it was not a lifestyle they wished to pursue or those who felt that there were more lucrative or desirable livelihood opportunities elsewhere. The first sub-set, while important analytically, are few within the area. While there is definitely a concern amongst many of the community members about the potential environmental and health impacts arising from local large-scale extraction projects, the prospect (or imperative) of taking advantage of mine labour opportunities remains too enticing to pass up the prospect all together. While the expansion or continued operations of the coal mines rests by no means on the consent of the local villagers[34], the majority of villagers felt wage-employment was too good an opportunity to pass up and have attempted to coerce the potentially negative environmental and health impacts of the mines through engagement with the mining companies.

[34] The land they inhabit is legally 'property' of the state that has the 'right' to extract from the ground the resources which belong to the "people of Indonesia".

The other group that decided to seek other means of well-being outside of mine employment were those who typically felt they could find a better income from doing other work. These types of jobs ranged depending of the people and the relevant capital resources they possessed (c.f. Bebbington 1999). Those who possessed higher marketable human capital (such as local contractors who were able to procure contracts either by the mining company, the municipal government or by private individuals or individuals who could manage their own shops) or those with higher social capital (such as those who had connections to social and political elites who could provide them with capital to pursue higher income jobs, or access to lucrative resources like caves or village government positions) or those with existing financial capital stocks which allowed them to expand into activities like investing in plantations or fresh water ponds. For this group, the opportunities available to them were more promising, if riskier, than the prospect of labouring for good pay, and left them with little desire to pursue low-skilled work with mine companies.

For those who did or will choose wage-labour with the mine, there remains an ambiguous security from mine labour for local employees. Little is certain about the longevity of their positions with the companies. Though the spectre of continued mine expansion is often mentioned, there is little certainty of the life of coal mining projects and work for the villagers beyond the medium term (10-15yrs). Despite this, in the context of the intensified 'land grab' described in the previous section, it appears more people in the future are set to become increasingly reliant upon wage-labour provided by mining sectors or the supporting industries moving away (or transforming their methods) from individually-held land and resource-based livelihood practices. However, the reasons for this mix of wage-based practices are complex.

6.3 Intervening Forces: Governance of Wage-Labour

6.3.1 Coal Mining Firms

Corporate Social Responsibility (CSR) requirements, as set out in Indonesia's Law 40/2007, require that companies operating within natural resources sectors "must report on the implementation of their CSR activities in their annual reports" (Rosser and Edwin 2010). Indonesia is the first country to make mandatory reporting on CSR practices. As such, community empowerment and development efforts have played a large role in shaping the local level livelihood strategies and the village development as a whole. CSR activities are wide-ranging, but tend to focus on the firm's social and environmental impacts or stewardship within the sites of their operations and beyond[35]. A number of these activities are relevant for livelihood opportunities for Sekerat-Sekerat's villagers. Amongst (but not limited to) the issues that are important to the context of Sekerat are: local employment strategies, gender-mainstreaming, labour practices, and less related to the mine's practices itself, cultural norms.

Many local mining industry firms have made an effort to higher local residents, but Pt. KPC (who inform Pt. DH's hiring practices) has made it a priority to higher local residents first and has created a system in which they can identify potential employees with the highest local content. The system is based on a mix of both geographic and skill-based qualifiers. Geographically, there are a series of concentric rings around the mine's epicentre out to about 30km to which they assign points, on a scale up to 100, where having residency and being educated within the centre radius would earn the most points and would make the candidates most qualified for the position which their skills allowed. While this practice was applied to the

[35] http://www.kpc.co.id/index.php?option=com_content&task=view&id=15&Itemid=29
See Pt. Darma Henwa Annual Report 2009, or
http://www.ptdh.co.id/index.php?option=com_content&task=view&id=46&Itemid=25

Sangatta mine site, its outer rings encompassed the village of Sekerat, allowing village residents to find employment opportunities but limiting their prioritization in assigning employment. This changed once the Bengalon site began operation and with the development of the Lubuk Tetung Port as Sekerat's residents became high on the list of potential candidates.

Once selected for work, employees were offered training if they lacked the adequate skill-set for the job in question. Training primarily focused upon agri-business, small-medium enterprise development, and a variety of skills training such as machinery operations or mechanical maintenance. However, in speaking with numerous villagers about the reason they undertook the practices they have, none mentioned agri-business or small-medium enterprise development assistance for those who were still living in Sekerat-Sekerat.

There have also been efforts made on the part of Pt. KPC to deploy 'gender mainstreaming' practices in their employment policy. This approach, as outlined in 1997 by the UN Economic and Social Council, seeks to "mak[e] the concerns and experiences of women as well as of men an integral part of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres, so that women and men benefit equally, and inequality is not perpetuated"[36]. With Pt. KPC's efforts to adhere to these principles, they have been set at odds with the Indonesian government's stance on gender and employment in the mining sector. Lahiri-Dutt (2006) notes that "Indonesian laws also prohibit women from doing night-shift work and from working in the actual mines – though government policies at various levels are not entirely clear-cut on the latter. To hire women in round-the-clock shifts, KPC has had to obtain special permission from the local government." Despite this, female labour is significantly lower within the mining sector (just 5% of KPC workforce) as a

[36] http://www.ilo.org/public/english/bureau/gender/newsite2002/about/defin.htm. Retrieved July 20, 2010.

proportion of the total of active women within the Indonesian labour force (31%) (Lahiri-Dutt 2006). Further, although numerous mentions were given that women were often hired as vehicle operators due to gendered aspects—as interviewees stated unnamed studies showing that women had increased sensitivity and were more cautious than men making them more suited for jobs with high risks—more than half of Pt. KPC female employees worked within administration-related sections within the offices (Lahiri-Dutt 2006). Nevertheless, the result is that Pt. KPC policies have opened many doors for local women to engage with formal employment opportunities that, within other Indonesian sectors and regions, are not yet available.

