

When distal flows meet local realities: A history of *Acacia* and *Eucalyptus* plantations in Pitas, Sabah

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Highlights:

- The telecoupling approach enables examination of the transference of adverse environmental impacts and positive financial gains between different actors and locations.
- Distal flows of investments and outgoing returns mediated through State interests reinforce harmful narratives, marginalise local people and jeopardise native ecosystems.
- Research on tree plantations grounded in social and environmental justice require an analytical lens that highlight distal flows and its potential inequalities.

Introduction

Southeast Asia's forests and agricultural lands have historically been contested. Dynamics related to land use change and the allocation of resources are decided by a myriad of actors, including local communities, multinational companies and governments, often with overlapping claims. This brief focuses on the district of Pitas in Sabah, East Malaysia, one of the poorest in the country, vis-à-vis *Acacia mangium* and *Eucalyptus pellita* plantations in the Bengkoka Peninsula.

Land use change is the conversion of land from one type of use to another, such as the transformation of forests into agricultural land or urban development. However, human activity has accelerated and intensified specific types of land use changes, leading to significant environmental, social, and economic challenges. Land use change in Pitas towards tree plantations is underpinned by the intersecting and telecoupled flows of ideas, commodities, and finances across spatial distances. While these flows benefit certain actors, it comes at the expense of indigenous and local communities, whose livelihoods and cultural practices are intrinsically bound to these spaces, as exhibited in Pitas.

Pitas: A frontier of contested change

Pitas is located in the Kudat Division in the north of Sabah. It spans an area of 1,419.32 km² and has a population of 36,660 people (DOSM, 2022). The majority of the population are the Rungus, followed by the Orang Sungai and other minorities such as the Bajau, Cagayan, Dusun,

Kadazan, Suluk, Tambanuoh, and Ubian (Udarbe, 1985). A majority of the local people are farmers, while the remaining villagers eke out a living as fishermen (McGowan International Pty Ltd, 1982). Data from the Department of Statistics Malaysia (DOSM) indicates that over half of the local residents, 53.6 percent, live in a state of absolute poverty, whereby the mean and median gross household income are RM3,378 (USD726.45) and RM1,999 (USD429.89), respectively (DOSM, 2020).ⁱ

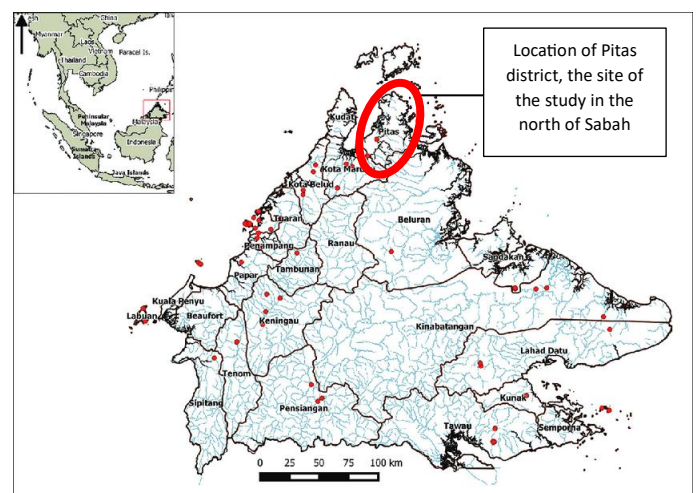


Figure 1: Map of Sabah, Malaysia.

The Rungus practice swidden agriculture for the cultivation of cassava, maize, rice, and other vegetables; they also raise animals such as chickens, pigs, and water buffalo, alongside selling bananas and coconuts to supplement their income (Bahauddin et al., 2015). They live in long-houses which are located on one-hectare patches of forest land as per customary rule (Massey et al., 2011). This communal living arrangement means that

agricultural land—which is also a marker of village territory—is shared by all the households; residents take turns to cultivate the land and harvest it produce once the forest has undergone regeneration (Mesa-Lago & González-Corzo, 2020; Appell, 1983).

The practice of shifting cultivation by the local people was deemed “primitive” by the State government (SAFODA, 1980, p. 1). During a state visit to Queensland, Australia, in 1966, then Sabah Chief Minister, Harris Salleh, learned that *Acacia mangium* was effective in preventing forest fires (Lasimbang, 2023). Given Pitas’ hot and dry climate, the Sabah Forestry Development Authority (SAFODA) was thus instructed to develop 100,000 acres (40,468 hectares) of land by planting *Acacia mangium* trees under the Afforestation and Settlement Scheme for the People in Bengkoka (SAFODA, 1980).ⁱⁱ The scheme was divided into five phases, and each phase corresponded to the five area divisions as shown in Figure 2.

