



ASEAN-Canada Research Partnership Working Paper Series
Working Paper No. 5
January 2017

When the Forest is Depleted: Resource Governance in the Border Regions of Kapuas Hulu in West Kalimantan, Indonesia

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This paper is the outcome of research conducted by junior fellows of the 2012–2016 ASEAN-Canada Research Partnership with the aid of a grant from the International Development Research Centre (IDRC), Ottawa, Canada. It focuses on the theme of 'Natural Resource Management for Sustainable Growth'.

The ASEAN-Canada Research Partnership was launched in January 2012 to mark the 35th Anniversary of the ASEAN-Canada Dialogue Partnership. It is jointly conducted by the Institute of Asian Research (IAR), University of British Columbia (UBC), as well as the S. Rajaratnam School of International Studies (RSIS). RSIS is the Coordinator of the initiative. It also serves as the Secretariat. Information on IAR UBC and RSIS may be found at www.iar.ubc.ca/ and www.rsis.edu.sg respectively.

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Recommended Citation

Ali Muhyidin, 'When the Forest is Depleted: Resource Governance in the Border Regions of Kapuas Hulu in West Kalimantan, Indonesia' (ASEAN-Canada Working Paper Series no. 5, Singapore: Centre for Non-Traditional Security Studies (NTS Centre) RSIS, 2017).

Abstract

There are particular challenges in managing natural resources in border areas between Kapuas Hulu in West Kalimantan, Indonesia, and Sarawak in Malaysia. Understanding resource governance in such areas is crucial, as it not only strengthens awareness of conservation but also sheds light on the complexities involved due to the different perceptions and interests of parties involved. The paper explores the opportunities and challenges associated with managing resources in sustainable ways. The case study reveals that, although there is an increase of local awareness on conservation, community dependence on forestlands remains much the same. It also shows that decentralisation processes can have detrimental effects on the resources being used.

Keywords: border area, conservation, decentralization, forest governance, Indonesia

Biography

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Introduction

Governing natural resources in border regions offers a wide range of opportunities and challenges. Border regions are usually rich in unexploited natural resources that are accessible from both sides of the frontier. This consequently increases the mobility of people, and goods and services across the border. However, intensified cross-border exchanges have unavoidably escalated burdens on natural resources¹ due to a consequent exploitation. These challenges and pressures have led to various responses and initiatives for transboundary cooperation on natural resource management.

The boundary between Betung Kerihun National Park (BKNP) in the Kapuas Hulu district, West Kalimantan, Indonesia, and the Lanjak Entimau Wild Sanctuary (LEWS) of Sarawak, Malaysia, is an example of the dynamic trends of managing natural resources in a border region. LEWS covers 187,000 hectares (ha) of protected areas while BKNP is spread over nearly 800,000 ha.² Although there have been economic and political tensions at the borders between the two countries, the relations between Indonesia and Malaysia remain good. Both countries' governments are actively engaged in cross-border initiatives and have indicated continued support. The cooperation includes joint ecotourism activities and community-related projects development.

BKNP is the largest conservation area in Kapuas Hulu. It occupies around 25 per cent of the district area and includes highly diverse flora. Its forest ecosystem also provides significant natural habitats for the rich fauna, many of which are rare species, such as the Bornean orang-utan (*Pongo pygmaeus*). Due to these conditions, Kapuas Hulu declared itself a conservation district in 2003.

There were already established collaborations on transboundary management between Malaysia and Indonesia prior to BKNP and LEWS. One of these collaborations was the transboundary biodiversity conservation areas (TBCAs), which were inaugurated in 1993. The TBCA shares many common features in landscapes, water reserves, ethnographic history, culture, and flora and fauna resources.³ The initiative has been a model for other collaborative actions on both sides of the border. In 1997, the International Tropical Timber Organization's (ITTO) Borneo Biodiversity Expedition to the TBCA marked the development of scientific cooperation between the two countries. In 2001, the Sarawak government approved the addition of Batang Ai National Park (BANP) located in south LEWS to the TBCA.⁴ The BKNP area is also a focus of transnational cooperation under the Heart of Borneo (HoB) initiative involving Indonesia, Malaysia and Brunei Darussalam.

Although some progress has been made through the TBCA project and other initiatives, the management of conservation areas around this border region still faces several challenges, such as: (i) lack of local capacity in building on the partnership; (ii) joint activities, such as joint patrols, cross-border visits and information exchange, are not developed; (iii) limited local ability to understand protected areas management; (iv) limited awareness of conservation issues among

¹ The initial concept of conservation district for Kapuas Hulu is like two sides of the same coin where the

² Paul P. K. Chai and Penguang Manggil, 'Thinking outside the box', *ITTO Tropical Forest Update* 13, no. 2 (2003): 15.

³ Ibid.

⁴ James K. Gasana, P. P. K. Chai and Y. Trisurat, 'The management of protected areas in borderlands: Understanding the processes of transboundary biodiversity conservation' (Bern: Swiss Organization for Development and Cooperation, 2004).

local people in border areas; (v) lack of resources for forest patrols; and, (vi) a multi-stakeholder process to formulate a work plan is not in place.⁵

Cooperation between Indonesia and Malaysia in forest conservation entails some prospects for both countries. Many of the communities on the frontier share commonalities with respect to ethnic, linguistic and cultural identities. These common identities have benefited both communities through improving employment, trade and social conditions, even though the direction of movement is more toward Malaysia.⁶ Shared benefits are also derived from joint ecotourism activities to promote the culture, adventure and natural history of the national parks.

Some issues, however, hinder efforts to maintain resource governance in the border areas of Kapuas Hulu. Growing mobility across borders raises problems of sovereignty and security when it includes illegal activities or trade. This can create a mutual distrust between stakeholders from both countries and hamper efforts on conservation.

