



Land Governance in an Interconnected World

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LAND FORMALIZATION TURNED LAND RUSH: THE CASE OF THE PALM OIL INDUSTRY IN PAPUA NEW GUINEA

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Abstract

This paper uses the case study of Papua New Guinea (PNG) to engage with the debate on customary land formalization processes, derived from Hernando de Soto's 'Mystery of Capital' (2000). The case of the oil palm industry in PNG demonstrates that customary land registration processes may be captured by powerful 'big men' and companies, within an environment of weak and changing governance. Weak or non-existent state capacity for the regulation and enforcement of the palm oil industry have been exploited by logging/oil palm companies surpassing various government agencies at different levels. Instead of increasing agricultural activity and national income, the case shows that customary land formalization has led to worsening poverty and wealth inequality due to biased land lease agreements between customary landowners and developers, loss of tax revenues due to tax exemptions, and a lack of service provision such as roads, schools, and health centers.

Key Words: Oil palm; land formalization; customary land; deforestation; Papua New Guinea

INTRODUCTION

‘Unlocking’ customary land for agricultural development has been one of the primary goals of the Papua New Guinean (PNG) government. By 2030, the government aims to reduce the share of customary land from 97% at present, to 80% (PNG Department of National Planning and Monitoring, 2010, p. 21). Consequently, PNG has undergone a massive land rush between 2003 and 2011, during which 5.5 million hectares of customary land were formally registered with the national government under so-called ‘Special Agricultural and Business Leases’ (SABLs), representing around 12% of the total land area (Global Witness, 2017). The leases entailed mostly foreign-owned companies (Filer, 2011b, 2012b) and the PNG government intended to particularly promote large-scale agricultural activity through these SABLs, which generally would be granted for 99 years.

The main crop proposed under the SABL scheme was oil palm, which has experienced a surge in international demand. Around 2 million hectares of the 5.5 million hectares transformed under the SABL scheme were designated for oil palm development (Filer, 2012a; Nelson et al., 2014), wherein developers promised not only to develop large-scale oil palm production, but also other benefits such as the establishment of roads, health centers, and schools. Many developers, however, did not meet the productive or social development promises. Instead, developers clear-felled the designated areas to extract the valuable logs (Gabriel, Nelson, Filer, & Wood, 2017; Mirou, 2013; Nelson et al., 2014; Numapo, 2013), raising doubts about the genuine intent of the developers to cultivate oil palm, instead disguising their logging activities as agricultural development initiatives.

This paper situates the PNG experience within the debate on land formalization processes. Hernando de Soto’s has argued in ‘Mystery of Capital’ (2000) that land formalization is a necessary condition to generate income and improve land productivity. Based on a comprehensive set of interviews with all relevant stakeholders on the island of New Britain, the case of the oil palm industry in PNG demonstrates that customary land formalization processes may be captured by powerful ‘big men’ and companies within an environment of weak and changing governance. Instead of increasing agricultural activity and national income, customary land formalization has led to increased poverty and wealth inequality due to biased land lease arrangements between customary landowners and developers, including low land rentals, forgone tax revenues due to tax exemptions, and a lack of service provision such as roads, schools, and health centers. The inadequacy of oil palm production developments has led to an increase in wealth inequalities due to the unequal distribution of logging revenues, its short-term nature, and low land rental payments to customary landowners. Rather than increasing incomes for rural Papua New Guineans, only few income opportunities remain for the local population, such as the precarious employment on the plantations, or small-scale/subsistence farming. Furthermore, the land

formalization process has exacerbated deeply-rooted, pre-existing power relationships at the national and local level, as local powerful ‘big men’ have abused their power to exclude other customary group members from land decisions in the SABL process.

This paper finds that the poor performance of the SABL scheme is largely related to the capture of decision authority by powerful interest groups, operating in an environment of weak and changing governance (German et al. 2014). This paper concludes that the recent land formalization processes in PNG have not led to the transformation from ‘dead capital’ to active capital but have rather contributed to an increase in land tenure insecurity. This is because the outcomes of formalization are sharply defined by their political economy contexts, which is not addressed by de Soto’s analysis.

Recognizing the importance of more nuanced perspectives of customary tenure, this paper argues that a further understanding is needed to address in more detail the power relationships within communities, and national and local forms of governance which surround the customary system. If land policies fail to engage communities and their customary systems, pre-existing inequalities might be exacerbated instead of remedied, thereby both deepening poverty and retarding economic growth.

The paper is organized as follows: Section 1 reviews the literature on land formalization and customary land tenure. Section 2 examines the customary land tenure system in Papua New Guinea and introduces the so-called ‘old’ oil palm industry. Section 3 presents the case study, the qualitative methods, and the analysis of the primary data. Section 4 reviews the legal and political changes that gave rise to the ‘new’ palm oil industry since the mid-2000s, whilst Section 5 analyzes these new oil palm developments in detail, concluding that these are unsustainable economically, socially, and environmentally. Finally, Section 6 concludes by offering some final reflections and policy implications.

1. DEBATING LAND FORMALIZATION

Land formalization and registration has long been part of the policy and theoretical debate in relation to economic development and growth. For this paper, I adopt the definition of land formalization used by Hall, Hirsch, and Li (2011, pp. 27–28): “land formalization refers to the recognition and inscription by the state of rights and conditions of access within specific boundaries”. This refers to formalizing processes on customary/communal and state land, in which land titling is understood as a particular case of formalization. It relates to the demarcation of boundaries, recording and recognition of ownership, enabling landowners to sell, transfer, and mortgage the land. It is further important to define what is mean with customary/communal tenure arrangements. Here, I adopt the broad definition proposed by Fitzpatrick (2005, p. 454), stating that customary tenure is characterized by underlying ‘ritual and cosmological’ land relations; communal rights to control land transfer (at times assigned to leaders or chiefs) or constraints on land dealings with non-community members; land access based on kinship or locality; and reverting unused communal land back to the community. As such, customs are contingent and dynamic, and steadily being produced, reinterpreted and renegotiated with each other

and with the state (Cousins, 2000). As a result of land formalization attempts, a dualism of land tenure systems has emerged: one that upholds the customary tenure system, and one that has a formalized, i.e. ‘statutory’ land market (Bruce, 1998).

The most prominent attempt to articulate the economic benefits of land formalization has been made by de Soto (2000), who argues that formalization is the primary driver of economic growth by transforming ‘dead’ capital into active capital, which will enable countries to overcome poverty and underdevelopment. Customary land tenure rights are often ambiguous and negotiable, which de Soto argues make them unfit to be utilized as financial collateral for productive investments. Instead, they tend to be used in ‘unproductive’ ways including subsistence farming, leading de Soto to dub them dead capital. The formalization of land rights turns the land into a fungible asset by means of a formal title, allowing landowners to access collateral for a loan, thereby making productive investments, or allowing landowners to trade the land. Thereby formalizing property would not only increase economic growth, but also “as an address to for collecting debts, rates and taxes” (de Soto, 2000, p. 49). De Soto’s approach to land formalization differs from earlier formalization iterations in that formalization is the most central issue to foster growth and development, and not just one mere policy out of many (Benjaminsen, Holden, Lund, & Sjaastad, 2008).

Since the early 2000s, the World Bank has recognized that the formalization of communal or customary tenure arrangements as a group can be more cost-effective, recognizing the adaptability of customary systems to specific circumstances (Deininger, 2003; Deininger & Binswanger, 1999; Deininger, Selod, & Burns, 2010). For instance, registration of group rights may be desirable over individual rights when circumstances do not allow for individual formalization. This can be due to, e.g. weak state and administrative capacity of the central government institutions, or practical constraints in reaching remote areas (Deininger, 2003). Additionally, the registration of group rights may be particularly effective in reducing the risk of encroachment by outsiders, whilst safeguarding the rights and security of individual group members (Deininger, 2003, p. 76). However, even though the World Bank has recognized group land rights registration as more appropriate in some circumstances, it sees it as part of an evolutionary framework of property rights, in which property rights will be increasingly individualized with economic development since it offers the strongest incentives for efficient use of resources (Deininger, 2003, p. xxiv and 28).

Critical assessments of land formalization attempts are plentiful, relating to the desired outcome of the formalization and the risks rooted within the process of formalizing land. In terms of outcomes, it has been argued that the informality of customary land tenure arrangements is not equal to land tenure insecurity, questioning the direct relationship between land formalization and economic development (Lavigne Delville, 2010). Cousins et al. (2005) argue that land formalization in the South African context has not led to the desired increases in tenure security and lending to the poor. Similarly, the

positive relationship between land titling and productivity, and between land titling and access to formal credit has been refuted in some contexts (see e.g. R. Hall & Kepe, 2017; Lawry et al., 2017; Migot-Adholla, Hazell, Blarel, & Place, 1991).

In terms of risks associated with the land formalization process, high implied costs of the formalization processes are often cited as prohibitive, especially due to the fundamental embeddedness of customary land tenure into complex social processes (Cousins et al., 2005; Fitzpatrick, 2005). Evidence suggests that benefits may accrue to the more powerful, wealthier, and better connected within the community, exacerbating pre-existing social and economic inequalities (Lakau, 1997; Toulmin & Quan, 2000a; Cotula, Vermeulen, Leonard, & Keeley, 2009; Zoomers, 2010; Benjaminsen et al., 2008; Bottazzi, Goguen, & Rist, 2016). Cases of corruption and manipulation by investors, agrarian elites, and the government are also well documented (Benjaminsen et al., 2008; Chand, 2017; Kelly & Peluso, 2015; Zoomers, 2010). Particularly interesting is the analysis by Boamah (2014), investigating the role of chiefs as initiators and reinforcers in the land dispossession process to restore their own authority and control over the land. Ample evidence has been also been provided concerning the increases in conflict between different communities or individuals within communities to claiming rights to the land due to over-simplified legal classifications of ‘owner’ and ‘user’ of land, marginalizing especially women, youth, and other ‘secondary users’ (Fitzpatrick, 2005; Lavigne Delville, 2000; Toulmin & Quan, 2000b). These critics either directly or indirectly imply that implementing De Soto’s idea results in exacerbating inequality, thereby retarding economic development and poverty reduction attempts (Obeng-Odoom, 2013).

Finally and most importantly, Chimhowu and Woodhouse (2006) suggest that so-called ‘vernacular’ land markets have existed for more than a century in African customary tenure systems, implying the existence of market-based land access. Thereby, the authors disrupt the traditional conceptualization of land tenure as a dichotomy between customary and statutory tenure, i.e. between non-market and market systems. Failure to acknowledge the vernacular nature of land markets might therefore lead policymakers in misidentifying those who would benefit the most of land policies, risking exacerbating existing inequalities and deepening poverty.

Policies suggested by these critics relate to endogenizing reform attempts by acknowledging the underlying causes and nature of tenure insecurity (Fitzpatrick, 2005), assuring women’s property rights even if that undermines customary law (Joireman, 2008), or dismissing costly land formalization in favor of basic and comprehensive principles to validate land claims and transactions (Platteau, 2000).

Despite the ample criticisms surrounding land formalization attempts, international organizations such as the FAO and the World Bank have recently put land formalization in the center of arguments for ‘responsible’ agricultural investments (FAO, IFAD, UNCTAD, & the World Bank Group, 2010). Amidst the resurging debate on the global ‘land grab’ after the food price spikes in 2007-2008, the FAO

and the World Bank argue that the ‘risk’ of dispossession is high when land rights are not clearly defined (Borras & Franco, 2012). Yet, the case of oil palm in Papua New Guinea demonstrates that land formalization to attract investors has led to unsustainable large-scale investments compromising 12% of PNG’s land area (Global Witness, 2017), the very same large-scale land investments that these organizations were concerned about in the first place.

As a result of the critical literature discussed above, I argue that a more nuanced approach to customary tenure is necessary to uncover pre-existing power relationships and social and economic inequalities within communities, and power structures within different forms of local and national governance. The case study of the island of New Britain in Papua New Guinea serves as an example to unpack the processes and consequences of the government’s attempt to formalize large tracts of customary land as a means to spur economic development and agricultural production.