Even further, the role of the production style of the company is relevant for understanding what kind of job opportunities are available for local villagers to acquire. Specifically, since the cost of labour within open-pit coal mining is typically a relatively small part of production costs—approximately 20% compared to the 50% of production costs of high-skilled and dangerous labour for underground mining (Banks 1985)—many local villagers were offered mining opportunities which would not have been as easily available without more intensive training. As such, these jobs have provided the villagers a relatively safe and still significant amount of income that would not have been available in the same way had the coal seams been less accessible from the surface or if not located as closely to international waterways.

6.3.2 The State

Labour law within Indonesia also plays a role in determining the control and direction of how mine employment can impact local development dynamics. For example, the terms and nature of employment for labour in areas of production processing, such as mining, are in no way long-

term permanent employment. In Article 66 of the 2003 Indonesian *Act Concerning Manpower*, it is stated that:

> If the job is related to the entrepreneur's core business activities or activities directly connected with production process, the entrepreneur is only allowed to employ workers/labourers under an employment/ work agreement for a specified period of time and/or under a work agreement for an unspecified period of time.[37]

This is important because most of these jobs are highly dependent upon the continued existence and operation of the mine. The mine site possesses a 20 year contract of work (transitioning to mining permits under the new 2009 mining law) with possible extensions of two ten year periods. However, operations continue only if there is coal to be profitably mined and no job is assured beyond that period. This component of state law reinforces the point that labour opportunities emanating from coal mining operations are by no means a long-term or stable and instead take their cue from the economic viability of the industry in question. While this is particularly true of many other livelihood practices, the sustainability of coal mining labour is dependent a number of forces which are almost always cast beyond the realm of influence of local villagers. As such, many management strategies to sustain these forms of wage labour are only so effective.

6.3.3 Local Cultural Influences

The local thirst for mine-related employment is also influenced by the local cultural norms associated with the swift transition in livelihood practices. Many of the younger villagers are excited at the opportunity to take-up employment in a dynamic and potentially lucrative sector which carries the allure of being connected to a global enterprise, potentially offering international placements. Few noted the short term and erratic nature typical of work in a sector

[37] http://www.ilo.org/dyn/natlex/docs/SERIAL/64764/56412/F861503702/idn64764.PDF. Retrieved August 1, 2010.

reliant upon international markets and prices and national political climates. Few still seemed capable to project where or what they will be doing 5 or 10 years into the future. Contrastingly, many older villagers saw mine labour as an unsustainable practice. For instance, one of the 44 year old security guards noted that he only intended to work for a few years to provide enough income to put his children through school and provide them other necessities which he did not have as a child. He hoped he could one day save enough money to leave the mine work and buy a plot of land to cultivate vegetables to sell to local villagers. Another elder suggested that

> Yes, the work will give us money, but where will our children work when the mine is gone? We can't eat money.

In between these two seemingly generational perspectives, some villagers are able to choose not to engage in wage-labour, instead pursuing higher value or less exhaustive activities, such as fishing, contracting services, land development projects or finding labour with more lucrative practice such as collecting swallows' nests in the hills behind the village. These generally tend to be individuals with close connections to village elites or others who possess access to capital to pursue activities with higher returns.

Along this vein, the local village social structure also influences the structuring of employment opportunities around the mine site. The TKBM labour is indicative of this trend, and it remains important to understand its role in shaping local village livelihood dynamics. While its role is at the moment more marginal, its importance will increase as labour at the mines becomes increasingly difficult to sustain.

6.4 Conclusions

Many villagers have benefited from the opportunity to work in positions that provide them with a constant flow of revenue and relative job security. These benefits are certainly more desirable than coal or other mining projects which often marginalize and discriminate against local villagers instead of providing them with lucrative and potentially gainful employment opportunities. However, the challenge remains as to how sustainable these positions are and to what extent they can be extrapolated into encouraging more robust and diversified economic opportunities within the surrounding area; a perennial problem in resource extraction regions. Despite the reforms which have provided greater regional and local level decision-making capacity which could help make this greater regional growth a reality, many of efforts to pursue business development or alternative skills are appear to take a back seat as the majority of the villagers are focused upon employment with the coal mine and not on diversifying their skill base. Nevertheless, the increased incomes have made it possible for savings which could potentially be directed toward such training into the future. Whether or not those skills will be useful in a village without a coal mine is another question.

As for current wage-employment opportunities, the operation schedule of a mine's expansion and commencement have provided and are also restricting many of the labour opportunities for local villagers. One can see this most directly through the trends in the population levels of the village. Future expansions of other mining operations in and around the village and the progress of the Bengalon site will likely dictate future trends in livelihood practices. Currently, it could be said that some level of 'resource mania' or that of a frontier mentality is crafting the imagination of locals who see future expansion and labour opportunities within the area as inevitable.

Nevertheless, there are also many important local social and cultural qualities which regulate the division of labour opportunities and the way in which locals engage with the availability of labour flowing from the mine. However, these opportunities work more to reflect the dominant economic trends and opportunities which the mine supplies and thus must be interpreted in conjunction with the political economic trends from the mine and less in contrast to them. That is, while the agency of local institutions and the impact of local social relations are important in informing the impacts of mining on local livelihoods, these factors must be placed within the context of broader forces (i.e. the importance of mining in the world and national economy imperatives) which create the opportunities for these socio-cultural factors to then have importance. Thus, while decentralization efforts appear to offer more room for autonomy and agency of local level actors, they only do so within the context of the forces which give life to the local scale. As such, understanding why villagers have the perception that they have the right to jobs with the company or why they have little consideration of livelihoods beyond mining related work must be considered with respect to the fact that many of the opportunities they have to exert autonomy and agency over the impact of mining are enlivened by the operation of coal mining which is crafted beyond their realm of influence.