Political decentralisation in Indonesia, which has been imposed since 1999, is another challenge for resource governance. There have been competing interests between central and local governments due to differences in their interpretation of decentralisation regulation. When the central government revoked the authority of local governments to issue logging permits, local governments often delayed it. Instead, local governments collect local taxes from timber activities.⁷

Development of oil palm corridors is perhaps the most challenging issue for the sustainability of resource governance. Implementing oil palm development involves many trade-offs. While it is profitable for economic development, it also threatens local livelihoods. It threatens rich biological diversity, but also offers financial support for forest conservation efforts. Oil palm is a renewable source of fuel, but it also has potential to increase global carbon emissions.⁸ Thus, oil palm development has always been a dilemmatic choice.

The central government cannot effectively monitor and manage resources in border areas, thus it is necessary to involve stakeholders from all levels: national, regional and district government; private sector; non-governmental organisations (NGOs); and, local communities. Understanding resource governance in border areas is important, as it not only strengthens awareness of conservation itself but also gives a better picture of the complexities at play when it takes into account competing interests among the parties involved.

To better understand the dynamics of natural resource governance in the border region, I seek to identify the challenges and opportunities of natural resource governance in the border region of Kapuas Hulu. The field research was conducted in Kapuas Hulu district, West Kalimantan, a border area between Indonesia and Malaysia. In-depth interviews were conducted with NGO activists, local government officers, foresters, forest rangers and community leaders to understand their

⁵ International Tropical Timber Organization (ITTO), 'Promoting biodiversity conservation in Betung Kerihun National Park (BKNP) as the trans-boundary ecosystem between Indonesia and the state of Sarawak Malaysia (Phase III)' (PD 617/11 Rev.2 [F], Yokohama: ITTO, 2012), 16.

⁶ Junaenah Sulehan et al., 'Development at the margins: Livelihood and sustainability of communities at Malaysia-Indonesia borders', *Sociology & Space* 51, no. 3 (2013): 548.

⁷ Yurdi Yasmi et al., 'Stakeholder conflicts and forest decentralization policies in West Kalimantan: Their dynamics and implications for future forest management', *Forest, Trees and Livelihoods* 16, no. 2 (2006): 177.

⁸ Douglas Sheil et al., 'The impacts and opportunities of oil palm in Southeast Asia: What do we know and what do we need to know?' (*CIFOR Occasional Paper* No. 51, Bogor: Center for International Forestry Research [CIFOR], 2009), 9.

perceptions and interests. I also participated in the World Wildlife Fund for Nature's (WWF) community capacity-building programmes for conservation.

Concepts and Theories: Border and Natural Resource Development

In international relations, the term 'border' refers to the separation of physical territories belonging to one state from the territory of its neighbour. The characteristic of a border region is its close proximity to a national borderline as well as its impact on economic, political, social and cultural life in the region. Another important feature is that the actors in trans-border regions are divided by national borders and operate in different political spaces, which may limit opportunities for negotiation and governance.⁹

The border is a zone that invites or attracts people from both sides of the border to engage in legal or illicit activities, depending on the laws and regulations of the respective countries, and the social acceptance of the communities concerned. Communities sharing borders may identify and share cross-border cultures, values and, sometimes, ideologies. The social interactions of border communities are also largely influenced by historical and kinship ties.¹⁰ From a historical perspective, interconnectedness between Indonesia and Malaysia existed before the arrival of colonial powers. The connectivity happened in the regional system of trade, inter-marriage and politics. The notion of 'kinship' has been a major feature in the diplomatic relationships between the 'blood-brothers', which can be traced through ideology, history, commonalities of race, ethnicity and cultural forms.

Borders and natural resource governance form a functional relationship. Natural resource governance is defined by the structure of political life and administration of a sovereign state. However, natural resource governance could not be unified, even by an internal territorialisation process, due to the country's natural geography. Natural resource governance is also influenced by physical distance between the central government and district regions, especially those located in border regions, as remoteness increases the cost of governance.¹¹

The need to control and manage border regions is of growing importance, especially when the areas are remote and rich in unexploited natural resources that are yet accessible from both sides of the frontier. Weaker states usually face some difficulties when they try to defend their claims on areas covered with forest and those that are sparsely populated because of their lack of infrastructure.¹² Management of natural resources is a series of coordinated interventions to preserve or heighten benefits that are extracted from those resources.

The continuous movement and interaction across the Borneo borders builds flexibility in people's identity, which enables members of the different border communities to identify and relate to other subgroups based on physical proximities. With the existence of border markets and a less strict regulation on cross-border movement, the communities become easily mobile and make cross-border visits to family and relatives. The sense of national sentiment tends to be fluid, particularly when the

⁹ Will de Jong and Kristen Evans, 'Natural resource governance in border regions: From national backwaters to transnational territories and global commons', *Journal of US-China Public Administration* 8, no. 8 (2011): 933.

¹⁰ Sulehan et al., 'Development at the margins', op. cit., 5.

¹¹ Jong and Evans, 'Natural resource governance in border regions', op. cit.

¹² Michael Eilenberg, 'Frontier constellations: Agrarian expansion and sovereignty on the Indonesian-Malaysian border', *The Journal of Peasant Studies* 41, no. 2 (2014): 4.

centre of power is distant from the border, and development programmes for border communities are not given priority.¹³

The intensified exchange and mobility as well as economic development in cross-border areas have increased pressures on natural resources. This has led to various responses by those who have different concerns and interests, either to conserve or to exploit the resources. Political tension between the central government and lower levels of governments, or with ethnically different borderland inhabitants has become a problematic issue that needs to be considered.

Increasing awareness on the importance of rules for managing resources in border areas has led to initiatives of transboundary cooperation on natural resource management.¹⁴ Transboundary cooperation on conservation is important to coordinate the efforts of the countries involved, which share trans-border ecosystems. International cooperation for biodiversity conservation can promote peace through constructive dialogue, information exchange and mutual arrangements for sustainable development in the border regions. Increasing economic and environmental interdependencies between neighbours offer opportunities of cooperation, particularly in biodiversity conservation.