2. PAPUA NEW GUINEA: LAND TENURE AND THE ‘OLD’ OIL PALM INDUSTRY

2.1. LAND TENURE IN PAPUA NEW GUINEA

Agriculture constitutes the primary source of livelihood for the 87% of Papua New Guineans that live in rural areas (World Bank, 2018). 97% of the land in Papua New Guinea is customary, the remaining 3% consist of state and freehold titles – a distribution unique to the region (Filer & Sekhran, 1998). Papua New Guinea is the country with the highest language diversity, having over 840 language groups and thousands of tribes and clans (Chand, 2017). Due to its diversity, the principles of inalienability of land, group ownership, and fuzzy land boundaries are inherent in the customary land tenure systems in PNG (Lakau, 1997). Yet, the rules underpinning these systems have dynamically developed over time and adapted to changing circumstances. According to Koczberski, Curry, and Anjen (2012), generally two principles of land tenure can be identified across the country. First, virtually all land belongs to landholding groups founded in kinship, rendering individual land ownership uncommon. Generally, customary land rights are secured and enjoyed by being a member or an affiliate to a landholding group (Lakau, 1997). Second, customary land tenure is exercised in a pragmatic manner, safeguarding the adequate land access for subsistence, for instance through the ‘*wantok* system’, i.e. an extended kinship system (Lakau, 1997). This relates to the distinction between land tenure and land use practices in Papua New Guinea. Land tenure is generally based on membership to the landholding group, for instance by birth or marriage, whilst land use is predominantly individualized by group members or relatives (Fingleton, 2004). Larcom (2016) adds that control rights of land are commonly group-held, constraining any permanent land transfer outside of the landholding group. Yet at the same time, ‘vernacular land markets’ (see above) exist in which customary land may be rented or transferred (Anderson, 2015).

The British (1884-1906) and German (1884-1914) colonial administrations largely respected customary land tenure (Larcom, 2016). The 3% that have been alienated from customary land tenure were either

used for coastal plantations through the acquisition by mostly German settlers, or used for urban and infrastructure developments through leases by the colonial administration (Filer & Sekhran, 1998). At the end of the colonial period, the Australian Administration pushed for the ‘freeing up’ of customary land through its registration and formalization since it increasingly saw customary land tenure as an impediment to economic development in an independent Papua New Guinea (Filer & Sekhran, 1998; Power & Tolopa, 2009). The Native Land Registration Ordinance of 1952 was the first serious attempt to register customary land, yet ten years later no customary land titles had been registered due to legal challenges and lack of funding (Lakau, 1997). This prompted a series of other acts (see Lakau, 1997, p. 537 for an overview of pre-independence legislations), including the Land (Tenure Conversion) Act 1963, which allows for the registration of some of the customary land for an individual title by members of the landholding group, provided the agreement of all members of the landholding group (Trebilcock, 1983). Additionally, the Land Groups Incorporation Act of 1974 allows for the registration of an incorporated land group by a customary group, however it did not contain any provisions for registration of titles. Therefore, the so-called ‘lease-leaseback’ scheme was instituted in 1979 as a provision in the Land Act to allow for the lease of customary land by customary landowners to the State, which would then lease it back to the same landowners, or any persons or organizations approved by the landowners (Filer, 2011b). However, none of the laws resulted in the ‘unlocking’ of large tracts of customary land partly due to local opposition to enforce such laws (Power & Tolopa, 2009), revealing the large diversity and complexity of customary land rights throughout PNG (Filer & Sekhran, 1998).

2.2. THE ‘OLD’ OIL PALM INDUSTRY IN PAPUA NEW GUINEA

The oil palm is the most important agricultural crop in Papua New Guinea in terms of area harvested and the source of the country’s largest private sector employment.¹ Crude palm oil is the country’s most valuable agricultural export, constituting 4.5% of total export value in 2016 (The Atlas of Economic Complexity, 2016). With 1.4% of world exports, PNG ranks as the fourth largest exporter of palm oil after Indonesia, Malaysia, and Guatemala (ITC, 2017). Oil palm area has expanded rapidly by 72.3% between 1989 and 2013, 25.3% of which results from deforestation (Vijay et al. 2016)².

The oil palm industry in Papua New Guinea originates from a form of state capitalism undertaken by the Australian government that invited foreign capital into the PNG economy to actively prepare for the independence of PNG and establish the basis for the development of the rural economy. The Australian government encouraged export-oriented large-scale agriculture developments, such as oil palm, in order

¹ The palm oil company New Britain Palm Oil Ltd (NBPOL) alone is the biggest private sector employer by employing over 20,000 in Papua New Guinea (NBPOL interview).

² In comparison, Indonesia and Malaysia saw an increase in oil palm area planted between 1989 and 2013 by 91.7% and 63.3%, respectively, of which 53.8% for Indonesia and 39.6% for Malaysia came from deforestation (Vijay, Pimm, Jenkins, & Smith, 2016, p. 10).

to increase diversification of PNG's agricultural economy, raise export income, and increase the standard of living (Grieve, 1986; IBRD, 1965; IBRD & IDA, 1968).

The first major oil palm developments in PNG occurred in the 1960s, financed by development finance institutions, most prominently the World Bank/International Bank for Reconstruction and Development (IBRD), and the Commonwealth Development Corporation (CDC). Following a mission and recommendation by the World Bank/IBRD at the request of the Government of Australia in 1963, commercial oil palm cultivation in PNG was first established at Cape Hoskins, West New Britain in 1967 through a joint venture called New Britain Palm Oil Development Ltd (NBPOD) between the Administration of the Territory of Papua and New Guinea (then an External Territory of Australia under the United Nations Trust Territory) and the British company Harrisons & Crosfield (A.N.Z) Ltd. The joint venture was owned in equal shares by Harrisons & Crosfield and the Administration of the Territory of Papua and New Guinea (World Bank, 1968).

With this oil palm development the World Bank introduced the nucleus estate and smallholders (NES) structure in PNG, developing a nucleus estate and palm oil mill that are centrally located and surrounded by a significant amount of smallholders to spur local economic development (Grieve, 1986). The national government and a foreign-owned company would both own 50% of the nucleus estate, whereas the foreign-owned company is responsible for the management of the nucleus estate and palm oil mill, and the marketing of the palm oil (Grieve, 1986). Furthermore, the agreement specified that half of the palm oil milling capacity is reserved for oil palm fruits produced by smallholders (IBRD & IDA, 1968). Due to the success of the so-called Hoskins scheme, the PNG government promoted four other NES schemes, i.e. Biialla (1972/1977³), Popondetta (1976), Milne Bay (1985), and Poliamba (1991) (for a review see e.g. Grieve, 1986; Koczberski, Curry, & Gibson, 2001).

This article refers to these oil palm developments that have been initiated or supported through development finance institutions as the 'old' oil palm industry, which can be characterized by two key features using the example of West New Britain. First, since the old oil palm industry was established to strengthen the PNG economy and raise the living standard of the people (see e.g. IBRD, 1965), the two companies New Britain Palm Oil Ltd (NBPOL) and Hargy Oil Palms Ltd (HOPL) manage a considerable amount of smallholder blocks, i.e. around 40-50% of the hectareage. Second, the old oil palm industry derives their revenues (almost) only from palm oil production and is not engaged in any logging activities. In contrast, the 'new' oil palm industry, which was developed in the late 2000s/early

³ The Biialla Oil Palm Scheme was established in 1972 set up as a joint venture between the PNG government and the Japanese company Trans Pacific Palm Oil Pty. Ltd (Independent State of Papua New Guinea, 1976). However, due to a dispute between the company and the government, a new joint venture called Hargy Oil Palms Ltd (HOPL) was formed in 1977 between the government, SIPEF (Belgium), and Warrens (UK), owned 50% by SIPEF/Warrens, and the other half by the National Government of PNG (Grieve, 1986; Koczberski, Curry, & Gibson, 2001). The government sold its 50% to SIPEF in 2004 (King, 2015); Warrens sold its share to SIPEF in 1994.

2010s under the Special and Agricultural Business Leases (SABLs), relies heavily on logging revenues to finance the development of the oil palm plantations and the palm oil mill (see section below).

The island of New Britain, which is the main hub for palm oil development in PNG, is the main case study of this paper. The island houses two provinces, West and East New Britain, each with distinct experiences of palm oil development. West New Britain has been the site for what this paper calls the ‘old’ oil palm and East New Britain is currently the site for the ‘new’ oil palm.

3. METHODS AND ANALYSIS

The results of this study are based on a combination of secondary and primary data sources. Secondary data results from consultation of data on the global palm oil industry, the PNG economy, and its agricultural and forestry sector. The primary data is qualitative in nature, which was collected during fieldwork in PNG between February and April 2017. Fieldwork took place on the island of New Britain, which comprises the provinces of West and East New Britain, and the capital Port Moresby. The island produces the majority of the palm oil in PNG, whilst headquarters and important government ministries are based in the capital. Primary qualitative data is based on (a) participant observation, (b) (semi-) structured interviews, (c) focus group discussions, (d) informal conversations, and (e) fieldwork notes. Sources were landowners; smallholders; oil palm growers’ associations; farm workers employed by the companies or by the cooperatives; plantation/milling companies; refineries; and government agencies at the local, provincial, regional, and national level; NGOs; and the Catholic Church. The primary data covers 120 interviews, 14 participant observations, and six focus groups. Interviews generally covered themes of current and historic experiences with the oil palm companies; production conditions and performance; land rights and processes of land access; labor; social consequences; and environmental impacts. Finally, participant observations occurred in the production, milling, and refining facilities of oil palm.

The qualitative data collected was subsequently organized, transcribed, categorized, and coded under themes across different actors that emerged during the data collection and transcription process. For this process the software NVivo was used. The following analysis draws predominantly from the primary data collected during fieldwork but is complemented by secondary data.

4. WHAT HAS CHANGED IN THE PNG OIL PALM INDUSTRY?

This section outlines the major changes that led to the rise of the ‘new’ palm oil industry. First, I discuss the policy changes in the forestry regulations that led logging companies to look for faster access to timber elsewhere. Thereby, Papua New Guinea has undergone a massive land rush between July 2003 and April 2011, during which 5.5 million hectares of customary land were leased to predominantly foreign-owned companies under the so-called lease-leaseback scheme using Special Agriculture and Business Leases (SABLs), representing around 12 percent of the country’s total land mass (Global

Witness, 2017). Second, I will discuss the main findings of the Commission of Inquiry which was established in 2011 as a result of the controversies surrounding the land rush.

The PNG government introduced the lease-leaseback scheme in 1979 after independence from Australia in 1975 to allow for the legal registration of customary land titles by customary landowners with the State, enabling the customary landowners to lease the registered land to the State, which then can lease the land back to an entity that the landowners approve, i.e. the same landowners, or other persons or organizations, for a period of up to 99 years (Filer, 2011b). Thereby, landowners can use their land for economic activities by using the issued land title to sublease the land to a company or as a collateral to access bank loans.

The lease-leaseback scheme was then integrated into PNG's Land Act 1996 (Sections 11 and 102) introducing 'Special Agriculture and Business Leases' (SABLs). The lease-leaseback arrangement under the SABLs involves first the establishment of an Incorporated Land Group (ILG) by the customary landowners. This enables them to lease it to the national government, facilitated through the Minister for Lands and Physical Planning (the 'head lease'). The Minister issues an SABL for that parcel of land back to the ILG without rent payable generally for a period of 99 years. The SABL can be used as a basis for a sub-lease agreement between the ILG and a third party, for instance a company to develop and manage the land (Filer, 2012b, 2012a). The involvement of the state during the process is justified on two grounds. First, the resulting state lease title serves as a guarantee for bank loans, and second, the Constitution of Papua New Guinea necessitates the State to protect customary landowners from the total alienation of their customary land (Numapo, 2013). By leasing the land to the State, the customary tenure of the land is temporarily converted into a State lease, thereby alienating the land and suspending existing customary laws over the leased land for the period of the lease, in the anticipation of meaningful development.