Even further, the temporal qualities of labour are important to understand in explaining the specific range of practices underway currently. These must not be seen to be fixed and will be in flux not only with relation to the extent of the coal in the ground, but also the political economic imperatives which make it worthwhile to take that coal out of the ground. Further, again the biophysical must be seen to give life to the specific wage-labour opportunities pursued by villagers. Without the relative ease of extraction (requiring low-skilled extraction techniques) and the village's location at the port, many of these social and political institutions (e.g. the CSR

programs) would not produce the specific outcomes that we are witnessing. As such, the biophysical and temporal are important in understand current and future mining initiatives (such as the new mining law) impact upon community livelihoods.

CHAPTER 7: LEFT BEHIND: FISHING AND OTHER PRACTICES

While wage-labour and land speculation have been predominant throughout the village, it would be misleading to portray the transition in livelihood practices as evolving solely upon these two practices. Instead, farmers still work *kebuns*, fishers still catch fish and crab, and many others seem to fall somewhere in between. In reality, most households rely upon a variety of practices that act to buffer and sustain household income in the face of dynamic livelihood opportunities. While the two most dominant trends within the village have been the result of land compensation and wages earned from labour around mining, other practices are often attributable to a lack of these two other forces. That is, many of the livelihood practices currently pursued outside of mine labour has been funded by land compensation opportunities or have occurred because villagers and migrants were unable to access these opportunities and are forced to adapt their plans in search of making a living.

7.1 History of Fishing

Situated on the western shore of the Makassar Strait, the original Sekerat village site of Sekerau-Bawah historically relied heavily on coastal fisheries. Primarily undertaken by ethnic Bugis, the stocks of a wide range of fish, crustaceans, molluscs and a variety of other marine resources were exploited for consumption and often traded for fruits, vegetables or timber from the local forests and *kebuns* of ethnic Kutai. During the 1960s and 70s, shrimp fishing was a popular practice in the village. Many villagers participated in fishing shrimp in response to the dramatic increase in shrimp prices during this period (FAO 2006). However, with declining shrimp stocks (and the introduction of a trawl fishing ban in Western Indonesia) and a decline in

shrimp prices caused in part by aquaculture expansion, shrimp fishing ceased to be a tenable practice. Today, shrimp stocks are said to be regaining and the moratorium on trawlers introduced in the 1980s has been lifted (though remaining for shrimp trawlers) allowing shrimp practices to occur through less invasive tactics. However, villagers claim the shrimp fishing is no longer viable due to the low market prices and increased fuel costs which combine to make the practice too risky.

However, more notable was the absence of real interest or talk toward fishing as a practice. Seeing as the village developed along the coast and was long populated partially by Bugis and local Kutai fisherpeople, it was surprising not to hear much talk about fishing. Historically, much of the local community relied on coastal area fishing practices, either through net casting or line fishing, to supply local consumption needs or small-scale trading in nearby villages. In recent years, fish stocks close to shore are said to be less robust and less numerous as both large and small pelagic fish species are now classified as 'fully exploited' in Indonesia (WWF 2010). Those who continue to fish are forced out into deeper waters further off the coast (ranging from about 2 to 6km) and seek larger fish to supply nearby markets now accessible to roads, or within the local community. Those who continue the practice tend to fall into three categories: (i) those who engage it as a leisurely activity, providing pleasure and a small portion of their personal income or food supply; (ii) those who have been able to invest in fishing gear and boats allowing them to seek greater quantities of typically larger fish to nearby markets, restaurants (the developing small-scale tourism industry has been supported here by both residents and local government), residential units (*kos*), or mining facilities and; (iii) those who rely, tenuously, upon the practice as a key source of income.

Those who rely tenuously on the practice as a main source of income are typically in the minority and tend to be those who are not native to the village area and have come, unsuccessfully, in search of labour at the mine. One such example is a Sulawesi native who had come in search of work only to have failed 7 times in finding employment. Bringing his wife and daughter with him, he now relies on occasional fishing on board a local restaurant owner and fisherman's fleet who use the fish they catch to sell in Bengalon, the sub-district capital, or for consumption. He remains distressed at the prospect of continuing in this line of work, as it does not provide his family with a steady enough income to support them in the village. With more than 8 months in the area, he frets the future of his family in the village and debates where they might move next if he does not find more stable and lucrative employment. Another villager has a similar experience after coming to the village in search of work; he has taken up fishing with the help of his friend who currently works at the mine as well as supplementing this with searching nearby mangroves for crab.

Yet, there are others who are capable of maintaining fishing as their primary practice, however they typically tend to be long term residents of the village, or those who entered the village with a sizable existing wealth base. Examples include a 25 year old fisherman who left his job as a dump truck operator after 1.5 years to pursue a 'simple' life. Frustrated with the long hours and physically strenuous work of driving the large trucks, he took up a spot fishing on the boat of a local restaurant owner in order to provide himself and his wife and child with an income. However, he also spoke of his desire to help his father operate a freshwater fish farm once he brings the project into operation at a yet to be determined date.

Figure 7.1: A local fishing boat available for rent for tourists.

While fishing has become less of a priority for villagers within Sekerat, small-scale fishing continues to be important for some. Several Bugis *bantu*[38] still spot the shoreline and half a dozen boats motor out to between 1-3 km off the shore on any given night or morning. Line fishing is the most common fishing technique in the area and large-scale fishing is out of reach, with the exception of those who have the financial well-being to purchase larger ships required to fish.