Tourism can improve local development in several ways, such as facilities and infrastructure development, promotion of economic development, more effective business networks, transport and other government concerns. From the economic perspective, tourism can contribute through the flow of goods, services and people across the borders.¹⁵ Rogerson argues that tourism is an instrument to secure new economics and promote employment growth, and yet it depends on several factors, such as open communication; cultural, racial and linguistic differences; political relations between the respective regions; and, the degree of economic disparity.¹⁶ Tourism may also encourage the central government to speed up development in border regions. To support the sustainability of development, Indonesia and Malaysia have promoted ecotourism as part of agreement collaboration.

Territorial sovereignty and security are other important issues on resource governance. According to Eilenberg, borders exist to define state sovereignty.¹⁷ Central governments control national territory and impose national administration for political and economic reasons under constitutional mandates.¹⁸ Therefore, a state's sovereignty on monitoring natural resource within its territory could be threatened if border regions are not properly administered.

Border issues between Indonesia and Malaysia have a long history that has adversely affected the relationship between the two states. Indonesia's National Development Planning Agency (BAPPENAS) identified two particular areas between the countries: (i) the land border in Kalimantan; and, (ii) the outer small islands in Riau, Kalimantan and Sulawesi. Differences between the areas include a lack of suitable infrastructure, facilities and accessibility in Indonesia while the Malaysian border areas are more accessible and mostly equipped with functional

¹³ Ibid., 5.

¹⁴ Jong and Evans, 'Natural resource governance in border regions', op. cit., 926.

¹⁵ Joan Anderson and Egbert Wever, 'Borders, border regions and economic integration: One world, ready or not', *Journal of Borderlands Studies* 18, no. 1 (2003): 27–38.

¹⁶ Rogerson, C. M. 'Tourism Routes as vehicle for local economic development in South African: The example of the Magaliesberg Meander', *Urban Forum* 18 (2007):49-68.

¹⁷ Michael Eilenberg, 'Frontier constellations: Agrarian expansion and sovereignty on the Indonesian-Malaysian border', *The Journal of Peasant Studies* 41, no. 2 (2014): 157–182.

¹⁸ Jong and Evans, 'Natural resource governance in border regions', op. cit., 925–6.

infrastructures, such as electricity, telephone network and access to healthcare facilities. The Malaysian conditions arise because the government has focused on key growth along developing corridors and more investment has been made in power generation and energy-intensive industries, ports and hubs, and tourism-based industries.¹⁹

Context: Kapuas Hulu as Case Study

Kapuas Hulu, the largest district in West Kalimantan province, has an area of roughly 31,162 km² and is home to diverse indigenous groups, Dayak being the largest ethnic group in the district.²⁰ Approximately 84 per cent of the total land area in Kapuas Hulu consists of forest, 57 per cent of which is designated for conservation and watershed protection.²¹ Table 1 shows the land and forest use in Kapuas Hulu. The district also has production forest, with about 17.5 per cent of the province's land area being assigned to commercial forestry. Only about one-quarter of the district's area is used for agriculture, plantation and settlement.²² The district is rich in biodiversity – there are 1,216 identified flora types, which consist of 418 genera from 110 families.²³ Among these flora types, 75 are endemic. The fauna is also diversified – there are seven types of primates, 24 endemic groups and 14 endemic herpetofauna.²⁴

Table 1: Land and forest use in Kapuas Hulu.

Land and forest use	Area (hectare) No. (%)
Protected areas	1,667,601 (56.21%)
Betung Kerihun National Park	800,000
Danau Sentarum National Park	132,000
Danau Empangau Protection Forest	628,973
Water catchment area	49,546
Peatland	67,082
Production forest	523,094 (17.50%)
Restricted production forest	241,116
Production forest	201,716
Conversion forest	80,262
Agriculture, settlement and plantation	773,359 (26.29%)
Total	2,984,203 (100%)

Source: District Forestry Office, Kapuas Hulu; Ferdinandus Agung Prasetyo, Krystof Obidzinski and Ahmad Dermawan, 'Launching the partnership and assessing the challenges ahead – Learning lessons year 1 and 2; Forest partnership: From Kalimantan districts to the global market place' (Bogor: Center for International Forestry Research [CIFOR], 2007), 45.

Two national parks, BKNP and Danau Sentarum, are located in the Kapuas Hulu district. Both national parks, together with the Kapuas River, provide vital ecological services not only to the people of Kapuas Hulu but also to the wider population of

¹⁹ Muazir and Hsieh, 'Borderlands and tourism development in Kalimantan island', op. cit., 1–2.

²⁰ Bayuni Shantiko et al., 'Socio-economic considerations for land-use planning: The case of Kapuas Hulu, West Kalimantan' (Working Paper 120, Bogor: Center for International Forestry Research [CIFOR], 2013), 3.

²¹ Ibid.

²² Ferdinandus Agung Prasetyo, Krystof Obidzinski and Ahmad Dermawan, 'Launching the partnership and assessing the challenges ahead – Learning lessons year 1 and 2; Forest partnership: From Kalimantan districts to the global market place' (Bogor: Center for International Forestry Research [CIFOR], 2007), 44.

²³ Anas Nasrullah et al., *Kapuas Hulu: Trip through Heart of Borneo* (Kapuas Hulu: Tourism Working Group, Kapuas Hulu district, 2007), 101-102.

²⁴ Ibid.

West Kalimantan. BKNP is located adjacent to the conservation area in Sarawak, marking Kapuas Hulu as the first trans-frontier natural reserve in Asia.

Referring to the characteristics of its forestland and habitat, Kapuas Hulu declared itself as a conservation district in 2003. Following the enactment of the conservation district, the head of district (*bupati*) formed a working group called *Pokja Kabupaten Konservasi*, which consists of several people from the District Development Planning Agency (BAPPEDA), the District Forestry Office, Estate Crops Office and NGOs.²⁵ The roles of the working group included facilitating dialogue among stakeholders regarding the implementation of natural conservation. However, it does not develop formal policy. As a consequence, this working group has not so far become significant in managing resource, as it operates only within the realm of discourse without further implementation.

Nearly 80 per cent of Kapuas Hulu's population depend on the agricultural sector (Table 2), and services and trade are still undeveloped. In the agricultural sectors, local people manage the land in traditional ways, which is known as shifting cultivation. The lands are mostly acquired by clearing forest. The district was heavily dependent on its forestry sector, especially for food, medicines and crafts until the central government imposed a logging ban.