The following government agencies are involved in the process. First, the Department of Lands and Physical Planning (DLPP) is the leading agency in supervising the overall process of administering and managing the SABLs (Mirou, 2013; Numapo, 2013). It issues the lease and sub-lease agreements, and is responsible of safeguarding the land titles. Second, the Department of Agriculture and Livestock (DAL) is pivotal in screening and selecting the agricultural projects. DAL is responsible for organizing public hearings and awareness meetings with affected landowners of the suggested SABL project. Once DAL approves of the agricultural project proposal, a Certificate of Compliance is issued, which is a precondition for being granted a Forest Clearance Authority (FCA) over the SABL by the Papua New Guinea Forest Authority (PNGFA). The FCA is an instrument to clear-fell the land in preparation of establishing agricultural activities.

Prior to the land rush starting in 2003, SABLs had been used on relatively small areas. Between 1979 and 1989, around 6,000 hectares have been converted through the lease-leaseback scheme into mostly

coffee and cocoa blocks. Shortly after the introduction of the scheme, companies and local politicians have manipulated the scheme for their own interests (Filer, 2011a). Between 1979 and 2002, only around 150,000 hectares had been converted from customary land to SABLs (Filer, 2012b).

A surge in SABL projects occurred after amendments to the Forestry Act 1991 (Sections 90A-E) in 2000 and 2007 in reaction to pressure by the World Bank to close a loophole in the forestry regulation to curb (illegal) non-sustainable large-scale logging activities (Filer, 2011a; Holzknicht & Golman, 2009). Major grounds of contention are Sections 90A and 90B of the amended Forestry Act that introduce the FCAs, allowing companies to engage in logging to clear-fell an area conditional on the agricultural development of the cleared land. The ease with which FCAs could be attained facilitated the massive abuse of the SABL scheme. At least two other factors contributed to this abuse. First, the most common instrument for large-scale logging, Timber Permits, are only granted through a relatively lengthy process, potentially taking multiple years.⁴ Second, new FMAs have only been slowly issued by PNGFA, limiting the amount of timber available within government-approved timber concessions (Winn, 2012). As a result, logging companies had great incentives to access logs through SABLs, requiring them to develop agricultural projects.

As a result, the attempts of the World Bank to create a more sustainable logging industry in PNG had the opposite effect: the issuance of SABLs rapidly increased from 2003 onwards, logging activities accelerated under the SABL scheme, and log exports surged. Specifically, log exports from FCA covered areas issued for SABLs increased from 133,223 m³ in 2009 to around 6,296,059 m³ in 2016 (Global Witness, 2017). Under the scheme, developers promised not only to develop large-scale oil palm production, but also to provide other benefits such as the establishment of road infrastructure, health centers, and schools (Mirou, 2013; Numapo, 2013). However, most of the developers delivered neither. Instead, developers clear-felled the designated areas to extract the valuable logs (Gabriel et al., 2017; Mirou, 2013; Nelson et al., 2014; Numapo, 2013).

The widespread abuse of the SABL scheme by logging companies led to the establishment of a Commission of Inquiry (COI) which held hearings between 2011 and 2012. Three commissioners were tasked to investigate initially 72 SABLs located all around PNG, which extended to 77 SABLs during the course of the inquiry. 34 of the SABLs investigated proposed oil palm development (Mirou, 2013; Numapo, 2013). Only two commissioners were able to submit their final reports in June 2013, leaving out a final analysis of the oil palm areas in West and East New Britain. Numapo (2013, p. 235) concludes that the SABL process was characterized by extensive abuse and misconduct by the relevant government agencies and project proponents. The COI concluded in 2013 that the main beneficiaries of the SABL scheme were large-scale logging companies without any long-term interest in agricultural

⁴ Timber Permits are generally employed in Forest Management Agreements (FMAs) or Local Forest Areas between PNGFA and the customary landowners (Australian Government, 2016).

development, who veiled their logging activities under the prospect of conducting agricultural development.

The main results of the COI relevant to this paper relate to, first, the lack of a clear legislative framework regarding the processes of application, processing, registering, approval and issuance of SABLs, opening the door to widespread misuse and manipulation (Numapo, 2013, p. 18 and 254). Second, the coordination between involved government departments during the land registration process was minimal, illustrated by independently given approvals and certificates without involving other relevant agencies (Numapo, 2013). Between 2007 and 2010, 23 FCA applications are identified of which one was granted before the SABL was approved, six were granted without an approved SABL, and five applications were pending without the approval of an SABL (Filer, 2011a, p. 281). However, as outlined above, FCAs can only be issued under valid lease agreements (e.g. SABL), rendering more than 50% of the FCAs (12 out of 23) between 2007 and 2010 invalid. Third, landowner awareness, consultation, consent, and approval of the proposed projects was at times manipulated by project developers in order to expedite the process (Mirou, 2013, p. 13; Numapo, 2013, p. 239). Similarly, DLPP officers often did not seek the consultation of all landowners but instead relied on the representatives of the ILG (Numapo, 2013, p. 239). Lack of landowner consultation and consent is mostly evident in the lack of land boundary inspection shown by the straight land boundaries demarcating the SABLs (Numapo, 2013, p. 240).

5. THE NEW OIL PALM INDUSTRY IN EAST NEW BRITAIN, PNG

This article questions the genuine intention of the new palm oil companies to develop oil palm plantations. Instead, it puts forward the claim that their main objective is to gain short-term profits from logging activities, resulting from the wide variety of valuable tree species found in PNG's virgin forests. It determines whether an oil palm project is 'genuine' by identifying if the project has constructed a palm oil mill and has carried out any shipments of palm oil. A palm oil mill is a large capital investment which demonstrates, to some degree, a long-term commitment of the company.⁵ Under this definition, I identified three projects as genuine oil palm projects in the 'new' oil palm industry, which are all located in the province of East New Britain.

Two of these projects are the Sigite-Mukus Integrated Development Project (four SABLs) developed by Gilford Ltd, and the Kairak/Baining project (one SABL)⁶ under East New Britain Palm Oil Ltd (ENBPOL). Both projects were investigated in the COI. Additionally, this paper considers the Ili-Wawas Integrated Rural Development Project (two SABLs) developed by Tzen Niugini Ltd/Tzen

⁵ Bewani Oil Palm Plantations Ltd has commissioned a palm oil mill, but at the writing of this paper, no palm oil shipments could be verified.

⁶ The Kairak project was not part of the initial 75 SABLs to be invested in the COI. However, it was later on discussed as part of the COI in a special meeting (see Numapo, Jerewai, & Mirou, 2012).

Plantation Ltd as part of the new palm oil industry. ENBPOL, Tzen Niugini, and Tzen Plantation belong to the same company network.⁷ A formal submission of the Ili-Wawas to the COI has been made, but no transcript of records of this event exists (Jerewai, 2011a, pp. 2–3). Both the Sigite-Mukus and the Ili-Wawas are ‘integrated’ projects, combining logging with agricultural activities with the aim to bring socio-economic development to the less developed areas in PNG. Both projects are located in the remote District of Pomio, whilst the Kairak project is located in the more densely-populated Gazelle District.

The primary objective of the three projects as stated in their project proposals is socio-economic development, promising to establish health centers, schools, and infrastructure (especially roads and bridges), developing access to the urban markets of Rabaul and Kokopo, and enabling the communities to market their local produce and cash crops such as cocoa. This is particularly relevant to the Pomio district, which belongs to the poorest districts in Papua New Guinea (Gibson et al., 2005). To date, the government has not constructed a road link between the Pomio District and the provincial center of Rabaul/Kokopo, reflecting the government’s neglect of investing into important infrastructure and public services.

This section investigates the long-term sustainability of the recent customary land conversions involving the establishment of large-scale oil palm production in East New Britain. In the following sections, I examine the new oil palm projects in terms of their origins and company structure, topographic feasibility, governance structure, patron-client relationships, social conflicts, and economic development. Due to safety issues, I was unable to conduct any fieldwork in the Sigite-Mukus project area. Therefore, the following analysis provides more details on the Ili-Wawas and Kairak projects.

5.1. DEVELOPERS, ORIGINS, AND COMPANY STRUCTURE

In the following, I outline the origin of the developers as logging companies, their complex company structures, which may facilitate transfer pricing and tax avoidance. The new oil palm industry consists of two players, Gilford Ltd and a group of companies called ENB Resources Group of Companies⁸ (in the following called ENB Group). Gilford Ltd is the developer of the Sigite-Mukus Integrated Development Project (four SABLs) in the Pomio District. The company network ENB Group operates two projects under two different subsidiaries. The first is Tzen Niugini Ltd/Tzen Plantation Ltd, which

⁷ According to information extracted from the PNG Investment Promotion Authority (IPA), Tzen Niugini and ENBPOL have the same company directors but different mother companies. Tzen Plantation and ENBPOL have one common company director. The other two company directors in Tzen Plantation are related to Tzen Niugini and ENBPOL. One is the son of a company director to ENBPOL and Tzen Niugini, the other is a former shareholder for Tzen Niugini.

⁸ Note that ENB Resources Group of Companies is not a registered company with IPA. However, this is the company name that has been commonly used by company interviewees.

develops the Ili-Wawas Integrated Rural Development Project⁹ consisting of two SABLs in Wide Bay. The second is East New Britain Palm Oil Ltd (ENBPOL) which operates the Kairak Oil Palm Development Project (two SABLs) in the Gazelle district. Additionally, ENBPOL is currently starting a new project in East New Britain called Sagamer Integrated Agriculture Project, which will be developed by another ENB Group subsidiary, Avibinbab Taden Ltd, located between the Ili-Wawas and the Kairak project. See Table 1 for an overview of the projects. The Sagamer project is only partially discussed due to the infant stage of the project.

All three projects (Sigite-Mukus, Ili-Wawas, and Kairak) were actively supported by the East New Britain Provincial Government (Jerewai, 2011a, p. 14). The Sigite-Mukus and Ili-Wawas projects have been initiated by the former Pomio District Member and Minister for Trade and Industry Paul Tiensten¹⁰ as stated in their project proposals. The Kairak project has most likely been initiative by a group of powerful landowners in cooperation with the developer (Numapo, Jerewai, & Mirou, 2012).

According to the developers, the primary objective of the Ili-Wawas, Sigite-Mukus, and the Sagamer projects are the rural development of the remote areas of the Pomio and Gazelle district. They stress the importance of developing infrastructure to create market access to urban areas, generating employment, and providing social services such as health and education. Yet, none of the projects contain a smallholder component which would ensure that a wider group of people directly benefits from the project (unlike the old palm oil industry in West New Britain), questioning from the outset the ‘developmental’ objectives of the projects. The Kairak project is somewhat different. The project area does not contain any commercially valuable forest resources and has comparatively good infrastructure development due to its proximity to Kokopo and Rabaul. As a result, the Kairak project puts more emphasis on the generation of employment and the creation of a vibrant rural community, rather than the development of roads. In addition, ENBPOL added smallholders and joint venture agreements with larger landowners to the Kairak project. In 2017, ENBPOL managed 1,410 hectares of joint venture agreements and 2,144 hectares of smallholders (see below for a brief discussion). Unfortunately, the number of joint ventures and smallholders could not be retrieved.

⁹ The Ili-Wawas project has not been investigated in the COI since the SABL was granted to an ILG instead of a landowner company, which according to interviews with government officials, led to the exclusion of the project from the COI.

¹⁰ Tiensten is currently serving a nine year prison sentence for misappropriation (Radio New Zealand, 2014).

Table 1. Overview of the new oil palm industry.