In sum, fishing as a critical livelihood source has diminished in importance, but has also begun to be engaged in more diverse ways. With larger quantities of people relying on long hours of wage labour within the mine, more people have begun to engage in leisurely or more capital intensive manner. Boat rentals and fishing gear are possible in the area for tourists either from the mine or the larger mining town, Sangatta, some 30km away. However, it is also a

[38] Bantu are fishing platforms constructed of bamboo various distances off the coast. The bantu's of Sekerat were in approximately 13m deep waters, and fishermen would commute out to the structures and spend nights line-fishing while cooking and sleeping atop the structures.

means for incoming migrants or those unable or unwilling to find labour with the mine as constituting one of a range of activities making up livelihood practices.

7.2 Intervening Forces: Governance over Fisheries

The previous fishing practices undertaken within the community have made continuation of fishing as primary livelihood practice rather difficult. Overfishing through increasingly intensive methods and the slow growth of population have minimized available stocks to provide long term reliance upon the oceans. Thus, the environmental limits of the local marine ecosystem, it appears, have been pushed to the boundary of sustainable extraction in some important ways for many of the traditional modes of extraction characteristic of villagers fishing practices. However, as economic opportunities have increased onshore, it has provided a resurgence of the practice in new ways. Greater capital has allowed some residents to shift into different markets which prefer large fish found in deeper waters, but the inflow of migrants who are unable to find steady work on land has also increased the reliance upon coastal fisheries such as mangrove hard and soft-shell crab.

While the initial wave of opportunities available for villagers helped catalyze the transition *away* from practices like fishing and operating *kebun* gardens, the continued inflow of migrants, the declining opportunities for employment and the limited productivity of the land as described in Chapter 5 have challenged the original intentions of the hopeful new entrants. As such, people are engaging in a variety of practices and continue to seek out less conventional opportunities and a larger variety of practices. These have included casual fishing, trapping of birds, deer and crab, collecting swallows' nests in the surrounding hills and casual labour within the expanding towns within the area. As several accounts have been given describing the

difficulty for low-skilled employment with this mine, it is likely that many of the new entrant village residents will continue to diversify their practices in order to provide security. However, it is likely, as the change in village population in the past three year has demonstrated, that out-migration may become the most sensible opportunity for those who seek more secure or sustainable practices. Nevertheless, with all the talk of future extraction and development, a second boom of labour opportunities seems more than plausible.

The lack of any talk of, or apparent effort, to collectivize or collaborate to seek support for these kinds of activities is also interesting. While community-based natural resource management schemes are popular across much of Indonesia, and much of the world for that matter, little effort has been made to duplicate such efforts within the village. Instead, institutional work at the local level has been much more heavily directed toward farming opportunities and land based transactions between the mining companies and local villagers. While the opportunity for, or effectiveness of, such schemes is merely circumspect at this time, the minimal importance of fishing with respect to mining related activities is likely to be a contributing factor for the lack of enthusiasm for developing such a scheme.

7.3 Livelihoods of Sekerat: What does it tell us?

From the range of local village-based livelihood stories, a firsthand description of the challenges and opportunities available to villagers in search of their living has become more clear. One important aspect in explaining the transition of livelihoods practices is the contextual role of decentralization. Increased local autonomy and fiscal control by districts has allowed local actors to determine some of the development opportunities and have provided a means for much of the wealth created from these projects to flow to those who live within the area. Further,

the dismantling of previous centralized structures have allowed local governments and legislative councils to play an active role in providing local institutions to deal with issues that matter most to its constituents, rather than working to meet objectives set out by provincial or federal level bureaucrats. It has also provided an opportunity for increased legitimacy within the villages where the projects are taking place, and has given them opportunities to work with, or against, local mining operations.

However, with the unique nature of mineral extraction and the important national political issues which flow from the desire to increase national electricity production, the opportunities for autonomous local level development realities have been restricted. Further, with high global coal prices and regional neighbour countries with seemingly insatiable appetites for increased energy production, there is a strong financial incentive for the political representatives to tap into the large growth industries in order to achieve improvements in local livelihoods and well-being that many of the provinces people appear to desire. From here, what do these livelihood trends and local level perceptions of villagers tell us of the role of decentralization and resource (coal) extraction in creating a 'governance space' responsible for informing the livelihood realities within this coal-mining town? To answer this, we must turn back to the theoretical propositions of political ecology first described in Chapter 2.

CHAPTER 8 - THEORY REVISITED: DEGRADATION AND MARGINALIZATION

From the above described livelihoods, the context in which decision-making occurs becomes clearer. The methodological approach of providing qualitative descriptions of livelihood practices alongside accounts of the individual's perceptions and justifications of *why* decisions are made as they are has provided an effective basis to *explain* how local social, economic and environmental change is created and re-created within this governance 'space'. From this, it has allowed a more direct understanding about the what happens with the intersection of competing governance forces, most importantly for us here being decentralization reforms and extractive resource governance, comes to guide local scale social/environmental change. More precisely, the combination of governing forces incumbent within coal mining and decentralization at the local scale has produced a unique governing ethos—a social, economic and environmental consciousness—which has guided how the initial, or structural, impacts of coal mining are interpreted and reproduced throughout the village through local livelihood practices .

But before proceeding to contemplate more fully the operation and consequences of this described governance space, a reassessment of the theoretical approach used and a consideration of the case specific for these theories is required. The following section attempts to re-engage with some of the theoretical positions outlined in Chapter 2's description of the political ecology approach in order to illustrate how this governance process arises and how the case of Sekerat fits within this theoretical frame.