Table 2: Population of Kapuas Hulu district by occupation.

Economic sector	%
Agriculture	77.56
Mining and quarrying	4.7
Processing industries	1.15
Electricity, gas and water	0.08
Construction	1.24
Trade, hotel and restaurants	5.74
Transportation and communication	0.72
Financial and other institutions	8.8

Source: Badan Pusat Statistik (BPS), *Kabupaten Kapuas Hulu Dalam Angka 2009* (Putussibau: BPS Kabupaten Kapuas Hulu, 2009).

Investments in Kapuas Hulu are mainly related to land-based investment; most are forest concession companies and oil palm plantations. Since decentralisation in 2001, the district has been compelled to generate local income. To finance its activities, the Kapuas Hulu district depends mostly on a budget allocation from the central government, which is largely comprised of general allocation funds (about 83 per cent), natural resource sharing (10 per cent) and tax sharing (5 per cent). The district also attempts to obtain revenue from the private sector in this case, it is the oil palm plantation industries. In 2005, for example, the district had allocated 278,000 ha for oil palm plantation and 7,000 ha for rubber plantation.²⁶ Part of these plantations was located in the area labelled as high conservation value forest. Table 3 shows the increase in the district's reliance on the decentralisation fund and a decrease in its ability to generate revenue.

²⁵ Ibid., 44.

²⁶ Ibid., 46.

Table 3: Kapuas Hulu's income budget (in million IDR).

Description	Budget No. (%)		
	2007	2008	2009
District's own income	30.962 (5.2)	17.034 (2.6)	6.117 (1.0)
Decentralisation fund	544.779 (92.1)	629.785 (94.9)	619.905 (97.4)
Other legal income	15.930 (2.7)	16.478 (2.5)	10.344 (1.6)

Source: Bayuni Shantiko et al., 'Socio-economic considerations for land-use planning: The case of Kapuas Hulu, West Kalimantan' (Working Paper 120, Bogor: Center for International Forestry Research [CIFOR], 2013).

Challenges in Managing Resources in Border Areas

Sovereignty issue

The sovereignty challenge along the border of Kapuas Hulu should not be separated from the historical issues between Indonesia and Malaysia. Setting aside the central part of Kalimantan near the border of Malaysia for conservation dates back only to the early 1990s. In the 1960s, the main purposes of state's control over border areas in Kalimantan were national security and promotion of development. However, the armed confrontation between Indonesia and Malaysia in the early 1960s directed more focus on security. Kalimantan borders were heavily scrutinised by the military and citizen mobility was restricted, especially for those not residing in the border regions. Citizens were required to show permit letters obtained from either the local military or police at border crossings.

Conditions became more difficult when the New Order government under President Suharto gave timber concessions to the army to help fund security measures. This arrangement was formalised when the Ministry of Forestry granted commercial forestry concessions (*Hak Pengusahaan Hutan* [HPH]) over one million ha along the border with Malaysia to a company named PT Yayasan Maju Kerja (an Indonesian military cooperative). These actions combined economic exploitation with national security concerns and affected almost the entire length of the West Kalimantan-Sarawak border.²⁷ These political and security matters burdened the government's efforts to promote economic and infrastructure developments in the borderland²⁸, and delayed field implementation of the cooperation project with Malaysia, particularly the joint biodiversity survey.²⁹

After the resignation of Suharto and once decentralisation began in 1999, the HPH concessions in the border areas were ended and local governments became more autonomous to manage their own resources. However, collusion and corruption practices, which were engaged in during the New Order era, have become entrenched at the provincial level. Between 2001 and 2002, bupati used their authority to grant small-scale logging concessions (*Hak Pengusahaan Hasil Hutan* [HPHH]) of up to 100 ha. Kapuas Hulu's bupati, for instance, processed 123

²⁷ Krystof Obidzinski, Agus Andrianto and Chandra Wijaya, 'Timber smuggling in Indonesia: Critical or overstated problem? – Forest governance lessons from Kalimantan' (Bogor: Center for International Forestry Research [CIFOR], 2006), 6–7.

²⁸ Eilenberg, 'Frontier constellations', op. cit., 8–9.

²⁹ Herry D. Susilo, 'Transboundary biodiversity conservation areas in Southeast Asia: Lesson learnt from Betung Kerihun National Park, Kalimantan, Indonesia', *Transboundary Conservation* 3, nos. 1 and 2 (2003): 18.

applications for such small concessions.³⁰ Unfortunately, those HPHHs were not distributed equitably. Local communities only gained small profits from HPHH, and the largest share of profits went to timber companies, local elites and government officials.³¹

Much of the illegal logging and timber smuggling along the Kapuas Hulu borders were carried out through community cooperatives involving Malaysian timber entrepreneurs, known as *tukei*, with Indonesian local corrupt district officials even though joint development projects, in reality, were restricted to logging. In 2000, there were at least 12 small financiers from Sarawak operating along the border of West Kalimantan, and the number had continued to grow in 2004.³² As a result, around 70 per cent to 80 per cent of the raw timber supplies in Sarawak were extracted from West Kalimantan's forest areas.³³ This illegal trade has created pressure on Indonesian sovereignty in border areas.

The illegal trade of lumber also affects other issues, such as markets, shops, bars and hotels, which developed rapidly, and prostitution increased to cater to loggers and visitors. Trafficking in endangered wildlife and plants, especially infant orang-utans and rare orchids, became major problems. These rare species were acquired by loggers in the forest and passed across the border for sale through sawmill operators.³⁴

According to the BAPPENAS report, sovereignty, territorial integrity and national security can be achieved by improving the welfare of people in the border regions.³⁵ One of the strategies to attain this goal is to create a large agricultural corridor along the border, so that the local citizens of Kapuas Hulu region can be more prosperous and reduce their dependence on neighbouring Malaysia.³⁶ This strategy is also believed to be capable of preventing illegal activities, especially illegal logging.