Project	Developer	SABL date	SABL (ha)	FCA date	FCA (ha)	Plantable (ha)	Planted (ha)	Log exports (m ³) ¹
Sigite-Mukus (4 SABLs)	Gilford Ltd (Rimbunan Hijau)	2008	55,400 ²	2010, renewed 2014		31,000	10,500	1,269,607
Ili-Wawas	1. Ili-Wawas Integrated Rural Development Project	2008 2011	24,810 4,736	2007	170,000 ^c	20,000 ³ or 10,000 ⁴	6,500 200 (cacao)	596,720
	2. Ili-Wawas Roadline Development Project	n/a	n/a	2007*	158,000 ⁵	21,000 ⁵	0	1,374
	3. Ili Stand Alone Integrated Project	n/a	n/a	2007*	10,400 ⁶	?	200 (cacao)	42,693
Kairak (2 SABLs)	East New Britain Palm Oil Ltd (ENB Group)	2011	34,536 ^a	n/a (agri permit)	n/a	?	2,267	n/a
Sagamer (Immerr-Kiligia)	East New Britain Palm Oil Ltd/Avibinbab Taden Ltd (ENB Group)	2007	33,500 ⁷	In process	27,400 ^b	24,000 ⁷	n/a	n/a

* Timber Authority, not Forest Clearance Authority.

^a Cancelled.

^b Proposed; not yet approved.

^c Based on company interview. Includes three FCAs and three TAs for the Ili-Wawas Rural Integrated Development Project, Stand Alone, and Roadline project.

¹ SGS (2017).

² Numapo (2013).

³ Karanas Investment Limited (n.d.).

⁴ Source: Company interview in 2017.

⁵ ENB PFMC (2006).

⁶ Winn (2012).

⁷ Palik (2015).

The Ili-Wawas project located in East Pomio was the first project of the new oil palm industry. Originally it involved three components: (1) the Integrated Rural Development Project, (2) the Roadline Development Project, and (3) the Ili Stand Alone Integrated Project. According to the project proposal, the oil palm development is financed through income raised from logging for the development of a road (2), and the ‘selective’ logging under the Ili-Wawas Integrated project (1). The Ili Stand Alone project is separate from the other two. Respondents during company interviews stated that the landowners affected by the Stand Alone project preferred the development of cocoa production rather than oil palm. According to the developer, only 200 hectares were logged and planted with cocoa. However, relying on log export data for the Stand Alone project (SGS, 2017), I derived an estimate for the area logged between 1,423 hectares and 1,856 hectares¹¹, which is 700-900% more than stated by the company. Similarly, the Roadline Development Project never fully materialized; information about the reasons could not be retrieved.

Since the FCAs for the Roadline and Stand Alone project both expired, the Ili-Wawas Integrated Rural Development Project is the only remaining component of the development. It consists of three FCAs which were granted to the Malaysian developer Tzen Niugini in 2007 for 25 years prior to the issuance of an SABL and sub-lease agreement with a landowning group. As discussed above, the landowners (as an Incorporated Land Group) first register their land with the government to receive an SABL for their collective parcel of land. Once the SABL is issued, the ILG can enter a sub-lease agreement with a developer, which is a prerequisite to be granted an FCA. Therefore, the FCAs issued for Tzen Niugini did not follow due process and enabled the company to log some of the areas without having acquired formal consent of the affected landowners. PNGFA temporarily suspended the clear-felling operation in 2008, since Tzen Niugini lacked a valid sub-lease agreement, cleared more than 500 hectares at a time without establishing oil palm plantations, and did not have any plans to establish an oil palm mill. As a result, Tzen Plantation was incorporated, which signed a sub-lease agreement with Simbali ILG in July 2009, expiring after 99 years in 2107.

COMPANY STRUCTURE

The complex company structures that surround both Gilford and ENB Group and their connections to tax havens such as Singapore and the British Virgin Islands allow for the possibility of tax avoidance and transfer pricing, i.e. the undervaluing of log export prices (see e.g. Barnett, 1989, pp. 375–378). Additionally, companies may intentionally misidentify valuable species and undermeasure the exported logs, diverting the non-accounted income to the holding companies located in the tax havens. Therefore, I argue that the connections to logging companies and the lack of expertise in oil palm development of

¹¹ Based on a yield of 23 m³ per hectare.

one developer severely question the developers' intention to successfully develop the oil palm industry in East New Britain. Additionally, the revealed connections to tax havens severely limit the developmental impact of the projects due to forgone earnings by the government.

Both Gilford Ltd and ENB Group are or were subsidiaries of large Malaysian logging companies. Both are part of a complex web of companies which can be traced back to registrations in tax havens, such as Singapore and the British Virgin Islands. Gilford Ltd is owned by Prime Resources Corporation Ltd, a subsidiary of Rimbunan Hijau (RH), one of the biggest logging companies in Southeast Asia and the biggest in Papua New Guinea (Gabriel & Wood, 2015). RH is a multinational and multi-sectoral company, owning one of the two national newspapers in PNG called The National, the mall Vision City, and the luxurious Stanley Hotel & Suites. RH's web in the PNG forestry industry is wide and nontransparent (for an early account see Filer & Sekhran, 1998, pp. 52–57; for an update see Mousseau & Lau, 2016, p. 17). Prior to the oil palm development in PNG, RH has had experience with oil palm development in Sarawak (Cramb & Sujang, 2013). Another RH subsidiary, Sinar Tiasa Ltd, is also involved in the development of the oil palm in Gilford's Sigite-Mukus project (Jerewai, 2011b, p. 72). According to Mousseau and Lau (2016), Gilford co-owns Sinar Tiasa Ltd together with Monarch Investments Ltd, a subsidiary of Monarch Logging Ltd registered in Singapore and a holding company connected to RH.

Tzen Niugini and Tzen Plantation (part of the ENB Group) were set up by Cakara Alam (PNG) Ltd, a major logging company in PNG with large logging concessions in West New Britain and no experience with oil palm development prior to the oil palm development. According to interviews with various stakeholders including the company, Tzen Niugini was only interested in the extraction of timber during the initial stages of the project and had no intention of developing oil palm, contrary to its project proposal. Due to the risk of project suspension in 2008 (as discussed above), the company changed its shareholders and management. At the same time, Tzen Plantation Ltd was incorporated by the new shareholders of Tzen Niugini to be responsible for the planting and operation of the oil palm plantations, whereas Tzen Niugini would continue to be responsible for the logging operations. Operations resumed in 2009 with the first plantings of oil palm.

Tzen Niugini claims to have no more connection with Cakara Alam. However, tracing the company management and shareholders through the Investment Promotion Authority (IPA), a clear cut from Cakara Alam at the time cannot be identified. Since 2008, different changes to the director structure took place, and in 2012 former Cakara Alam directors were reinstated as company directors. The last Cakara Alam director ceased from Tzen Niugini only in 2013, long after the company had claimed to be a 'genuine' oil palm producer. In terms of shareholder structure, Tzen Niugini is fully owned by Kenlox Global Ltd, registered in the British Virgin Islands. According to IPA information, all shares were transferred to Kenlox Global in 2009. However, further share transfers took place in 2011 and

2013 by a former and a current Cakara Alam director. Hence, real divestment between the logging company Cakara Alam and Tzen Niugini could only have been completed earliest in mid-2013.

Similarly to Gilford, the current company structure of the ENB Group consists of large company web, of which many lead to the tax haven of the British Virgin Islands. As of December 2017, I was able to identify 12 companies connected to the ENB Group either via similar shareholders or company directors. This includes Tzen Plantation which is owned by Smarthill Holdings Ltd, and ENBPOL which is owned by Glory Jade Investment Ltd, both registered in the British Virgin Islands. The joint venture component of the Kairak project is operated through O & G Ltd, owned by Onwide Development Ltd also based in the British Virgin Islands. The directors of O & G Ltd overlap with the directors of Tzen Niugini and Tzen Plantation.

5.2. TOPOGRAPHIC FEASIBILITY

Assessing the projects described in Table 1 in terms of their topographic feasibility, all project areas show low suitability for oil palm production due to the hilly terrain, requiring the establishment oil palm plantations on terraces. I argue that the choice of the project locations is primarily driven by the possibility of extracting valuable logs rather than the suitability of the terrain and soil for oil palm development. I compare the fieldwork observations to the findings by Nelson et al. (2014), who assign land suitability scores to various oil palm developments in PNG. Additionally, I derive an estimate for the area logged based on log export data by SGS (2017), suggesting that the logged area is significantly larger than the planted or plantable area as stated by the companies. It further suggests that the developers are likely to have not complied with the FCA's condition of clearing an area of 500 hectares at a time, which needs to be replanted with oil palm before further clear felling.

Generally, oil palm plantations are developed on flat lands such as coastlines since hilly terrains and steep slopes require the costlier alternative of constructing terraces for the oil palm plantation. Terracing is usually associated with decreases in potential yields, increased risk of soil erosion and landslides, increases in input costs due to runoff of rainwater leading to higher fertilizer requirements, and increased risk to health and safety for plantation laborers (Corley & Tinker, 2016; Fairhurst & McLaughlin, 2009). Yet, all three oil palm projects have been developed using extensive terracing.

The Ili-Wawas project is located in the remote area of Wide Bay, Pomio, with no road access to the urban areas of the province. Whilst the log port and first plantations are located close to the coast (see Figure 1b), the company advanced inland to extract valuable logs from primary forest and plant oil palm. This required moving into increasingly hilly terrain involving extensive terracing. This is in line with findings by Nelson et al. (2014), who state that the land suitability of the Ili-Wawas project for oil palm development is marginal. During interviews, government officials from the Department of Agriculture and Livestock have voiced similar opinions about the unsuitability of the terrain. The practice of terracing stands in contrast to the old oil palm industry, who have established their

plantations along the coast lines. They refrained from terracing due to the high costs, lower yields, and health and safety issues for plantation workers. Furthermore, the palm oil mill (see Figure 1) is not placed in the middle of the plantations or along the coast. This is conventional practice, to ensure minimal transportation time for optimal fruit quality.¹² Instead, logging sites and oil palm plantations have moved further inland away from the mill. Both the terracing and the increased distance to the mill put into question the developer's intention to establish productive and safe plantations, strongly suggesting that the choice of the project location was guided by the potential to extract logs rather than the production of oil palm.

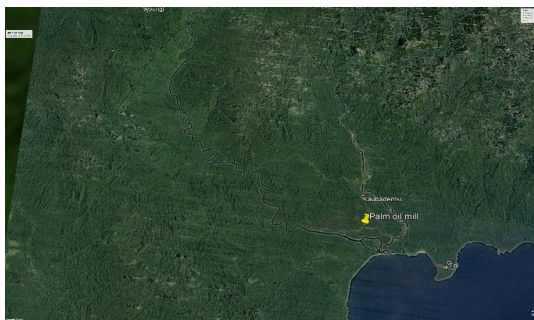


Figure a. Ili-Wawas project in 2007.

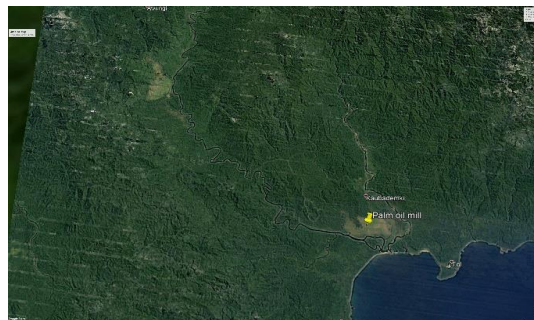


Figure b. Ili-Wawas project in 2009.

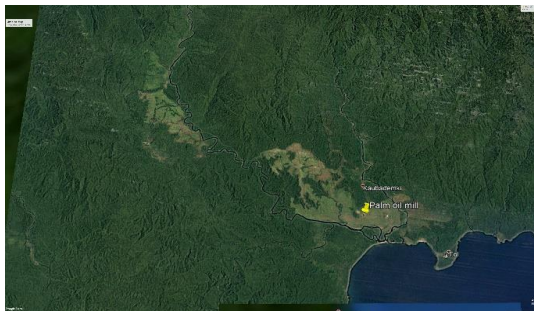


Figure c. Ili-Wawas project in 2011.