8.1 Political Ecology Reviewed

8.1.1 Political Economy

As was earlier described, the recent work in political ecology research is often criticized for an underemphasized role for the biophysical characteristics in understanding social and ecological impacts (Walker 2005). Despite this concern, the recent influx of attention paid to the political institutions and political action has given much insight into the ways which institutions and individuals perceive and re-act to the environments in which they operate. The consequence of disregarding the biophysical character of the surrounding environment (specifically the quality of the land) or of the natural resources that informs dominant local industries (i.e. coal) is that much is left out of context. Specifically, the important role these characteristics have played within the sub-village of Sekerat-Sekerat in terms of making it an attractive place to source thermal coal for export, providing an environment to foster a particular style of land speculation, and inform the types of labour available for local villagers speaks to the importance of the biophysical. While a detailed analysis of the natural environment was beyond the scope and capacity of the present research, the role of both the local land ecology and the material nature of the coal extracted from the village lends insight in assessing how Indonesia's evolving decentralized governance structure informs the impact of coal mining within village livelihoods.

Arising in part from historical uses of local land, villagers also felt the expansion of *kebun* farming practices was for the most part undesirable. Not only was the soil perceived to be of low quality, but the mountainous terrain made it difficult to expand practices more intensively throughout the region. Thus, while local farmer Self-Help Groups were constructed in order to support and enhance farming practices and greater room was provided for the growth of these groups in line with local farmers desires through decentralization reforms, on the whole the local villagers appeared to be believe that managing or intensifying farming practices (either in terms

of scaling up collective practices or through capital investments) was not a feasible or desirable due to the physical characteristics of the village. While there were certainly other perceptions and constraints which restricted room for engagement with farming, the role of the village environment has (for the present time at least) restricted the continued or expanded practice of farming as a desirable livelihood option in many important ways.

These findings are important to consider with respect to the role that a resource's biophysical qualities have in shaping the way political institutions are structured, and thus how they can inform, for example, the social relations of production or regional economic development opportunities (Bridge 2008, Bakker and Bridge 2005). As such, it can be argued that "one of the most important outcomes of recent work on materiality is the problematization and reformulation of the concept of agency" (Bakker and Bridge 2005: 18). With this insight, the inclusion of the materiality of a resource in understanding the local political economy has provided some important resolution in understanding how the material aspects of coal mining can inform the local livelihood opportunities. Specifically, the extraction of shallow (surface mined), high-quality bitumous coal provided relatively accessible and numerous employment opportunities for local villagers that are not as readily available with other resource extraction activities, such as oil or underground coal mining (Bridge 2008). The jobs staffed by local villagers constitute a fairly high proportion of the total labour force—high percentage of the labour force, approximately 60% (Dharma Henwa 2010)—operating at these projects and yet a relatively small proportion of labour costs (low percentage of production costs, approximately 20%). Further, the village's location on the beach and proximity to the thermal coal extraction site has made it cost-effective and desirable for international and national extraction and provide easy access to for export at low-cost transit points on international waterways. As such, large

numbers of villagers have been able to access relatively well-paid labour which they have converted to into various livelihood practices and modes of improving well-being, such as education for children or investments in a fishing businesses or agricultural plots.

Into the future, the focus on materiality of resources can also provide insight in understanding the impact of the new mining law. With its emphasis on nationalizing the refinement capacity of mining activities where possible, the state powers are rendered somewhat ineffective at the Bengalon mine site as the resource requires minimal processing (under current international market demands[39]) and relies on relatively rudimentary technology to extract the resource[40], in the sense that only minimal education is needed to train villagers for their current positions. In this regard, the scope and scale these particular components of the national level mining policy do not match up with the biophysical scale of coal's characteristics as they occur within Sekerat. However, with the other key impact of the mining law being an ability to cap export of coal at a specified yearly tonnage, the Bengalon pit could see impacts in its extraction activities and potentially influence the availability of jobs for local villagers if the national demand for thermal coal does not match up with the production capacity of the Bengalon site as it operates currently.

Nevertheless, the temporal cycles of large-scale mining have also been influential in shaping some practices with relation to land use and livelihood changes. The initial boom involved in the commencement of mining operations required large investments and acquisition

[39] The growing efforts of one of Indonesia's main export markets (China) to expand into clean coal technology could potentially impact this situation, however the potentially dynamic end-of-line uses of coal will more likely carry political economy implications for the sites of electricity production.

[40] Though surface mining technology has been bolstered by technological advances in extraction improvements, the practices remain relatively rudimentary in that post-exploration production consists of removal of and separation from overburden, transportation, crushing and loading on to tankers for transport.

of land holdings with secure titles in order to assuage investors and senior management that the large capital investments needed to activate these projects has proven to be important components in the local context. This acquisition boom initiated the land purchases that were an important component of the transition away from *kebun* gardening that many workers had previously relied upon. While not all villagers were excited about the transition, or even included in the land purchase program due to the selective nature of the acquisitions in and around the village, several villagers noted that it was no longer realistic to continue gardening practices due to the high occurrence of pests which became overwhelming when other gardens were left untended. Specifically, pests focused on the fewer remaining crops and eventually pushed the capacity of the plots beyond the perceived utility of the gardening practices. While there may have been opportunities available to continue farming for those with access to capital to invest in pesticides or other deterrent practices, at the current time many of those desiring to continue farming had neither the financial capital nor the institutional or organizational support to attempt such strategies. With the importance of the Land Organization superseding the Farmer Organization, little substantial institutional support was available for those seeking to pursue farming activities. Thus, while there was the potential for political support for local farmers to attempt to continue the practice in the village, little effort seemed to be applied to carry out such activities, likely due to the dominance of land speculation in the village or the transformation of land uses at this time. Thus, while attention to materiality has provided important opportunities for explanation, the commonplace cyclical characteristics of large-scale coal exploitation projects of their various boom and bust expansion and contraction periods are also important (Ballard and Banks 2006). So while materiality is of use here, attention must also be paid to the

temporal aspects of land speculation within the village, which, it may be argued, is already in decline.