Decentralisation of forest management

Forest management in Indonesia during the New Order era was extremely centralised. It was controlled by giant companies that were granted HPH concessions by the central government. Under the HPH system, the rights of local communities on forests were marginalised. The commercial concessions also led to environmental degradation, as it increased the rate of deforestation and landslides, and exacerbated the level of river pollution. The New Order regime came to an end in 1998, following the widespread student protest, which called for Suharto's resignation and democracy reforms.

The post-Suharto era has been marked by policy reform and demands for greater autonomy from provincial governments. In response to these demands, the central government enacted Law No. 22/1999 on Regional Government and Law No.

³⁰ Obidzinski, Andrianto and Wijaya, 'Timber smuggling in Indonesia', op. cit.

³¹ Yurdi Yasmi et al., 'The complexities of managing forest resources in post-decentralization Indonesia: A case study from Sintang district, West Kalimantan', Case Studies on Decentralisation and Forests in Indonesia (Case Study No. 10, Bogor: Center for International Forestry Research [CIFOR], 2005), 25.

³² Reed L. Wadley and Michael Eilenberg, 'Autonomy, identity, and "Illegal" logging in the borderland of West Kalimantan, Indonesia', *Asia Pacific Journal of Anthropology* 66, no. 1 (2005): 7.

³³ 'West Kalimantan unable to halt illegal logging', *The Jakarta Post*, 18 March 2003,

<http://www.thejakartapost.com/news/2003/03/18/west-kalimantan-unable-halt-illegal-logging.html>.

³⁴ Wadley and Eilenberg, 'Autonomy, identity, and "Illegal" logging in the borderland of West Kalimantan, Indonesia', op. cit., 25.

³⁵ Bappenas. 2003. *Strategi dan model pengembangan wilayah perbatasan Kalimantan*. Jakarta: Kementerian Perencanaan Pembangunan Nasional, Badan Perencanaan Pembangunan Nasional.

³⁶ Eilenberg, 'Frontier constellations', op. cit., 11.

25/1999 on Fiscal Balancing between Central and Regional Government. Despite the laws reflecting transfer of power and authority from the central to provincial and district governments, they lack clarity in defining regional governments' rights, particularly in the forestry sector.

The decentralisation initiative, which was imposed in 1999, has been considered to put more pressure on forests. Fiscal decentralisation has driven local governments to issue more 100-ha HPHHs as the source of regional own-source revenues (*Pendapatan Asli Daerah* [PAD]).³⁷ District heads were able to generate taxes and more income from a number of informal payments under the initial share of timber extraction and utilisation permits (*Izin Pemungutan dan Pemanfaatan Kayu* [IPPK]) payments and HPHH.³⁸ In Kapuas Hulu, for instance, forest activities based on IPPK and HPHH contributed to more than 85 per cent of locally generated revenues in 2002.³⁹ HPHH concessions also provide a medium for the formalisation of illegal logging.

The Kapuas Hulu district has a kind of authority to impose charges for any movement of goods beyond the district borders. For instance, the district government collected IDR 50,000 (approximately USD 5.8) for a vehicle from each truck that transported timber from the district to the neighbouring region of Malaysia.⁴⁰ This levy was justified by the local government as monitoring mechanism on the cross-border timber trade.

Forestland conversions for other purposes, such as plantation and agriculture, have also increased since decentralisation. Much worse, there are many cases of unauthorised permits for converting forestland to plantations distributed by districts governments. Forests are also threatened by either small-scale or large-scale mining.⁴¹

These major challenges led to increased deforestation in Kapuas Hulu between 2002–2003 and 2005, when most of the forest cover loss occurred in production forests. Although the district stopped issuing HPHHs by mid-2002, forest conversion for either oil palm plantation or agriculture has continued to threaten forests. In Kapuas Hulu district, in 2007, the district government issued 21 permits for oil palm companies covering 254,500 ha.⁴²

³⁷ Ali Muhyidin and Masahide Horita, 'Decentralization of forest management in Indonesia: Its opportunities and challenges' (paper presented at the 15th International Research Symposium in Public Management, Dublin, 11–13 April 2011).

³⁸ Ibid.

³⁹ Christopher Barr et al., 'Decentralization of forest administration in Indonesia: Implications for forest sustainability, economic development and community livelihoods' (Bogor: Center for International Forestry Research [CIFOR], 2006).

⁴⁰ Ibid.

⁴¹ Ali Muhyidin and Masahide Horita, 'Decentralized governance of forestry sector in Indonesia' (paper presented at the 3rd Asian Conference in Social Sciences, Osaka, 3–6 May 2014).

⁴² Yayan Indriatmoko 'Local Community vs Oil Palm Plantation Company: Two Case Studies from West Kalimantan, Indonesia (paper presented at the CAPRI International Workshop on Collective Action, Property Rights, and Conflict in Natural Resources Management. Siem Reap, Cambodia, June 28th to July 1st, 2010).

Oil palm plantation: Development or conservation?

Oil palm plantations have expanded rapidly in Indonesia in the last decade, marking it as the country's second largest agricultural product after rice paddy. Large-scale oil palm monocropping has been one of the national strategies of agrarian expansion. Indonesia's palm oil production is projected to grow to 30 million tonnes by 2020.⁴³ The Indonesia Plantation Research Institute has proposed the expansion of oil palm plantation by 120,000–140,000 ha per annum.

Palm oil is Indonesia's most significant agricultural export. Indonesia is currently the world's largest producer of crude palm oil. As global demand for palm oil increases, palm oil industry in Indonesia has seen significant growth. Currently, oil palm plantations are managed by more than 600 industries.

In Kapuas Hulu, oil palm plantations have expanded from the east towards south and north, between the two national parks. Production of palm oil in the Kapuas Hulu district has increased every year such that, within five years, the production doubled between 2008 and 2012 (Table 4). Over the next 10 years, local governments plan to issue licenses for an additional 20 million ha for oil palm plantations.⁴⁴ The productions of palm oil in Kapuas Hulu district are supervised by nine companies under the Sinar Mas Group, which operates a total area of 159,500 ha.⁴⁵

Table 4: Production of palm oil (tonnes) in Kapuas Hulu district.