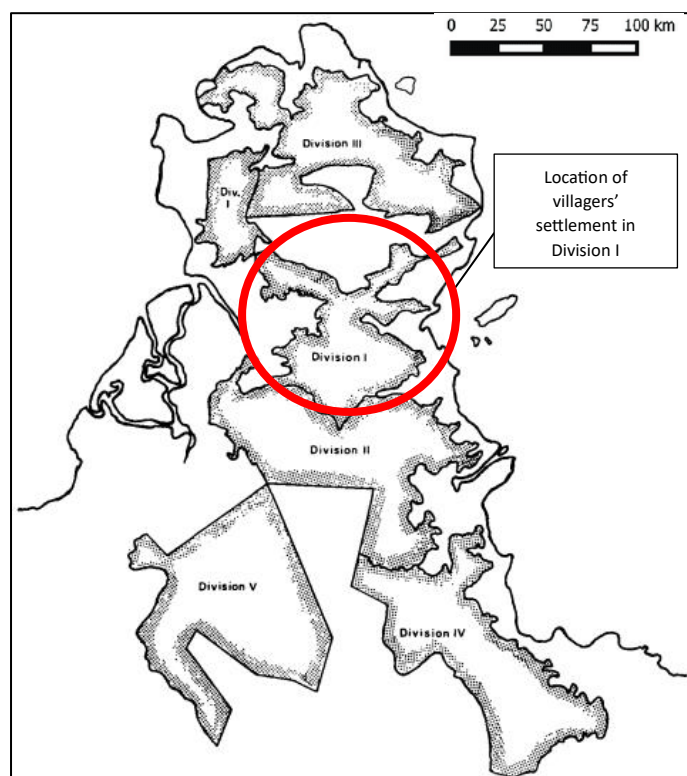


Figure 2: Map of the Bengkoka peninsula indicating Division I-V of SAFODA’s Afforestation and Settlement Scheme and the location of the villagers’ settlement in Division I (Udarbe, 1980).

It aimed to resettle a total of 2,000 families, with 400 families targeted in each phase. Each family would be provided a two-bedroom house located on a half-acre lot (0.2 hectares), replete with electricity and water supply, and given 15 acres (6 hectares) of land to plant with *Acacia mangium* over the duration of 10 years. This

would be part of a “village grant”, in which the names of each settler would be recorded (SAFODA, 1980, p. 3). Besides that, settlers were expected to tend to an additional 35 acres (14 hectares) of land owned by SAFODA, in which rattan will also be planted on these 50 acres (20 hectares) (SAFODA, 1980). Additionally, the settlers and their dependents would be employed as part of SAFODA’s permanent workforce to run the plantations until the time of harvest and be given equity share in the plantations which was comparable to almost 15 acres (6 hectares) (Udarbe, 1985).

In its early stages, the SAFODA scheme was funded by the World Bank through its proposed forest development programme. This was in line with the Bank’s thrust of funding, beginning in the late 1970s, towards sustainable and “people-oriented” forestry (World Bank, 1991, p. 12). The Bank’s pivot in this direction aimed to address the growing demand of wood for industrial purposes, while at the same time preserving natural forests through the establishment of tree plantations, providing employment opportunities, and alleviating poverty (World Bank, 1991). The Bank’s programme in Bengkoka was divided into three phases, and Phase I (1985-1989) entailed a pilot technical assistance project to develop 7,413 acres (3,000 hectares) of *Acacia mangium* to test the viability of scaling up operations in the future (World Bank, 1985). A USD6.5 million loan was approved, but funding was halted after findings showed that the endeavour would only have little commercial success (World Bank, 1992). It was found that *Acacia mangium* would only be suitable for low-grade utility timber or as pulpwood and particle board and was not widely used by industry players (World Bank, 1992). The halting of funds from the World Bank meant that only 200 families managed to be settled in Division I, with the rest of the villagers located in Division II-V left in the margins.

In the years since, SAFODA’s *Acacia mangium* plantations have been financed by various actors. Currently, there are four main actors that are active in the *Acacia mangium/Eucalyptus pellita* plantation front, apart from SAFODA. They are Acacia Forest Industries Sdn Bhd (AFI), New Forests, Gerak Saga Sdn Bhd, and Merica Group.

Telecoupled flows: Ideas, finances, and commodities

As part of data collection for this study, semi-structured interviews were conducted both online via Zoom and offline. The interviews ran between 27 April-15 May 2023

and included a range of respondents comprising of villagers, community leaders/civil society actors, research institutes, as well as NGO, company, and government agency representatives.