8.1.2 Decentralized Government: What about Agency?

The formulation of a particular governance space within Sekerat has much to do with the strength of relevant stakeholders. We have seen the role of the technology and characteristics of nature play an important role in the structural conditions of the mine's impact, but continued space for the work of political actors continues to be critical in shaping the impacts of coal mining. In particular, while the technological and material influences give rise to particular local impacts, the role of the national state continues to have an influential role, specifically in the process of land titling and ownership, despite decentralized authority expanding toward regional actors. Specifically, this was seen in the mining companies' specific community engagement procedures and the local state's authority over the granting of permits and the application of various environmental and labour standards over the work done within the mines. Yet, this strength only really exists within specific areas, such as land management in the village of Sekerat. Across Indonesia, the efficacy of BPD council in playing a role at the local level is said to lack much real authority in exerting supervision or control over the village government itself (USAID 2006). The council is structured to be upwardly accountable toward the district head via the head of the sub-district, instead of horizontally accountable to the citizens who elect the officials for their five year terms. Further, the actual governing role these councils play is questionable as they often only function in the service of the district head or the village head/administration associations (a national body founded in early 2005) which do not always represent the interests of the village community (USAID 2006). However, we have seen their relative strength in playing a role to help inform the livelihood practices of Sekerat-Sekerat. This

is quite likely related to the support for the institution by the mining industry which relies upon the ease of transferring title and ownership over land and quickly resolving compensation disputes. While the village government entity of the BPD may be said to be relatively powerless with respect to the mining firm or the national government, it was still able to install further regulations (e.g. limiting size of land sales to 2 Ha) which provided various opportunities for villagers to maintain some bargaining strength when selling off sections of their land. This provided a limit upon specific kinds of land sales that villagers or land owners could undertake and minimized rapid, large-scale transformations within the village. Beyond this, the local government was also included within negotiations which allowed them to work with the villagers and the mining companies to exert force in guiding local development programs and pathways, such as village infrastructure projects of clean water systems, roads and (potentially) electrification of the village. This influence enforces the claim that the impact of a specific capital flow (i.e. a development of a coal mine) is also dependent upon social relationships that enable the commodification of land, acquisition of rights, and the construction of collaborative horizontal and vertical partnerships between different actors in the mineral production chain (Bridge 2002: 373). As a result, the locally empowered agents have come to play an important role in shaping (as opposed to determining) the local reality with respect to development and livelihoods, but their role must be seen in the context of the mineral extraction process and further grounded through the 'reifying' coordinates of time and space.

The question of the autonomy of the local institutions and civil society groups must be put in the context of the persistent power of national mining regulations and the strength of the mining company activities within the region. With this realization, it becomes important to differentiate what kind of influence these different political entities are able to have. While both

the Farmer and Land Organizations receive institutional support from the coal companies operations, the institution which worked in unison with the structural opportunities of the mine (i.e. the Land Organization) came to play a more influential role and garnered more support throughout the village by villagers and official representatives alike. While political counter efforts can be exercised within a decentralized context, it appears as though the structural forces which evolve from different scales or 'moments' (Cf. Rangan and Kull 2009) of political or agential influence—like the national state land domain, international mining company CSR norms, the local physical land characteristics—mean that local villagers must still work within the context or governance 'space' in which they find themselves (i.e. one in which the impacts of mining on labour and land are greatly determined). That is to say that the efforts of decentralization which aim to reposition governance practices beyond or below the nation state and into civil society and corporate hands often end in governance schemes associated with the rise of an economically-minded governmental rationality through an accompanying transformation of the technologies of government (Swyngedouw 2005). As such, claims of increased local autonomy seem to be couched within the context of the rationalities of the economic processes that define the livelihood activities of the area. This also reflects Watts' insights that the multiplicity of authorities engaged within governance spaces sustain forms of power in security and regulation by controlling 'things and men's relation to them' (in our case people's relation to coal) (Watts 2004b citing Foucault 2000). From this and with reference to decentralization, Swyngedouw's claim that "a clear distinction, at least theoretically, has to be made between meta-, first-, and second-order governance" (Swyngedouw 2005: 2001) is quite well placed. Thus, while the rule within a particular governance space works to *inform* the range of livelihood practices pursued, it does not *determine* the practices.

8.1.3 Remaining Thoughts

Political ecology has provided numerous points of entry into understanding the dynamic ways in which governance (institutional and otherwise) can shape and reshape the manner in which these projects produce local social and environmental change. The in-depth ethnographic research has been critical in providing a strong empirical base for informing the dynamic impacts these projects have, allowing us to eschew broad-brush claims of a limited set of standard impacts for resource extraction projects across various scales that governance projects, such as decentralization reforms, can inherently and deftly mediate and reconcile competing interests of locally engaged stakeholders. Instead, this research, it is argued, has provided a better contextual description of the ground level experiences in order to understand how the above described livelihood impacts arise from the operational (ontological) level processes but are also re-created through the social realm of observations (epistemology) made by national and local policy makers, mining company community development officers and the researcher himself and eventually interpreted (translation) by the local land managers seeking to maintain a livelihood (c.f. Rangan and Kull 2009).

However, several criticisms remain. While the analysis provided us with a means of understanding the changing nature of governance systems which activate or empower a changing range of political actors ('stakeholders'), it remains a challenge to point directly to how these factors operate as a whole, and which actor facilitates and which actor causes the dynamics we have seen. Specifically, it is difficult to give a precise description of the internal dynamics that determine the form these influences have taken, how they emerged, or why they impinge when they do (Bridge 2002). More specifically, while providing a context for understanding the structural impositions that such a mining project and decentralization reforms offers, it remains

difficult to assess whether or not these individuals would have shifted away from *kebun* gardening or small scale crop production in the absence of these forces. As such, the complexity that political ecology analysis embraces also makes it difficult to point to individual variables to direct political action toward in order to alter the outcomes we have seen.