Year	Production
2008	8.651
2009	8.725
2010	11.513
2011	15.710
2012	17.751

Source: Badan Pusat Statistik (BPS), *Kalimantan Barat Dalam Angka 2013* (Pontianak: BPS Provinsi Kalimantan Barat, 2013).

From the economic development perspective, oil palm plantation undeniably brings significant benefit in the form of economic growth. Although it only contributed around 14 per cent to the Indonesian gross domestic product in 2008⁴⁶, it provided more than 41 per cent of employment for the country's population. Employment generated from palm oil plantation could potentially reach over 6 million lives. Palm oil industry also contributes to regional development, as a source of poverty alleviation through farm cultivation and downstream processing.⁴⁷

Oil palm plantations have also provided a new source of income for the local people.⁴⁸ Companies pay IDR 39,000 per day to daily labourers (equivalent to USD 3.5) and wages are paid twice a month. This income does not include compensation

⁴³ World Growth, 'The economic benefit of palm oil to Indonesia' (Arlington: World Growth, 2011), 15.

⁴⁴ Martua T. Sirait, 'Indigenous peoples and oil palm plantation expansion in West Kalimantan, Indonesia' (Amsterdam: Amsterdam University Law Faculty, 2009): 6–8.

⁴⁵ Laurio Leonald and Dominic Rowland, 'Drivers and effects of agrarian change in Kapuas Hulu Regency, West Kalimantan, Indonesia' in Liz Deakin, Mrigesh Kshatriya, Terry Sunderlan, *Agrarian change in tropical landscapes* (Bogor: Center for International Forestry Research [CIFOR], 2016).

⁴⁶ World Growth, 'The economic benefit of palm oil to Indonesia: A report by World Growth' (Arlington: World Growth, 2011), 4.

⁴⁷ *Ibid.* p. 5–12.

⁴⁸ Bayuni Shantiko et al., 'Socio-economic considerations for land use planning: The case of Kapuas Hulu, West Kalimantan' (CIFOR Working Paper No. 120, Bogor: Center for International Forestry Research [CIFOR], 2013).

given by the oil palm company if it wants to use the land owned by the local people. In Kapuas Hulu, the compensation paid by the company is IDR 250,000/ha (equivalent to USD 22.7). If the land is idle or owned by a communal society, the compensation is paid to the head of village to be distributed equally to members of the community.⁴⁹

However, if appropriate management does not accompany this expansion of agriculture in Indonesia, the impact will be harmful to the country's sustainable development. Expansion of oil palm plantations without considering conservation principles can lead to environmental and social problems. It contributes largely to the increasing carbon dioxide emissions and loss of biodiversity. Problems of agreement between parties are mostly caused by the lack of recognition of customary rights and it leads to environmental degradation.⁵⁰ In 2010, no less than 630 land disputes between palm oil companies and local communities had occurred in Indonesia.⁵¹

During an interview with one of the local leaders in the Badau border of Kapuas Hulu district, the informant stated:

We understand that the presence of oil palm has positive effects, such as employment and increased local income. We also feel that economic activities are more developed since then. But, oil palm also has negative effects, especially on water. The water becomes cloudy.

Based on a report from Fauna & Flora International, there are 54,656.54 ha of degraded land, which can be converted to oil palm plantation in Kapuas Hulu.⁵² However, in practice, much of the conversion is done by clearing forests, such as on the Badau border.⁵³ Plantations are also being opened in mangrove areas. Most of the licenses are usually issued in forest areas, as the timber obtained from forest clearing could be used to pay for the establishment of these plantations.

The biggest challenge for both central and local governments is how to improve economic development without causing major ecological impacts and hampering regional cooperation on conservation. As oil palm plantation is a significant contributor to regional economic growth, local governments need to pay more attention to the allocation of conversion lands. This requires extensive capacity building to formulate criteria for degraded or non-forest land for plantation investments and appropriate incentives to encourage plantation investors to use degraded lands.⁵⁴ Regulations on allocating areas within the conversion forest zone for clearing need to be enforced to limit the use of forested lands for plantation. Another important step is to strengthen collaboration between the central and local governments, particularly between the National Land Agency (Badan Pertanahan Nasional [BPN]), Ministry of Forestry, Ministry of Agriculture, and other stakeholders in provinces and districts to map and distribute degraded lands according to the law.

⁴⁹ Ibid.

⁵⁰ Bayuni Shantiko et al., 'Socio-economic considerations for land-use planning: The case of Kapuas Hulu, West Kalimantan' (*Working Paper 120*, Bogor: Center for International Forestry Research [CIFOR], 2013); Obidzinski et al., 'Environmental and social impacts of oil palm plantations and their implications for biofuel production in Indonesia', op. cit.

⁵¹ Krystof Obidzinski et al., 'Environmental and social impacts of oil palm plantations and their implications for biofuel production in Indonesia', *Ecology and Society* 17, no. 1 (2012): 25, <http://dx.doi.org/10.5751/ES-04775-170125>.

⁵² Yuyu Ramdhani, 'Degraded land for expansion of oil palm plantation in Ketapang and Kapuas Hulu district, West Kalimantan' (Jakarta: Fauna & Flora International, Indonesia Program, 2010).

⁵³ WALHI, 'Potret Buram Sawit Perbatasan', <http://www.walhi.or.id/publikasi/potret-buram-sawit-perbatasan>.

⁵⁴ Obidzinski et al., 'Environmental and social impacts of oil palm plantations and their implications for biofuel production in Indonesia', op. cit.

The opening of the Badau border in 2012

Badau is a subdistrict in Kapuas Hulu. It is located on the border of Lubuk Antu district, Serawak, Malaysia. The distance between Badau and Lubuk Antu is around 10 km, which is much closer than that between Badau and Putussibau, Kapuas Hulu's capital (around 120 km). Furthermore, the distance between Kuching-Lubuk Antu-Putussibau is around 460 km, which is less than the distance between Pontianak and Putussibau (around 750 km). Since October 2012, the Badau border has been officially open, and provides an opportunity for economic development and connectivity between Indonesia and Malaysia. However, it also challenges the progress of forest conservation.