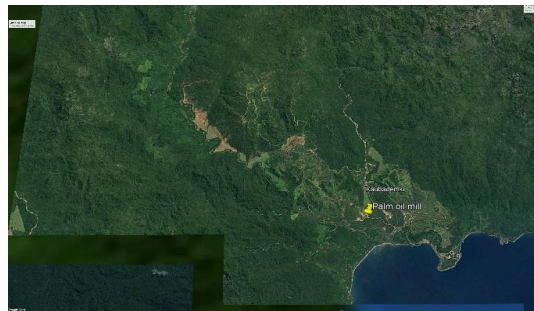


Figure d. Ili-Wawas project in 2016.

Figure 1. Satellite images of the Ili-Wawas project in 2007, 2009, 2011, and 2016. Yellow pin represents the palm oil mill.

Source: Google Earth (2018a).

Comparing the area planted with oil palm to the area logged, disproportionately more land has been deforested than replanted, questioning whether the cleared land will be planted with oil palm. According to SGS data (2017), Tzen Niugini has extracted 596,720 m³ of logs between mid-2007 and early 2017. With an optimistic yield for clear-felling operations of 30 m³ per hectare (Papua New Guinea Forest Authority, 1997)¹³, the estimated logged area is equivalent to 19,891 hectares, which is well above the plantable target of 10,000 hectares. Thereby, the estimated logged area also suggests that the company has not followed the FCA's condition of clearing only 500 hectares at a time.

¹² The fruits of the oil palm tree, called Fresh Fruit Bunches, need to be processed 24 hours after harvest to ensure the Free Fatty Acid (FFA) complies to the relevant quality standard. The FFA is the main measure of.

¹³ Note that this is an optimistic yield. Other reports suggest lower yields between 18 and 23 m³ which would increase the clear-felled area significantly (see Hammond, 1997; Tate, 2007).

In contrast, examining the satellite images of the Sigite-Mukus project (Figure 2), the plantations are established along the coastline. Unfortunately, the exact location of the mill could not be determined due to lack of data. Despite being located along the coast, extensive terracing is necessary due to the hilliness of the terrain, which corresponds to the findings by Nelson et al. (2014), stating that the Sigite-Mukus project exhibits marginal land suitability for oil palm production.



Figure a. Sigite-Mukus project in 2011.

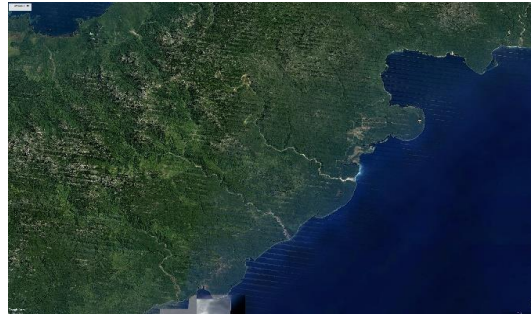


Figure b. Sigite-Mukus project in 2012.



Figure c. Sigite-Mukus project in 2015.



Figure d. Sigite-Mukus project in 2016.

Figure 2. Satellite images of the Sigite-Mukus project in 2011, 2012, 2015, and 2016.
Source: Google Earth (2018b).

Examining the area planted versus the area logged, Gilford has extracted 1,269,607 m³ between mid-2011 and early 2017 (SGS, 2017), significantly more than the Ili-Wawas project. Using the optimistic yield of 30 m³ per hectare, the estimated area that has been cleared amounts to 42,320 hectares, which is higher than the area plantable stated by the company (see Table 1). Considering the sheer size of the clear-felled area, it is highly unlikely that Gilford has complied to the FCA's condition to clear-fell 500 hectares at a time. It further questions whether the entire area will be replanted with oil palm.

Finally, the Kairak development does not involve the deforestation of primary forest. Instead, the project is used as a pure oil palm development project. However, inspecting the location of the project, again it becomes evident that the area is unsuitable for oil palm production. Due to the hilly and at times steep terrain, terracing is required to establish oil palm plantations (see Figure 3). This is in line with the assessment by Nelson et al. (2014) assessing the land suitability of the Kairak project as insufficient. Additionally, according to company interviews, the production locations are spread out over 100 km, requiring around four hours to deliver the fresh fruit bunches (FFB) to the mill due to poor road conditions, potentially deteriorating the fruit and oil quality.



Figure 3. Terraced oil palm plantations behind palm oil mill in Kairak project.
Source: Author.

5.3. LIMITED REGULATION

The vast and rapid registration of customary land through the SABLs was partly enabled by the weak or non-existent state capacity for the regulation of the palm oil industry and its enforcement. The only directly responsible quasi-government agency for the oil palm industry is the Oil Palm Industry Corporation (OPIC) founded in 1992, which provides agricultural extension services to smallholders. It is 50% funded by smallholder levies on FFB, complemented by a voluntary grant by the palm oil millers. To a lesser extent, OPIC has profited from Stabex funding from the European Commission and government grants (McKillop, Bourke, & Kambori, 2009). As a result, OPIC is predominantly dependent on the performance of the existing smallholders in the old oil palm industry and the voluntary financial support of the industry. The voluntary nature of the grant implies that if OPIC does not perform as desired, millers can choose to withdraw the grant, as it has occurred in 2017 when Hargy Oil Palms in West New Britain decided to withdraw its voluntary contribution due to insufficient services provided by OPIC. Therefore, OPIC is highly constrained in providing services to newly established smallholders in the Kairak project in East New Britain. In fact, interviews with OPIC officials revealed that OPIC has not been informed of any smallholder developments in the new oil palm industry.

Another oil palm-specific industry body is the PNG Oil Palm Producers Association (POPA), which consists of those oil palm companies in PNG that are committed to the Roundtable on Sustainable Palm Oil (RSPO), comprising NBPOL and HOPL. According to an interview with a POPA representative, the new oil palm companies have so far shown no intentions to adopt the RSPO. They are currently excluded from becoming POPA members to protect the old palm oil industry's reputation as sustainable palm oil producers. As a result, no forum exists through which the government can address the industry as a whole.

Apart from these industry-specific bodies, the Department of Agriculture and Livestock (DAL) and the Papua New Guinea Forest Authority (PNGFA) play key roles, at least on paper, in monitoring the newly established oil palm projects. However, their influence has been mostly nonexistent. DAL has not been able to adequately assess the technical expertise of the new oil palm companies to develop sustainable

oil palm plantations, nor their financial capacity to fund it. As stated before, the ENB Group has had no prior experience in large-scale agriculture or in oil palm. Additionally, both the ENB Group and Gilford argue that they are reliant on the logging revenues to fund the oil palm development, questioning their financial capacity (Numapo, 2013, p. 246). According to interviews with DAL representatives, the department currently does not have sufficient funding to conduct the quarterly monitoring of the newly established oil palm plantings. Additionally, PNGFA has enabled the unsustainable large-scale logging of forest land by issuing the Ili-Wawas FCA without the formal approval by DAL and without the registration of the customary land by issuing an SABL. An SABL over part of the project area was issued to Simbali ILG in 2008, after the issuance of the FCA in 2007.

5.4. RELATIONSHIP BETWEEN GOVERNMENT, INDUSTRY, AND LANDOWNERS

The process to register the customary land of the projects was heavily facilitated by various government departments at different levels. In many instances, the project proposal and the necessary applications surpassed lower government levels and went straight to the national level. The speed of the expanding logging and oil palm frontier can be largely explained by the patron-client network between local elites, political elites, and logging companies. Consequently, the economic benefits accruing from the logging and oil palm operations are disproportionately rewarded to the local (political) elite that either have direct or indirect access to the state bureaucracy (see e.g. Fold & Hansen, 2007 for a similar experience in Malaysia).

Both the Sigite-Mukus and the Ili-Wawas project in the District of Pomio have been initiated by the former District Member, Minister for Trade and Industry and subsequently Minister for National Planning Paul Tiensten, and have been greatly supported by the East New Britain Provincial Government as a means to develop the poor areas of Pomio and the Bainings (Jerewai, 2011a, p. 14). Tiensten did not just facilitate the project proposals but also the subsequent sub-lease agreements with the developers. In various interviews, local powerful individuals, who were part of the project drafting of the sub-lease agreement, have claimed that they did not know that these developers were logging companies only interested in extracting valuable timber. However, I argue that Tiensten and his team knew about the background of these companies and consciously chose logging companies as developers. The Environment Impact Statement for the Ili-Wawas project drafted by the landowner company Wide Bay Investments, which is partly owned by Tiensten, explicitly references one of the directors of Tzen Niugini as a director of the logging company Cakara Alam. Thus, Tiensten and other involved local elites were aware of the logging background of the developers ignoring that economic development has been entirely absent from previous logging operations (see for instance Laurance et al., 2011),

The patron-client relationship between local elites, the logging/oil palm companies, and the state becomes particularly apparent when examining the companies' workforce. In at least one case, powerful

locals, who have been part of the drafting of the project, are presently working in managerial positions of the company, questioning their intentions and accountability with respect to the project. Additionally, at least one individual working for a company can be linked to the East New Britain Provincial Forest Management Committee, the provincial counterpart of the PNG Forest Authority (PNGFA), severely questioning the bodies impartiality in making assessments and taking decisions about future logging operations in East New Britain. Therefore, I argue that these local elites, supported by the East New Britain Provincial Government, have abused their power vis-à-vis the local community. Considering the relationships with the national government level, according to interviews with the PNGFA, its former Managing Director Kanawi Pouru is currently employed as a consultant by Gilford/RH, managing the Sigite-Mukus project.

Information I gathered on the Kairak project serves as an example of how various government departments and levels have played a vital role in the facilitation of the development. Not only were landowners not consulted prior to the project establishment, but also Local Level Governments and the Provincial Lands Department were surpassed and not properly, if at all, informed about the oil palm developments, despite the support of the Provincial Government (Numapo et al., 2012). Instead, the project proposals went straight to the National Lands Department, surpassing all lower government units. Furthermore, the Land Investigation Report and social mapping have not been conducted, which is a condition for the granting of a SABL. Even though the SABL for the Kairak project has been cancelled due to fraudulent practices in obtaining the lease, the provincial government continues to support the project as a means to bring socio-economic development to the area (Lapauve, 2017).

5.5. SOCIAL CONFLICTS

Social contestations in the processes of land access, land development, and benefit payments to local landowners are omnipresent in all three projects. The following sections will outline issues regarding landowner consent and awareness, and the unreasonable sub-lease or joint venture agreements.

Land disputes and contestations about landowner consent are prevalent in all three project areas. The land boundary demarcations of the SABLs are generally straight lines, reflecting a superficial boundary investigation and ignoring local dynamic boundaries between clans and tribes. The Sigite-Mukus project was extensively discussed in the COI, stating that no proper Land Investigation Report was conducted by the Provincial or National Lands Department, failing to adequately demarcate the land boundaries (Jerewai, 2011b, p. 66). Additionally, no proper consultation and awareness process was conducted with the affected landowners prior to the establishment of the project (Jerewai, 2011c, p. 88) or in the drafting of the sublease agreement (based on interview). As a result, the signing of the sub-lease agreement between Gilford representatives and local landowners does not represent the interest and consent of all the clans affected by the project. Rather, the process was hijacked by few powerful clan members, hoping to personally gain from entering in an agreement with Gilford.

Similarly, the Ili-Wawas project was established without the proper consultation and awareness of all affected landowners. According to company interviews, the consultation process of the Ili-Wawas project was conducted within two years involving four different language groups and 15 villages. However, until today, the company operations are occasionally suspended in some areas due to landowner conflicts. For instance, in 2012, the company suspended the clearing operation for two months due to landowner disputes.

Finally, the Kairak project has been established without the awareness, consultation, and consent of landowners which led to the decision of the Kokopo National Court to declare the two SABLs as 'null and void' in August 2016. The land registration process has violated Sections 10, 11, 12 and 102 of the Land Act 1997 in that the landowners have not given their consent or approval for the lease agreement (for a witness description see Numapo et al., 2012, pp. 23–24). As the decision of the court outlines, the land registration process was hijacked by a few powerful landowners from one specific clan who had incorporated the Kairak ILG, aiming to take full control and ownership of 'their' clan's land to protect it from competing land claims by other clan groups. Many of the local landowners and clans did not know of the project until ENBPOL brought in the machinery to clear the land in preparation for establishment of oil palm plantations (Numapo et al., 2012, p. 24). As result, landowners were de facto expropriated from their land and cash crops, including the destruction of some World Bank-funded cocoa projects. Due to the resistance of some landowners to leave their customary land, the company involved the police to remove people from their land, further exacerbating the social tensions in the area. To-date, the company employs private security at the borders of the project to inhibit people from entering the premises, including the customary landowners.