This study utilised the telecoupling approach, which describes the interconnectedness and interdependence of socio-environmental systems across distances (Liu et al., 2019). Telecoupling posits that human activity and environmental changes in one location could potentially impact distant areas through an intricate web of flows (Kapsar et al., 2019).

The practice of shifting cultivation by the local communities is portrayed in a negative light by the likes of SAFODA, AFI, and Gerak Saga. It is often linked to environmental degradation, deforestation, and soil infertility. This narrative is not new; it has been used since the time of British colonisation to justify land sale and development in North Borneo (Cleary, 1992). These arguments have merely been appropriated to suit the neo-colonial context of the present times. Although environmental justifications were used, at the heart of it, the British were primarily concerned with turning a profit, similar to what is taking place at present (Doolittle, 2006). At present, AFI and Gerak Saga are responsible to convert so-called idle forest lands into profitable ventures.

Interviews with the local people revealed that they disagreed with the term 'shifting cultivation' to describe their traditional agricultural practice, and preferred their practice to be described as crop rotation (*pertanian pindah* in Malay) instead. Labelling crop rotation as bad for the environment exhibits a lack of respect and understanding for indigenous culture, as well as the outright dismissal of local knowledge and expertise pertaining to forest land management. Head of the G20 coalition of villages, Jeffry Makap, explained that cultivated lands would be left alone for periods of 3, 5, or 7 years to allow sufficient soil regeneration (Makap, 2023). This, however, is what gives rise to the misconception of empty or idle lands which need to be converted into productive commodity frontiers (Wong et al., 2022).

In terms of financial flows, New Forests, an investment company which is headquartered in Australia, has had a presence in Southeast Asia since 2008. And since 2012, AFI operations have been financed through New Forests' Tropical Asia Forest Fund (TAFF), which aims to promote sustainable forestry in the region (New Forests, 2018).

The fund invested in Malaysia by acquiring a majority interest in the Hijauan Group of companies (World Wildlife Foundation, 2020). In 2018, New Forests and SAFODA made additional equity investments in Hijauan Group to facilitate the improvement and execution of AFI's strategic plans, resulting in TAFF having 84 percent of asset ownership (World Wildlife Foundation, 2020; New Forests, 2019). Gerak Saga, on the other hand, wholly operates using investment from individual shareholders in Merica Group, all of whom are European (MacNair, 2023).

Table 1: Financial flows related to SAFODA and AFI (own research, Majid Cooke and Toh 2012)

Financial flows related to SAFODA and AFI	
1985-1989	The World Bank approves a loan amounting to USD6.5 million for the Phase I of its Sabah Forestry Technical Assistance Project
1992	The World Bank halts funding after conducting feasibility tests on <i>acacia mangium</i> , cancelling Phase II and III of its project
1998	SAFODA signed a Memorandum of Agreement (MoA) with Kilang Papan Dasatu Sdn Bhd to produce medium density fibreboards, woodchips, and other wood products
1999	A Sales and Purchase Agreement was signed between SAFODA and Kilang Papan Dasatu Sdn Bhd. The latter agreed to purchase all the plantation logs from SAFODA
2000	A novation agreement signed between SAFODA, Serisar Forest Plantations Sdn Bhd, and Kilang Papan Dasatu Sdn Bhd (KPD), enabling Serisar to replace KPD in the previous Sales and Purchase agreement
2003	Serisar entered into a joint venture with SAFODA on a 50-50 equity basis, establishing AFI in 2004. December 2003, Serisar changes name to Mangium Plantations Sdn Bhd, assuming Serisar's obligations
2004	Mangium Industries Berhad builds a woodchip mill in Telaga
2007	Mangium Industries Berhad signs share purchase agreement with American company, Global Emerging Markets Forestry Investor LLC (GEM). GEM operated using the Global Environment Fund (GEF) until 2013
2008	GEM acquired the entire shareholding of Mangium Plantations and the woodchip mill in Telaga. Assets managed by Hijauan Asia Sdn Bhd in Pahang. Mangium Plantations Sdn Bhd changes name to Hijauan Bengkoka Plantations Sdn Bhd

2010	Finnfund, a Finnish company, alongside the European Investment Bank and other pension funds, invested in a Luxembourg-registered forestry fund the Dasos Timberland Fund I (DTF1), which in turn, invested USD12,931,452 into Hijauan Asia Sdn Bhd
2013	New Forests' Tropical Asia Forest Fund (TAFF) closed with capital commitments totalling USD170 million. TAFF acquired majority interest in the Hijauan Group of companies
2022	New Forests announced the first close of their Tropical Asia Forest Fund 2 (TAFF2) at USD120 million. In May 2022, New Forests was acquired by Japanese conglomerates, Mitsui & Co. Ltd and Nomura Holdings Inc.