Since Badau is geographically closer to Lubuk Antu, Sarawak, than to the capital of Kapuas Hulu, most daily needs can be easily obtained from Sarawak. For Lubuk Antu, Badau is the biggest market. The bond and connectivity are stronger since both populations are from the same subethnic group, which is *Dayak Iban*. As a result, communication and interaction is easy as they also use the same language.

Although, the border is officially open, neither country has implemented international trade policy for export and import nor are there taxes, customs and quarantine. Most of the cross-border transactions are limited and involve individual needs. However, a small number of people have sought benefits by illegally buying products, which are subsidised by the Malaysian government, such as gas, oil, sugar and rice.

The presence of oil palm plantation in Badau since 2007 increases economic and social activities in the region. One informant stated in the interview: 'Before Sinar Mas came, there was almost no economic activity. But since then, many workers came and followed by many shops, which are trying to fulfil their needs. When the workers receive their salary, they will spend it here'.

Although the economic benefit of oil palm plantation is visible, some people consider negative effects of the plantations, especially those related to water availability, which has become cloudy and undrinkable. Some people have begun to get water from Sarawak and, if the problem persists, they may need to buy drinking water as well.

The opening of the Badau border has potential detrimental impacts on the environment and livelihoods. Clearing tropical forests for development destroys the habitat of an enormous variety of animals and plants. It also creates burden for local communities that rely much on the forest as natural water reservoir and source of foods.

Marking the Opportunities

International initiatives and collaborations

One of the main characteristics of ecosystems is that they do not follow administrative or political boundaries. Policies and interventions on natural resources need to consider the interconnection of ecosystems, so that transboundary cooperation and integrated planning can become a new paradigm in modern conservation.

Transboundary conservation offers significant opportunities for more effective management, which includes an array of economic and sociopolitical benefits. However, since it involves more than one party for managing these conservation

areas, incompatible legal systems, political will, cultural sensitivity, different stages of economic development, and perhaps language barriers must be accommodated. Transboundary areas each have their own unique inimitable governance dilemmas.⁵⁵

Zbicz measured levels of cooperation in transboundary protected areas.⁵⁶ She concluded that the success of transboundary cooperation depends on the inclusion of all stakeholders and development of a supportive constituency. The day-to-day involvement and efforts of those at the local level will be crucial. International organisations and NGOs can equip protected areas, and facilitate nature conservation, as well as provide public education. Governmental cooperation could be implemented through integration planning and ecosystems based on eco-regional or bioregional management.⁵⁷

Transboundary cooperation on the Borneo island relies on bilateral agreement between Indonesia and Malaysia under the TBCA, as well as on multilateral cooperation, which includes these two countries and Brunei Darussalam under the HoB initiative.

TBCA had been sponsored by ITTO as a follow-up of Project PD 26/93 Rev.1 (F), 'Development of Bentuang Karimun Nature Reserve as a National Park – Phase I'.⁵⁸ The TBCA next aims to develop an effective model for managing a transboundary national park with LEWS. These activities were implemented by WWF Indonesia in collaboration with the Park Management Unit (PMU) of Ministry of Forestry, local governments, local communities and national experts from both countries.

There has been some notable progress as a result of this collaboration. The ITTO Borneo Biodiversity Expedition (IBBE) to the TBCA in 1997 was the first collaborative effort between the two host countries. In 2001, a joint task force was formed to implement joint patrol, staff exchange and exchange of visits of local communities.

BKNP was also a part of the HoB initiative, which was established in 2007. The HoB initiative is a transboundary effort to enable conservation and sustainable development that improves the welfare of those living on the island while minimising deforestation, forest degradation, and the associated loss of biodiversity and ecosystem services.⁵⁹ One of the major aims to establish a collective effort in managing forest areas in the HoB is to promote sustainable management of forest resources and conservation of a network of protected areas.

Kapuas Hulu is one of the pilot projects of the HoB initiative. The current initiative is payment for watershed services to maintain the forests. The conservation district, Kapuas Hulu, which is supported by WWF/CARE/IIED (International Institute for Environment and Development), also seeks to improve watershed management through incentive schemes and capacity building to assist village institutions in planning and implementing development programmes. Potential buyers include the Public Water Service (Perusahaan Daerah Air Minum [PDAM]) company, other

⁵⁵ William Wolmer, 'Transboundary protected area governance: Tensions and paradoxes' (paper presented at the fifth workshop on 'Transboundary Protected Areas in the Governance Stream' at the 5th World Park Congress, Durban, 12–13 September 2003).

⁵⁶ Dorothy C. Zbicz, 'Imposing transboundary conservation: Cooperation between internationally adjoining protected areas', *Journal of Sustainable Forestry* 17, nos. 1–2 (2003): 21–37.

⁵⁷ Ibid.

⁵⁸ International Tropical Timber Organization (ITTO), 'Promoting biodiversity conservation in Betung Kerihun National Park (BKNP) as the trans-boundary ecosystem between Indonesia and the state of Sarawak Malaysia (Phase III)', op. cit., 7.

⁵⁹ Heart of Borneo (HoB), 'About the HoB initiative', accessed 5 August 2014, <http://www.hobgreeneconomy.org/en/about/>.

districts along the Kapuas River, the provincial government and industries. The sellers, meanwhile, are communities living in and around BKNP. Further analysis of the requirements and revenue potential within this area is currently being undertaken.⁶⁰

Promoting conservation and development in border areas is not an easy task. Priorities, funding and management capacities vary between the partner nations. Government agencies and private-sector companies in both Malaysia and Indonesia, for instance, have different intentions with regard to the expansion of protected areas, including continued logging, large-scale agricultural development, increased smallholder agriculture, and also infrastructure and ecotourism development.⁶¹

Local communities of Kapuas Hulu also have different perceptions and different levels of awareness regarding the implementation of cooperation in conservation in the border areas. Some local communities perceive that conservation has interrupted their custom of using forests. Some adopt a passive stance when they see that conservation is important; yet do not involve in any conservation effort organised by the local government or NGOs. The rest show active support by being involved in forest management.⁶²

To sum up, conservation efforts still face insurmountable problems that need to be evaluated systematically. The two main threats for the sustainability of cooperation are illegal logging and wildlife poaching. TBCA could be used as an effective tool to bridge the political barrier related to the illegal logging practices. This may include joint activities for capacity-building purposes to monitor and reduce illegal logging and wildlife trade.⁶³ Capacity building is intended for not only the park staff but also the local people living near the conservation areas. Developing ecotourism is also important for minimising illegal activities in protected forests.