All three SABLs were predominantly signed by males, thereby violating the customary matrilineal land tenure system. Therefore, the signed sub-lease agreement as upheld by statutory law stands in direct contradiction with the local customary laws, revealing the modern contradictions of transitioning from a 'customary' to a capital-oriented system and exposing the underlying gender dynamics.

Furthermore, the sub-lease or joint venture agreements between the developers and the landowners are heavily in favor of the developer. All agreements contain a so-called penalty clause, stating that in case the agreement is terminated by the landowners for any unjustifiable reason, all development costs need to be repaid, i.e. the value of the planted trees, development costs (e.g. housing, land drainage), infrastructure investments (e.g. palm oil mill, roads), and expected profits from subsequent harvests of the oil palm until the end of the lease (Jerewai, 2011d, pp. 35–37). In case of the Sigite-Mukus project, during the signing of the sub-lease agreement with Gilford, landowners were not provided with any legal assistance or translation, therefore the penalty clause was not fully understood by the landowners signing the sub-lease agreement (Jerewai, 2011d, p. 37).

A similar bias can be found in assessing the agreement between ENBPOL and the landowners in the Kairak project. Based on interviews with joint venture partners, ENBPOL (through the subsidiary O & G) generally receives a 70% share, whereas the local partner receives 30%. Furthermore, if the landowner decides to terminate the agreement, s/he has to pay back the entire development costs, value of the palm trees planted on the land, and foregone income to the end of the contract of the project to the company.¹⁴ Additionally, as of February 2018, some joint venture partners have not received any payments for their harvests and land rentals since plantings commenced in 2013.

Furthermore, the agreements stipulate the rental which is paid by the company to the landowners, which are insufficient to sustain the landowners' livelihood considering limited alternative land use options due to the establishment of oil palm plantations and limited space left for gardening. Gilford only pays PGK 13 (\approx USD 4) per hectare per year for planted land and PGK 3 (\approx USD 0.9) per hectare per year for unplanted land. It is difficult to determine the individual benefit one accrues from the land rental due to the unknown number of landowners involved. Similarly, Tzen Plantation pays the landowners of the Simbali ILG PGK 31,010 (\approx USD 9,563) per year for 24,810 hectares, corresponding to PGK 1.25 (\approx USD 0.39) per hectare per year. Therefore, it can be argued that these flat and low rental payments for fully productive land is unreasonable, ignoring increases in oil palm productivity throughout the tree's life cycle and price improvements on the global palm oil market.

The joint venture agreements between ENBPOL and local landowners pay slightly more with PGK 30 (\approx USD 9) per hectare per year. However, similarly, the land rental is insufficient to sustain the livelihood of the landowners. For instance, one landowner owns around 226 hectares, earning PGK 6,780 (\approx USD 2089) per year. Yet, since the land rental is shared by the family owning the land, in this case seven people, each family member would earn PGK 968.5 (\approx USD 298) per year or PGK 2.65 (\approx USD 0.82) per day, which is insufficient considering the high cost of living in Papua New Guinea.

Considering the terms of both the sub-lease and the joint venture agreements, it becomes essentially impossible for the landowners to reclaim their land, whereby "leasing land becomes a form of self-dispossession" (Anderson, 2010, p. 13). In many cases the land registration process was hijacked by powerful local elites without consulting the wider local community. This was further facilitated by the patron-client relationship between developers, landowners, and various levels of government.

5.6. ECONOMIC DEVELOPMENT

Assessing the three oil palm projects in terms of their economic performance, I argue that the oil palm projects currently do not significantly contribute to local economic development. First, the milling of the fresh fruit bunches (FFB) is considerably lagging behind the planting and the logging progress. Second, tax exemptions of at least one of the projects results in forgone earnings for the government.

¹⁴ Joint venture agreements are usually made with landowners of state leases. Hence, the length of the joint venture is determined by the remaining time on the state lease. Generally, state leases are given for 99 years.

Third, no roads have been constructed linking the remote Pomio District to the urban center of Kokopo/Rabaul. Finally, even though the companies have generated employment in the plantation and milling, issues of low income and indecent provision of facilities persist.

In case of the Sigite-Mukus project, the palm oil mill was commissioned in 2016 and has a capacity of 60 MT FFB/hr. The company has planned to build two additional palm oil mills. As of March 2018, Gilford has not been able to export any palm oil. According to stakeholder interviews, the palm oil mill is running only every two or three days, reflecting the company's difficulty in sourcing a sufficient amount of FFB. Due to the distance of some plantations to the mill and the poor condition of the logging roads, the quality of the crop is negatively affected.

In contrast, the ENB Group, which manages both the Ili-Wawas and the Kairak project, has established two palm oil mills, one in each location, and has exported some of its palm oil. The mill in the Ili-Wawas project was commissioned in 2014 and inaugurated by former Deputy Prime Minister Leo Dion. The mill has a capacity of 25 MT FFB per hectare (extendable to 45 MT FFB per hectare), much smaller than the mill established at the Sigite-Mukus project. This might reflect the revised plantable area of the Ili-Wawas project from an initial 20,000 to current 10,000 hectares (see Table 1), compared to 31,000 hectares in the Sigite-Mukus project. As of April 2017, only seven shipments of palm oil have been made in a span of three years, which is relatively low considering that the first plantings have been made in 2008/2009 and logging activities have progressed relatively fast (see Figure 1). Export destinations for the palm oil include Malaysia, China, and India. The palm oil mill in Kairak is the newest as it was commissioned in January 2017 and has made one shipment as of April 2017. The mill is significantly smaller with 10 MT FFB per hectare, which might reflect the investor's cautiousness considering the controversy surrounding the Kairak project, as discussed above.

In terms of potential government revenue generated through tax income, at least one of the three projects, the Ili-Wawas project, is tax exempted, including exemptions from import duties on machineries, equipment, and agricultural inputs (e.g. fertilizers) (Taxation Review Committee, 2015). The tax exemption for ENBPOL in the Kairak project is currently under review. No information about tax exemptions could be retrieved about the Sigite-Mukus project. Additionally, due to the complex company structures of Gilford and the ENB Group and their links to tax havens, companies may benefit from transfer pricing and tax avoidance, for instance through the undervaluation of log exports and their prices, implying further losses in public revenue. Furthermore, the companies may be engaged in 'round tripping', in which companies transfer income from exports to tax havens for a certain period of time, which is then transferred to the 'home country' disguised as foreign direct investment, thereby allowing the company to avoid income or capital gains tax (see e.g. Kemme, Parikh, & Steigner, 2017).

According to interviews with community members, the development of roads was one of the main reasons to agree to the logging and subsequent oil palm plantation establishment. The desire for

infrastructure development reflects the inability of the National Government to establish roads to the remote Pomio District. Contrary to the initial promise made by Gilford and Tzen Niugini/Tzen Plantation, both have not yet established a road network to the urban areas of the province, leaving both the local community and the provincial government of East New Britain discontented (see e.g. Waide, 2018). Instead, according to stakeholder interviews, the developers have only established logging roads within the logging and plantation sites.

Both Gilford and ENB Group have generated sizable employment. Gilford currently employs 1,230 full-time and 2,400 part-time employees. ENB Group is currently employing a total of 2,000 employees at the Ili-Wawas and Kairak project. However, contrary to the project proposal, many laborers in the plantation are not locals but are coming from other provinces of the country, such as the Highlands, Sepik, and Madang. As a result, interviews with plantation laborers in the Ili-Wawas project revealed that social conflicts have emerged between the local landowners and the plantation workers from other provinces, and between the plantation laborers themselves. Some of these social conflicts are exacerbated by the lack of housing, insufficient hygiene and sanitation facilities, and limited gardening spaces provided to the plantation laborers. The food security of the plantation workers is negatively affected due to the almost absolute reliance on purchased foods from the company trading store as a result of the limited gardening spaces.

6. DISCUSSION

In the examination of the economic, social, and environmental dimensions, this paper argues that the recent palm oil companies can be characterized as non-inclusive and unsustainable. First, in terms of the origins and company structure of the developers, I argue that these companies were initially logging companies with at least one company lacking any agricultural expertise. Second, I find that the geographic location chosen for the projects is unsuited for oil palm production, suggesting that the sites were chosen based on the potential for timber extraction. Third, the surrounding governance structure of the oil palm industry is evaluated, arguing that the new oil palm industry is effectively unregulated. Fourth, the land formalization process was dominated by a select group of actors in patron-client relationships: the national government departments, foreign-owned developers, and the local elite. Local and provincial government departments for land and agriculture have been neglected in the process, land consultation and awareness with local communities were few or non-existent, and some members of the communities (especially women) were not involved in the registration process. These patron-client relationships between the developers, government officials, and the local powerful landowners have expedited the process of land registration and oil palm development. Fifth, the land leases were obtained without the proper consent and awareness of the affected landowners, therefore resulting sub-lease or joint venture agreements are unreasonable. Land rentals paid by the developers are negligible and insufficient for the economic development of the affected communities. Finally,

evaluating the oil palm projects in terms of their economic performance, I suggest that the oil palm development and palm oil milling have significantly lagged behind the logging operations.

CONCLUSION

This paper has argued that instead of examining land formalization in a vacuum, the political economy context needs to be taken into account. Weak forms of governance in the context of customary tenure systems may become an enabler for strongmen and developers to hijack the process and capture the main portion of the rents. Thus, land formalization approaches do not require technical solutions, but political ones, tackling weak governance and corruption (Benjaminsen, 2002). As the state has been unable to become a driver for economic development, this void has been filled by foreign corporations driving the large-scale expansion of oil palm plantations. This has been countered by emerging forms of organized rural resistance, such as the Commission of Inquiry and the court case against the Kairak project in PNG.

Contrary to de Soto's (2000) prediction, the customary land registration process in Papua New Guinea has not led to the desired transformation from 'dead' to 'active' capital. In an attempt to 'unlock' large tracts of customary land, 12% of the country's total land area were formally registered with the national government under so-called 'Special Agricultural and Business Leases' (SABLs) between 2003 and 2011 mainly due to changes in forestry legislation (Global Witness, 2017). This gave rise to what I term the 'new' oil palm industry in Papua New Guinea, consisting of logging companies incentivized to enter the oil palm business in the search of new sources of timber. The large-scale clearing of vast forest land for the establishment of oil palm production has resulted in the emergence of new regimes of land ownership, land access, and labor relations (for a similar discussion in Sabah, Malaysia see Bernard & Bissonnette, 2011). These investments do not just imply the mere transfer of rights over land and its resources, but entail essential economic and societal transformations, which impact and restructure rural social relations. Examining the terms of the sub-lease and joint venture agreements between the companies and the developers, landowners are essentially unable to reclaim their land, whereby "leasing land becomes a form of self-dispossession" (Anderson, 2010, p. 13).

The patron-client networks between local elites, logging/oil palm companies, and the state have captured land formalization attempts to the detriment of local landowners, plantation laborers, and broader economic development. As a result, economic benefits generated by the logging and oil palm operations are disproportionately accrued by the local (political) elites with direct or indirect access to the state bureaucracy (see e.g. Fold & Hansen, 2007 for a similar experience in Malaysia). This is due to the lack of landowner consultation, consent and awareness on part of the developers and relevant government offices; biased land lease arrangements between landowners and the companies, specifying low land rentals and penalty clauses; forgone tax revenues for governments due to tax exemptions; and

lack of service provisions such as roads, schools, and health centers. Therefore, this paper argues that the recent palm oil companies are characterized as non-inclusive and unsustainable.