Elsewhere, but linked with the previous concern, is the continued debate over the production of scale and its role in political ecology's 'chains of explanation'. While the research had neither the time nor resources to conduct a more in-depth analysis of the histories of villagers, it appeared as though there were significant differences between long-term village residents and the more mobile migrant and recent entry populations. The movement of individuals (and biology) from an 'old' local through to the 'new' local of Sekerat-Sekerat could just as easily play an important role in shaping the informal and micro-politics that play out within the village[41]. While there is much explained through a more structurally scalar view of impinging regulatory forces, there may also be important insights lost if due attention is not given to the networks of flows (of people and nature) that pass through the 'local' scale. It is from this concern that many within political ecology have engaged with concepts of networks and hybridity focused on activism, social movements and returns to the importance of ecological complexity (Rocheleau 2007, Bakker and Bridge 2005, Robbins 2004). These kinds of insights which understand these governing social relations as complex assemblages, webs of relations and "rooted networks" with hierarchies entangled in horizontal and vertical linkages (Rocheleau 2007: 724) can offer much when trying to understand what impact former coalitions and connections with other 'locals' can have within Sekerat. This could also prove useful when

[41] In honesty, this may have also been a short-sight of the methodological scale the author chose to pursue within the village in order to understand the migratory scale of ecological and human entities into the village.

attempting to understand scales of influence within local communities "where social relations express themselves in and through political coalitions that occupy multiple spatial and hierarchical scales" (Bridge 2002: 372). This may also be of use with respect to decentralized governance as local BPD leaders have engaged and travelled to other sites across Indonesia's more than 400 regional governments offering advice and experience for operating, particularly those with experiences in mining environments. Anne-Marie Slaughter's research on government networks also speaks to the growing importance of understanding the impacts of operating within an increasingly globalized and networked world (Slaughter 2004). With all of this said it remains imperative to deal with the complexity and contingency of the world in order to critically and deeply understand its evolutions and transitions. As such, in seeking ways to understand the future of Sekerat and the other Sekerat's of the world, we should keep in mind that:

> territories' future trajectories cannot be deduced from their place-based attributes [alone], but are shaped just as much by their positionality within broader economic systems; their uneven connectivities with other places (greater connectedness need not reduce inequality); and their embeddedness within multi-scalar economic, political, cultural and biophysical processes (Sheppard 2011).

CHAPTER 9 – CONCLUSION

In seeking to understand how resource extraction projects shape the development outcomes for surrounding villages, the preceding analysis has focused on an assemblage of forces acting upon a historically and physically grounded place. The growing energy demand of international markets has provided the grounds for a renewal of energy development projects across Southeast Asia and has brought East Kalimantan's abundant source of high-quality thermal coal to the continued attention of multinational mining firms. Filtered through an enormous transformation of its political governance structure by redirecting fiscal control of resource rents, empowering local level institutions such as the local community councils (BPD), and providing legal space for the operation of civil society and grassroots action, the sub-village of Sekerat-Sekerat was ostensibly exposed to a new mode of engagement with international forces of resource extraction practices from a number of supporting stakeholders. However, the reality of livelihood impacts is best illustrated by grounding the observations within an historical, social and biophysical context in unison with the recent phase of extraction which has provided an abundance of—although new and unique—opportunities for local villagers.

This research project has analyzed this process of livelihood impact and transformation through the analytical framework of political ecology in order to reflect and explain the social and political forces active in shaping the dynamic relation between society and nature. Taking Blaikie and Brookfield's (1987) marginalization and degradation thesis as its point of reference, this thesis highlighted the socio-political and political economic forces creating forms of socio-spatial differentiation (Brenner 2001) that create scalar impacts directed toward the local level, paying specific attention to the political decentralization structure and the biophysical qualities of

the resource extracted and its surrounding extractive environment. Giving due respect to political ecology's 'chains of explanation' methodology, the analysis gave close consideration to the ground-level local-politics and historical experiences that led to the institutional weakness of the Farmers Organization and strength of the Land Organization. As a result, the 'chain' of explanation was reassessed and the creation of scalar effects was refined as being the product of three moments (operational, observation and interpretation) as described by Rangan and Kull (2009) and qualified to re-engage the 'ecology' of political ecology as a means of illustrating how impacts become reified and realized at a particular scale.

9.1 The Impact of Mining

Large-scale projects (conservation, resource extraction, plantations, etc) are bound to have impacts on surrounding communities. Glenn Banks' idea that the challenge of mining is not the lack of development opportunities, but instead it's the abundance of "hyper-development" (Banks 2006: 263) is particularly relevant interpretation of the impact. Particularly, Banks claims that the cultural appropriation of new technologies (i.e. infusions of capital and the accompanying infrastructure development) leads to the increasing land development and varied livelihood practice opportunities that seem to drive the pathologies of mining (e.g. gambling, inner-community conflict, deforestation etc.). This insight draws upon the crucial social component surrounding resource extraction and inverses the common blame for negative structural impacts from mining operation and puts the local level institutions and cultural norms in more of an authoritative role for shaping the impacts for livelihoods. While the village of Sekerat-Sekerat has certainly shown the role of local institutions in playing a key role in

informing the impacts of mining, it would be too brash to claim that the role of the mining as an industrial project was irrelevant in understanding the outcomes we have seen.