Ecotourism and development in border areas

Tourism and ecotourism create potential opportunities for border regions. Timothy et al. mention that some international borders and their neighbouring territories attract tourists for certain activities; hence, modified infrastructure is required. Tourism in the borderlands encourages cooperation between countries.⁶⁴

Adjacent areas between West Kalimantan and Sarawak provide useful examples of tourism across the border. For example, in 2010, 21,809 tourists (or, 85.8 per cent of total visitors) visited West Kalimantan through the Entikong border.⁶⁵ Visitor inflows to Sarawak from Indonesia was higher, at 417,072 people (or, 15.8 per cent of total visitors), of which around 200,000 visitors went to cross-border areas.⁶⁶ These numbers suggest that Sarawak was more attractive to visitors than West Kalimantan. The government of Indonesia has started to develop, promote and improve these

⁶⁰ 'A partnership approach to economic sustainability: Financing the Heart of Borneo', http://awsassets.worldwildlife.org/downloads/fl0010_g_financing_the_heart_of_borneo_1oct10.pdf.

⁶¹ Sarah L. Hitchner et al., 'Community-based transboundary ecotourism in the Heart of Borneo: A case study of the Kelabit Highlands of Malaysia and the Kerayan Highlands of Indonesia', *Journal of Ecotourism* 8, no. 2 (2009): 193–213.

⁶² Interviews with some local community leaders in Kapuas Hulu district, West Kalimantan, on 17 May 2014.

⁶³ Saleem H. Ali, 'Transboundary conservation and peace-building: Lessons from forest biodiversity conservation projects' (UNU-IAS Policy Report, Yokohama: United Nations University Institute of Advanced Studies [UNU-IAS] and International Tropical Timber Organization [ITTO], 2011).

⁶⁴ Dallen J. Timothy, Jaime Guiab, Nicolas Berthet. Tourism as a catalyst for changing boundaries and territorial sovereignty at an international border. *Current Issues in Tourism*. Volume 17, Issue 1 (2014): 21.

⁶⁵ Muazir and Hsieh, 'Borderlands and tourism development in Kalimantan island', op. cit., 7–8.

⁶⁶ Ibid.

tourism spots. The Kapuas Hulu district, in this regard, has increased its promotion of the Danau Sentarum-Betung Kerihun festivals to Sarawak and Brunei Darussalam.

BKNP has been established as a main destination of ecotourism in Kapuas Hulu. Nature tourism in Kapuas Hulu offers scenic beauty as well as adventure activities, such as fishing, canoeing, boating, cruising, photography, animal watching, camping and cave expeditions. To support this initiative, Kapuas Hulu ecotourism community (*Komunitas Pariwisata Kapuas Hulu* [KOMPAKH]) has been collaborating with the WWF to engage the special interest of tourists who will enjoy the nature and cultural experiences of BKNP, which includes ceremonies of traditional dance and musical instruments, visits to long houses and old cemeteries, observing traditional crafts, and hearing local wisdom.

KOMPAKH promotes tour packages through a number of websites. This has actually created some employment for the local people in jobs such as porters and cooks. However, according to the head of the district's tourism board, not many of local young people are interested in ecotourism-related occupations.⁶⁷ One of the reasons is that ecotourism activities do not benefit local people directly. There is also concern that not all areas are suitable to be developed for ecotourism.⁶⁸

Above all, ecotourism in Kapuas Hulu still needs to be broken down into more practical attempts by strengthening the capacity of local people to operate tourism packages. This needs to be followed up by improvements in accessibility, accommodation, sanitation and human resources. Another strategy could be to increase incentives for the ecotourism sector.

Ecotourism is a potential way for local governments to support regional development that relies on the fair and wise utilisation of natural resources. Both Indonesian and Malaysian governments need to enhance ecotourism to increase mutual understanding. This mutual understanding will be important for strengthening any transboundary conservation effort.

Findings and Conclusions

This research concludes that there are several factors that affect resource management in border regions. Sovereignty issues, oil palm plantations, government decentralisation and the opening of the Badau border tend to suspend the management process although their detrimental impacts still need further observation. On the positive side, transboundary cooperation and ecotourism offer prospective projects in strengthening resource governance.

Identifying the challenges and opportunities of resource management in the border area of Kapuas Hulu helps to answer the question of why any conservation effort in the border region has not performed effectively. To effectuate successful resource governance, decision-makers and related stakeholders need to observe and evaluate the roots of problems. This research also articulates how to optimise the opportunities and minimise the challenges associated with cross-border resource management.

To optimise the opportunities, capacity building of local people to raise their awareness of conservation is important, as they often fail to see the real value of such initiatives. However, capacity-building programmes will not bring any benefit

⁶⁷ Interview with Mr Darmawan, Head of Kapuas Hulu Tourism Board, on 16 May 2014.

⁶⁸ Ibid.

without political will from the governments. Transboundary cooperation on conservation will meet its demand only if there is a mutual understanding between Indonesian and Malaysian stakeholders. This mutual understanding could be achieved by regular joint activities and patrols to monitor shared forests.

To minimise the challenges, regulation reinforcement on reducing illegal activities in the forests and on allocating areas for clearing are fundamental. Another strategy is to strengthen collaboration between the central and local governments to map and distribute degraded lands according to regulations.

Empirical information about challenges and opportunities in border areas not only is imperative to strengthening any conservation work but also can be potentially used to identify the limit of governing resources in these areas. This research clarifies that, to make the conservation work in the border areas more effective, attention needs to be paid to local political, economic and institutional dynamics, as well as on how different interests compete and negotiate.