POLICY IMPLICATIONS

Future land policies in Papua New Guinea need to recognize at least two issues: first, the legal and procedural framework that surrounds the land formalization process, and second, the very factors within the customary system that enable local elites to take over these processes in the first place.

First, the overall legal framework that governs the land formalization process in Papua New Guinea needs to be clarified, particularly focusing on strengthening local institutions. Mechanisms within the state bureaucracy ranging from the national to the local level government need to be set up that ensure transparency, monitoring across levels of departments, and due process. Additionally, government departments at the local and provincial level should be financially strengthened to be able to conduct awareness and consultation programs with landowners, and regular monitoring of existing projects. There is a great need to develop government-led screening mechanisms that identify genuine developers aiming to develop the land sustainably. Additionally, explicit oversight and enforcement mechanisms are necessary to ensure that benefits paid by companies to landowners are sufficient to spur local economic development, improve distributional outcomes, and that benefits are paid out as agreed.

Second, land formalization processes need to incorporate more equally distributed and transparent decision-making authority given to local communities to ensure the free and prior informed consent of landowners, and to prevent the hijacking of decision authority by local elites. This necessitates a detailed and comprehensive understanding of the complexities of the customary systems, incorporating issues of gender, inheritance, and land boundary conflicts. Land formalization is upheld by statutory law and stands in direct contradiction to local customary laws, revealing the modern contradictions of transitioning from a 'customary' to a capital-oriented system and exposing the underlying gender dynamics. In the matrilineal tenure arrangements in East New Britain predominantly men have signed the 99-year leases, ignoring women's property rights. Therefore, customary land tenure needs to be legally recognized, such as matrilineal land tenure arrangements and 'secondary' user rights to protect the property rights of women and less powerful group members. However, pre-existing inequalities within the customary tenure system also need to be acknowledged and ameliorated. Incorporated Land Groups, which represent the landowner groups and receive the benefits from the company, remain a black box in terms of benefit sharing with their group members. Systems need to be put in place that ensure the equitable and fair benefit sharing especially with less powerful members such as women and youth. As Benjaminsen et al. (2008, p. 34) have rightly pointed out, "the idea that the formal recognition of property will turn dead capital into living capital should not cloud the fact that it may turn somebody's dead capital into somebody else's living capital."

REFERENCES

- Anderson, T. (2010). Land Registration, Land Markets and Livelihoods in Papua New Guinea. In T. Anderson & G. Lee (Eds.), *In Defence of Melanesian Customary Land* (pp. 11–20). Sydney: AID/WATCH.
- Anderson, T. (2015). *Land and Livelihoods in Papua New Guinea*. North Melbourne: Australian Scholarly Publishing Pty Ltd.
- Australian Government. (2016). Country Specific Guidelines for Papua New Guinea. Retrieved from <http://www.agriculture.gov.au/SiteCollectionDocuments/forestry/australias-forest-policies/illegal-logging/png-csg.pdf>
- Barnett, T. (1989). *Report of the Commission of Inquiry into Aspects of the Forest Industry: Final Report* (No. Volume II). Government of Papua New Guinea.
- Benjaminsen, T. A. (2002). Formalising Land Tenure in Rural Africa. *Forum for Development Studies*, 29(2), 362–366. <https://doi.org/10.1080/08039410.2002.9666212>
- Benjaminsen, T. A., Holden, S., Lund, C., & Sjaastad, E. (2008). Formalisation of Land Rights: Some Empirical Evidence from Mali, Niger and South Africa. *Land Use Policy*, 26(1), 28–35. <https://doi.org/10.1016/j.landusepol.2008.07.003>
- Bernard, S., & Bissonnette, J.-F. (2011). Oil Palm Plantations in Sabah: Agricultural Expansion for Whom? In R. De Koninck, S. Bernard, & J.-F. Bissonnette (Eds.), *Borneo Transformed: Agricultural Expansion on the Southeast Asian Frontier* (pp. 120–151). Singapore: NUS Press.
- Boamah, F. (2014). How and Why Chiefs Formalise Land Use in Recent Times: The Politics of Land Dispossession through Biofuels Investments in Ghana. *Review of African Political Economy*, 41(141), 406–423. <https://doi.org/10.1080/03056244.2014.901947>
- Borras, S. M., & Franco, J. C. (2012). Global Land Grabbing and Trajectories of Agrarian Change: A Preliminary Analysis. *Journal of Agrarian Change*, 12(1), 34–59. <https://doi.org/10.1111/j.1471-0366.2011.00339.x>
- Bottazzi, P., Goguen, A., & Rist, S. (2016). Conflicts of Customary Land Tenure in Rural Africa: Is Large-Scale Land Acquisition a Driver of “Institutional Innovation”? *The Journal of Peasant Studies*, 43(5), 971–988. <https://doi.org/10.1080/03066150.2015.1119119>
- Bruce, J. W. (1998). *Review of Tenure Terminology* (Tenure Brief No. 1). Madison: Land Tenure Center, University of Wisconsin. Retrieved from <http://digital.library.wisc.edu/1793/22013>
- Chand, S. (2017). Registration and Release of Customary-Land for Private Enterprise: Lessons from Papua New Guinea. *Land Use Policy*, 61, 413–419. <https://doi.org/10.1016/j.landusepol.2016.11.039>
- Chimhowu, A., & Woodhouse, P. (2006). Customary vs Private Property Rights? Dynamics and Trajectories of Vernacular Land Markets in Sub-Saharan Africa. *Journal of Agrarian Change*, 6(3), 346–371. <https://doi.org/10.1111/j.1471-0366.2006.00125.x>
- Corley, R. H. V., & Tinker, P. B. (2016). *The Oil Palm* (5th ed.). Oxford: Wiley-Blackwell.
- Cotula, L., Vermeulen, S., Leonard, R., & Keeley, J. (2009). *Land Grab or Development Opportunity?: Agricultural Investment and International Land Deals in Africa*. London/Rome: IIED/FAO/IFAD.
- Cousins, B. (2000). Tenure and Common Property Resources in Africa. In C. Toulmin & J. Quan (Eds.), *Evolving Land Rights, Policy and Tenure in Africa* (pp. 151–180). London: DFID/IIED/NRI.
- Cousins, B., Cousins, T., Hornby, D., Kingwill, R., Royston, L., & Smit, W. (2005). *Will Formalising Property Rights Reduce Poverty in South Africa’s “Second Economy”?* *Questioning the Mythologies of Hernando de Soto* (Policy Brief No. 18). Cape Town: Programme for Land and Agrarian Studies (PLAAS).
- Cramb, R., & Sujang, P. S. (2013). The Mouse Deer and the Crocodile: Oil Palm Smallholders and Livelihood Strategies in Sarawak, Malaysia. *The Journal of Peasant Studies*, 40(1), 129–154. <https://doi.org/10.1080/03066150.2012.750241>
- de Soto, H. (2000). *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*. New York: Basic Books.
- Deininger, K. (2003). *Land Policies for Growth and Poverty Reduction* (World Bank Policy Research Report). Washington, DC: World Bank and Oxford University Press.

- Deininger, K., & Binswanger, H. (1999). The Evolution of the World Bank's Land Policy: Principles, Experience, and Future Challenges. *The World Bank Research Observer*, 14(2), 247–276.
- Deininger, K., Selod, H., & Burns, T. (2010). Making Land Governance Real. In K. Deininger, C. Augustinus, S. Enemark, & P. Munro-Faure (Eds.), *Innovations in Land Rights Recognition, Administration, and Governance*. Washington, D.C.: The International Bank for Reconstruction and Development/The World Bank.
- ENB PFMC. (2006). Referral of Financial and Economic Viability Report for Tzen Niugini over Ili-Wawas Integrated Agriculture and Roadline Timber Authority. East New Britain Provincial Forest Management Committee.
- Fairhurst, T., & McLaughlin, D. (2009). *Sustainable Oil Palm Development on Degraded Land in Kalimantan*. Washington, DC: World Wildlife Fund.
- FAO, IFAD, UNCTAD, & the World Bank Group. (2010). *Principles for Responsible Agricultural Investment that Respects Rights, Livelihoods and Resources: Extended Version* (Discussion Note). FAO, IFAD, UNCTAD and the World Bank Group.
- Filer, C. (2011a). New Land Grab in Papua New Guinea. *Pacific Studies*, 34(2/3), 269–294.
- Filer, C. (2011b). The Political Construction of a Land Grab in Papua New Guinea. Presented at the Global Land Grabbing, Institute of Development Studies, Sussex. Retrieved from <https://digitalcollections.anu.edu.au/handle/1885/9709>
- Filer, C. (2012a). The Commission of Inquiry into Special Agricultural and Business Leases in Papua New Guinea: Fresh Details for the Portrait of a Process of Expropriation. Presented at the Second International Conference on Global Land Grabbing, Cornell University. Retrieved from https://www.researchgate.net/publication/259368299_The_Commission_of_Inquiry_into_Special_Agricultural_and_Business_Leases_in_Papua_New_Guinea_Fresh_Details_for_the_Portrait_of_a_Process_of_Expropriation
- Filer, C. (2012b). Why Green Grabs Don't Work in Papua New Guinea. *The Journal of Peasant Studies*, 39(2), 599–617. <https://doi.org/10.1080/03066150.2012.665891>
- Filer, C., & Sekhran, N. (1998). *Loggers, Donors and Resource Owners* (Policy that Works for Forests and People series No. 2). Port Moresby and London: The National Research Institute and the International Institute for Environment and Development.
- Fingleton, J. (2004). Is Papua New Guinea Viable without Customary Groups?, 19, 96–103.
- Fitzpatrick, D. (2005). “Best Practice” Options for the Legal Recognition of Customary Tenure. *Development and Change*, 36(3), 449–475. <https://doi.org/10.1111/j.0012-155X.2005.00419.x>
- Fold, N., & Hansen, T. S. (2007). Oil Palm Expansion in Sarawak: Lessons Learned by a Latecomer? In J. Connell & E. Waddell (Eds.), *Environment, Development and Change in Rural Asia-Pacific: Between Local and Global* (pp. 147–166). London and New York: Routledge.
- Gabriel, J., Nelson, P. N., Filer, C., & Wood, M. (2017). Oil Palm Development and Large-Scale Land Acquisitions in Papua New Guinea. In S. McDonnell, M. G. Allen, & C. Filer (Eds.), *Kastom, Property and Ideology: Land Transformations in Melanesia* (pp. 205–250). Acton, Australia: Australian University Press.
- Gabriel, J., & Wood, M. (2015). The Rimbunan Hijau Group in the Forests of Papua New Guinea. *The Journal of Pacific History*, 50(3), 322–343. <https://doi.org/10.1080/00223344.2015.1060925>
- Gibson, J., Datt, G., Allen, B., Hwang, V., Bourke, R. M., & Parajuli, D. (2005). Mapping Poverty in Rural Papua New Guinea. *Pacific Economic Bulletin*, 20(1), 27–43.
- Global Witness. (2017). *Stained Trade: How U.S. Imports of Exotic Flooring from China Risk Driving the Theft of Indigenous Land and Deforestation in Papua New Guinea*. London: Global Witness.
- Google Earth. (2018a). Ili-Wawas Project Area. 4°57'33.93"S, 152° 1'46.90"E to 4°46'35.81"S, 151°47'55.56"E. Retrieved from https://www.google.co.uk/intl/en_uk/earth/
- Google Earth. (2018b). Sigite-Mukus Project Area. 5°35'51.95"S, 151°26'51.43"E to 5°53'53.88"S, 151° 5'47.42"E. Retrieved from https://www.google.co.uk/intl/en_uk/earth/
- Grieve, R. B. (1986). The Oil Palm Industry of Papua New Guinea. *Australian Geographer*, 17(1), 72–76. <https://doi.org/10.1080/00049188608702902>
- Hall, D., Hirsch, P., & Li, T. M. (2011). *Powers of Exclusion: Land Dilemmas in Southeast Asia*. Singapore: NUS Press.