The concern of the thesis on decentralization reforms has provided an important stylized perspective from which to view the way that social and political forces create and recreate the natural world and society's relations with it. After years of centralized networks of patronage, new opportunities have appeared for stakeholders new and old, local and non-local, to influence livelihood opportunities and trends in the community. In Sekerat, grassroots activism, continued central government control over environmental regulations, contracts of work (although with the new mining law these functions will almost fully be devolved to provincial and regional governments) and local land institutions all play a role in asserting how coal projects progress and their respective outcomes for local livelihoods. While the autonomy evolving from decentralized power structures puts local actors in charge of much decision-making, the context and range of capacity to make 'important' decisions is not so accessible. Specifically, while decentralization in principle provides the space for villagers to make their own choices, in practice they are restricted in many important ways. That is, understanding the operation of the 'governance space' (cf. Watts 2004b) or 'meta-governance' scale (cf. Swyngedouw 2005) of coal mining appear to be the frame from which one must look in order to understand how the overarching context in which decision-makers, and agency, operates.

In the end, decentralization has provided an opportunity for a specific consolation of forces to shift livelihood practices within Sekerat-Sekerat. The outcome has been land speculation and expansive clearing and claiming of plots, wide-spread engagement with wage-labour employment related to and beyond the scope of mining, and engagement with natural-

resource based livelihoods practices that are qualitatively different than in the past. This has occurred within the complex and dynamic context of a small fishing village that has had slow first engagement with the Sangatta pit project followed by a rapid expansion of resource and migrant flows reminiscent of a frontier region (cf. Tsing 2004). Thus to understand how livelihoods are incorporated into the material productive forces of high-quality thermal coal mining (cf. Blaikie and Brookfield 1987) we must also reconcile this structural conditioning through the lens of the construction of political governance systems that create opportunities for the agency of local and non-state actors that are empowered through schemes such as the political decentralization reforms seen across Indonesia.

Bebbington and Batterbury (2001) state that the institutional positions and political situation of different actor groups at the time of the integration, and the type and content of integration at the global scale, are what create the unique and diverse manners in which determine the livelihood impact upon the local level. It is these locally adaptive and structured relationships, and their mode of engagement with these new external forces, that begin to give us an understanding of how livelihoods are made and remade within this dynamic mining environment.

9.2 Directions for Future Research (For Inquiring 'Mines')

This research was intended to explain what forces are influential within the changing/evolving governance space that is the coal mining villages. Setting aside the numerous commonplace research restrictions (e.g. funding, timing, language barriers, etc), this research has only begun to pick away at the (coal) seams of this dynamic community situated in a province experiencing resource extraction mania. First and foremost in the next phases of research would be an analysis of other villages located around the Bengalon coal pit. This would provide greater

insight into some of the local characteristics of both ecology and politics in order to better comprehend what role these aspects play in shaping livelihoods in other villages affected by the same coal mining project. As well, research on opportunities for local villagers to develop and engage with grassroots or other institutional actors in providing villagers with support for practices that fall out of purview of mining-related industries. Specifically, what opportunities might there be for community-based natural resource management of the coastal estuaries and mangrove lands which marginalized groups use as a resource base? Also very important are questions about why the Farmer Organizations have failed to play a real role in supporting those who seek to continue practicing farm based activities within the sub-village of Sekerat-Sekerat.

With respect to the mining companies themselves, research should be directed at understanding how corporate social responsibility programs develop within or around the villages/projects, particularly investigating how companies' practices respond to local contexts as opposed to solely flowing from international discourses. Also, closer attention can be paid to the corporate operations of the mining company, specifically how international markets shape the labour structures of their operations and also what the potential impacts of operating in a carbon constrained world may be for the operations (and thus local labour opportunities) of the extraction and processing.

Finally, longitudinal studies could potentially offer very useful insights, in particular given that the creation of the new mining act will potentially institute export quotas, processing requirements and other political economic constraints the national government intends to enforce upon the coal mining industry. All of these questions are particularly pertinent and can gain insight from the revelations about the role of decentralization in enabling coal mining projects to effect local livelihood practices.

9.3 A future friendly?

While the local environment and village livelihoods have changed in very real and specific ways, the social and political forces shaping them are not unique to Sekerat. Despite the apparent lack of real local control over the course of developments within the village, the current human developments outcomes witnessed here are difficult to bemoan. The pace at which infrastructure, education, health care and employment was introduced to the village is arguably difficult to duplicate outside of the intensive nature of mining projects. Today, villagers have better services and infrastructure than they have been at any time in the past within this community. As such, the mine has presented many local villagers with the opportunity to transform their well-being in a manner that would not be conceivable in many of other ways without the creation of the coal mine.

However, the potential sustainability and accessibility of these benefits for all within the village give cause for consideration as to whether or not alternative development strategies would have been preferable. Specifically, with the limited life-span of these types of mines and the seeming preference of incoming mines to select local villagers for their labourers make the long-term likelihood of villagers to sustain their current land-holdings and wage-labour jobs seem tenuous. The numerous mine closings throughout the world and the creation of surrounding 'ghost towns' gives us some insight in understanding a potential future for Sekerat. Further, the current deforestation and land use change experienced within the village area make it unlikely that *kebun* gardening and fisheries of old will carry on as a sustainable practice. As well, the air and water pollution emitted by these pits has the potential to create long-term health impacts as villagers will likely survive beyond the life of the mine and its stream of current benefits.

In the creation and remaking of local livelihood practices, the suite of dominant practices within the sub-village has taken specific insight from the temporal and geographic aspects of the local village. Strategies to increase and empower local actors authority remains hamstrung to the greater macro-economic fluctuations and transformations which brought this opportunity to the village in the first place. As such, while decentralized government has provided space for local villagers to inform the types of outcomes witnessed in the village, it appears that these are more correctives to the influence of global demand, national level political-economic systems and the dynamic forces of the biophysical world in which villagers strive to make a living. As such, while decentralization appears to offer greater opportunity for increased autonomy and locally designed development, the practice appears to be more of a management tool for tweaking structural constraints rather than one for achieving alternative or just social/environmental outcomes.

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