Acacia mangium was introduced to the Bengkoka Peninsula because it was considered the “best choice” at the time due to its rapid growth rates and adaptability to poor soils (JICA, 1984, p. 25). However, it was quickly discovered that the trees would only be suitable for uses such as paper, pallets, packing material, particle board, pulpwood, and medium-density fibreboard chips (World Bank, 1992; JICA, 1994). Nevertheless, improvements in research and development have expanded its usage to material for indoor and outdoor furniture (with destinations such as Australia, China, Europe, the Middle East, and the United States), fence posts, reconstituted wood products, as well as building material for villagers’ houses (Hegde et al., 2013; Aling, 2023).

Commodity flows did not remain static. The pivot to *Eucalyptus pellita* in plantations across Pitas was caused by the *ceratocystis* wilt, which was first detected in Sumatra in 2010 (Lee, 2018). *Eucalyptus pellita* was chosen as a substitute due to its durability, strength, versatility, and resistance to local tree diseases (MacNair, 2023); and can be made into appearance-grade veneer for plywood, flooring, indoor and outdoor furniture, pulp, and also be used as saw logs and sawn timber (Hii et al., 2017; Speed, 2023).

Distal flows: Injustice as a consequence

At the outset of the SAFODA scheme, villagers were promised tangible socio-economic benefits and that their lands—*Acacia mangium* plantations were largely developed on native customary lands under tenure—would be returned to them once the trees were harvested. As such, villagers resumed their agricultural activities after the first round of harvesting. No written record exists for these assurances made, resulting in

contested land claims (Lasimbang & Nicholas, 2006). In 2017, SAFODA and AFI claimed that some villagers had trespassed onto plantation lands and filed charges against 6 defendants. The High Court ruled in favour of defendants 4, 5 and 6 representing 16 villages, as the lands were part of their native customary rights (NCR) (Daily Express, 2017), which entails the “permanent heritable and transferable right of use and occupancy” of land by a native Sabahan, even if he or she does not hold a documentary title to it (Wong-Adamal, 1998, p. 236). However, in 2020, the Kota Kinabalu Sessions Court sided with SAFODA and AFI against defendants 1, 2 and 3, and directed the villagers to vacate the Kamanchi-Gandawari village located within the SAFODA gazette (AFI, 2020; National Archives of Malaysia, 2018).

SAFODA and the companies continued to develop the native customary lands after the first harvest rotation and neglected to inform the local people of their intentions. The Human Rights Commission of Malaysia (SUHAKAM) noted that the SAFODA Enactment 1981 not only designates SAFODA as a “native” entity which enjoys the same rights as the local population in matters related to land, it also absolves SAFODA from its obligation to inform the local communities if a land title is issued to it (SUHAKAM, 2021). This is evident from the interview findings in which the local people stated that they did not know that *Eucalyptus pellita* was being planted across the Bengkoka Peninsula and for what purpose. They speculated that the trees would be sold to produce essential oils (Aling, 2023; Makap, 2023).

Conclusion

The transformation of forests into commodity frontiers in Bengkoka are due to the complex telecoupled flows of ideas, finances, and commodities which facilitates the transfer of negative social and environmental impacts over distances and benefits some actors over others. In the context of Pitas, companies—working hand-in-hand with the state government and their agencies—encroach on customary lands under the guise of contributing towards socio-economic development and the promotion of sustainable forestry. However, judging from environmental justice standards of distribution, procedure, and recognition, it is clear that the villagers of Bengkoka are marginalised on so many levels (Boillat et al., 2018). The establishment of industrial tree plantations under the SAFODA gazette comes at the expense of local livelihoods and the deprivation the

ancestral custom of shifting cultivation, and their associated cultural and ecological values.

Hence, it is vital that distal flows and their historic roots are examined to understand how/when the rights and interests of the local people are breached and who is accountable. By prioritising social-environmental justice, it is possible to achieve a balance between agricultural development and the preservation of forests, enabling the coexistence of natural ecosystems and thriving communities.

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ⁱ Please note that the exchange rate of Malaysian Ringgit (RM) to US Dollar (USD) used is based on rates provided by Bank Negara Malaysia on 4 July 2023, whereby RM0.21 = USD1.

ⁱⁱ SAFODA was established in December 1976 by the Sabah Legislative Assembly (Guizol & Purnomo, 2005).



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