- Hall, R., & Kepe, T. (2017). Elite Capture and State Neglect: New Evidence on South Africa's Land Reform. *Review of African Political Economy*, 44(151), 122–130. <https://doi.org/10.1080/03056244.2017.1288615>
- Hammond, D. (1997). *Asia-Pacific Forestry Sector Outlook Study: Commentary on Forest Policy in the Asia-Pacific Region* (Working Paper No. APFSOS/WP/22). Rome and Bangkok: Forestry Policy and Planning Division, Regional Office for Asia and the Pacific, Food and Agriculture Organization (FAO).
- Holzknicht, H., & Golman, M. (2009). Forest Sector Policy Making and Implementation. In R. J. May (Ed.), *Policy Making and Implementation: Studies from Papua New Guinea* (pp. 187–202). Canberra: ANU Press.
- IBRD. (1965). *The Economic Development of the Territory of Papua and New Guinea*. Baltimore, Maryland: The Johns Hopkins Press.
- IBRD, & IDA. (1968). *Papua and New Guinea: New Britain Smallholder Development Project*. Washington, DC: International Bank for Reconstruction and Development (IBRD), and International Development Association (IDA).
- Independent State of Papua New Guinea. (1976). Palm Oil Industry (Biala Project Re-Organization) Act 1976.
- ITC. (2017). Papua New Guinea - Exports of Palm Oil and Its Fractions, Whether or Not Refined (1511). International Trade Centre (ITC).
- Jerewai, A. (2011a). *Transcript of Proceedings* (Commission of Inquiry into SABL No. SABL40–Kokopo). Kokopo: Commission of Inquiry into SABL, Department of Prime Minister & NEC.
- Jerewai, A. (2011b). *Transcript of Proceedings* (Commission of Inquiry into SABL No. SABL46–KOKOPO). Kokopo: Commission of Inquiry into SABL, Department of Prime Minister & NEC.
- Jerewai, A. (2011c). *Transcript of Proceedings* (Commission of Inquiry into SABL No. SABL42–KOKOPO). Kokopo: Commission of Inquiry into SABL, Department of Prime Minister & NEC.
- Jerewai, A. (2011d). *Transcript of Proceedings* (Commission of Inquiry into SABL No. SABL43–KOKOPO). Kokopo: Commission of Inquiry into SABL, Department of Prime Minister & NEC.
- Joireman, S. F. (2008). The Mystery of Capital Formation in Sub-Saharan Africa: Women, Property Rights and Customary Law. *World Development*, 36(7), 1233–1246. <https://doi.org/10.1016/j.worlddev.2007.06.017>
- Karanas Investment Limited. (n.d.). *Ili-Wawas Rural Integrated Development Project: Forest & Agricultural Development Project Proposal*. Boroko, Papua New Guinea.
- Kelly, A. B., & Peluso, N. L. (2015). Frontiers of Commodification: State Lands and Their Formalization. *Society & Natural Resources*, 28(5), 473–495. <https://doi.org/10.1080/08941920.2015.1014602>
- Kemme, D. M., Parikh, B., & Steigner, T. (2017). Tax Havens, Tax Evasion and Tax Information Exchange Agreements in the OECD. *European Financial Management*, 23(3), 519–542. <https://doi.org/10.1111/eufm.12118>
- King, G. (2015). *Reviving Agriculture for Sustainable Development*.
- Koczberski, G., Curry, G. N., & Anjen, J. (2012). Changing Land Tenure and Informal Land Markets in the Oil Palm Frontier Regions of Papua New Guinea: The Challenge for Land Reform. *Australian Geographer*, 43(2), 181–196. <https://doi.org/10.1080/00049182.2012.682295>
- Koczberski, G., Curry, G. N., & Gibson, K. (2001). *Improving Productivity of the Smallholder Oil Palm Sector in Papua New Guinea: A Socio-Economic Study of the Hoskins and Popondetta Schemes*. Canberra: The Australian National University.
- Lakau, A. A. L. (1997). Customary Land Tenure, Customary Landowners and the Proposals for Customary Land Reform in Papua New Guinea. *Anthropological Forum*, 7(4), 529–547. <https://doi.org/10.1080/00664677.1997.9967473>
- Lapauve, J. (2017, May 4). Oil Palm Developing East New Britain, Says Governor Tobaining. *EMTV*. Retrieved from <http://www.emtv.com.pg/news/2017/05/oil-palm-developing-east-new-britain-says-governor-tobaining/>

- Larcom, S. (2016). Natural Resource Contests and Precolonial Institutions in Papua New Guinea. *Journal of Agrarian Change*, n/a-n/a. <https://doi.org/10.1111/joac.12169>
- Laurance, W. F., Kakul, T., Keenan, R. J., Sayer, J., Passingan, S., Clements, G. R., ... Sodhi, N. S. (2011). Predatory Corporations, Failing Governance, and the Fate of Forests in Papua New Guinea. *Conservation Letters*, 4(2), 95–100. <https://doi.org/10.1111/j.1755-263X.2010.00156.x>
- Lavigne Delville, P. (2000). Harmonising Formal Law and Customary Land Rights in French-Speaking West Africa. In C. Toulmin & J. Quan (Eds.), *Evolving Land Rights, Policy and Tenure in Africa* (pp. 97–122). London: DFID/IIED/NRI.
- Lavigne Delville, P. (2010). Innovative Approaches to Improving Land Administration in Africa. In K. Deininger, C. Augustinus, S. Enemark, & P. Munro-Faure (Eds.), *Innovations in Land Rights Recognition, Administration, and Governance*. Washington, D.C.: The International Bank for Reconstruction and Development/The World Bank.
- Lawry, S., Samii, C., Hall, R., Leopold, A., Hornby, D., & Mtero, F. (2017). The Impact of Land Property Rights Interventions on Investment and Agricultural Productivity in Developing Countries: A Systematic Review. *Journal of Development Effectiveness*, 9(1), 61–81. <https://doi.org/10.1080/19439342.2016.1160947>
- McKillop, B., Bourke, R. M., & Kambori, V. (2009). Policy Making in Agriculture. In R. J. May (Ed.), *Policy Making and Implementation: Studies from Papua New Guinea* (pp. 57–74). Canberra: ANU E Press.
- Migot-Adholla, S., Hazell, P., Blarel, B., & Place, F. (1991). Indigenous Land Rights Systems in Sub-Saharan Africa: A Constraint on Productivity? *The World Bank Economic Review*, 5(1), 155–175. <https://doi.org/10.1093/wber/5.1.155>
- Mirou, N. (2013). *Commission of Inquiry into Special Agriculture and Business Lease (C.O.I. SABL): Report*. Port Moresby: Government of Papua New Guinea. Retrieved from <http://www.coi.gov.pg/documents/COI%20SABL/Mirou%20SABL%20Final%20Report.pdf>
- Mousseau, F., & Lau, P. (2016). *The Great Timber Heist: The Logging Industry in Papua New Guinea*. Oakland, CA: The Oakland Institute.
- Nelson, P. N., Gabriel, J., Filer, C., Banabas, M., Sayer, J. A., Curry, G. N., ... Venter, O. (2014). Oil Palm and Deforestation in Papua New Guinea. *Conservation Letters*, 7(3), 188–195. <https://doi.org/10.1111/conl.12058>
- Numapo, J. (2013). *Commission of Inquiry into the Special Agriculture and Business Lease (SABL): Final Report*. Port Moresby: Government of Papua New Guinea. Retrieved from <http://www.coi.gov.pg/documents/COI%20SABL/Numapo%20SABL%20Final%20Report.pdf>
- Numapo, J., Jerewai, A., & Mirou, N. (2012). *Transcript of Proceedings: Special Meeting* (Commission of Inquiry into SABL: Special Meeting No. SPECIAL MEETING1). Port Moresby: Commission of Inquiry into SABL, Department of Prime Minister & NEC.
- Obeng-Odoom, F. (2013). The Mystery of Capital or the Mystification of Capital? *Review of Social Economy*, 71(4), 427–442. <https://doi.org/10.1080/00346764.2012.761758>
- Palik, A. (2015). *Environmental Impact Statement: Immerr-Kiligia Oil Palm Development Project*. East New Britain Palm Oil Ltd.
- Papua New Guinea Forest Authority. (1997). *Asia-Pacific Forestry Sector Outlook Study: Country Report - Papua New Guinea* (Working Paper No. APFSOS/WP/47). Rome and Bangkok: Forestry Policy and Planning Division, Regional Office for Asia and the Pacific, Food and Agriculture Organization (FAO).
- Platteau, J.-P. (2000). Does Africa Need Land Reform? In C. Toulmin & J. Quan (Eds.), *Evolving Land Rights, Policy and Tenure in Africa* (pp. 51–74). London: DFID/IIED/NRI.
- PNG Department of National Planning and Monitoring. (2010). *Papua New Guinea Medium Term Development Plan 2011-2015*. Port Moresby: Department of National Planning and Monitoring.
- Power, T., & Tolopa, O. (2009). Lands Policy. In R. J. May (Ed.), *Policy Making and Implementation: Studies from Papua New Guinea* (pp. 155–164). Canberra: ANU E Press.

- Radio New Zealand. (2014, March 29). PNG MP Paul Tiensten Sentenced to 9 years Jail with Hard Labour. Retrieved from <https://www.radionz.co.nz/international/pacific-news/240149/png-mp-paul-tiensten-sentenced-to-9-years-jail-with-hard-labour>
- SGS. (2017, April 4). Log Exports: Statistical Summaries by Shipment. ociété Générale de Surveillance (SGS).
- Tate, B. (2007). The Forest Sector, Land and Development Issues in PNG. Retrieved March 8, 2018, from http://www.fiapng.com/forest_sector.html#2
- Taxation Review Committee. (2015, April 10). Papua New Guinea Taxation Review - Issues Paper No.6: Excise Taxation. Papua New Guinea Taxation Review Committee. Retrieved from http://taxreview.gov.pg/wp-content/uploads/2015/04/15.04.10_issues.paper_.6_excise.taxation.pdf
- The Atlas of Economic Complexity. (2016). Exports of Papua New Guinea. Retrieved February 28, 2018, from <http://atlas.cid.harvard.edu/explore/?country=176&partner=undefined&product=undefined&productClass=HS&startYear=undefined&target=Product&year=2016>
- Toulmin, C., & Quan, J. (Eds.). (2000a). *Evolving Land Rights, Policy and Tenure in Africa*. London: DFID/IIED/NRI.
- Toulmin, C., & Quan, J. (2000b). Registering Customary Rights. In C. Toulmin & J. Quan (Eds.), *Evolving Land Rights, Policy and Tenure in Africa* (pp. 207–228). London: DFID/IIED/NRI.
- Trebilcock, M. J. (1983). Customary Land Law Reform in Papua New Guinea: Law, Economics and Property Rights in a Traditional Culture. *The Adelaide Law Review*, 9(1), 191–228.
- Vijay, V., Pimm, S. L., Jenkins, C. N., & Smith, S. J. (2016). The Impacts of Oil Palm on Recent Deforestation and Biodiversity Loss. *PLOS ONE*, 11(7), e0159668. <https://doi.org/10.1371/journal.pone.0159668>
- Waide, S. (2018, February 11). Pomio People Left with Few Options Getting to Kokopo. Retrieved February 22, 2018, from <http://www.emtv.com.pg/pomio-people-left-with-few-options-getting-to-kokopo/>
- Winn, P. (2012). *Up for Grabs: Millions of Hectares of Customary Land in PNG Stolen for Logging*. Ultimo: Greenpeace Australia Pacific. Retrieved from http://www.greenpeace.org/australia/PageFiles/441577/Up_For_Grabs.pdf
- World Bank. (1968). *Papua New Guinea - New Britain Smallholder Development Project*. Washington, DC: World Bank.
- World Bank. (2018). World Development Indicators: Papua New Guinea. The World Bank Group. Retrieved from <http://databank.worldbank.org/data/reports.aspx?source=2&country=PNG>
- Zoomers, A. (2010). Globalisation and the Foreignisation of Space: Seven Processes Driving the Current Global Land Grab. *The Journal of Peasant Studies*, 37(2), 429–447. <https://doi.org/10.1080/03066151003595325>

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