References


Catastrophe and Regeneration in Indonesia’s Peatlands: Ecology, Economy and Society

Kosuke Mizuno, Motoko S. Fujita, and Shuichi Kawai, eds.


Fires and haze have become regular events during the dry season in tropical areas in Southeast Asia, especially Indonesia. This is due mainly to government institutional failure in managing resource appropriation. Hence, existing solutions of command and control to mitigate the risk have not resulted in satisfactory results in analyzing the source and impacts (Glover and Jessup 1999; Varkkey 2016).

*Catastrophe and Regeneration in Indonesia’s Peatlands: Ecology, Economy and Society* reminds readers of the importance of the relationship between societies, institutions, and the environment in tropical settings before offering a recommendation. It shows that this relationship has been influenced by living strategies that formed through long periods of ethnic interaction, colonization, and independent state governance. The authors offer the concept known as the “Sustainable Humanosphere” to interpret this relationship and use grounded research to avoid study bias. The book then introduces the idea of developing “people forestry” in order to preserve peatlands while satisfying the economic needs of societies. These are the strong points of the book.

The book was written by 14 researchers who were in close contact with tropical societies in Indonesia. It is structured in three parts, with a total of 14 chapters excluding the introduction and epilogue. The first part attempts to explain biomass production in Southeast Asia. It gives an informative description of the tropical rainforest as intersectional beneficiary resource stock for
conservation, economic development, as well as a social motive for income survival. The first section also investigates the ways in which natural resources have been appropriated. It describes the governance of forest resources, which has been conducted by different regimes through the years in Southeast Asia. The first section also covers historical context, with appropriation trajectories of forested regions, including state agrarian policy, forest management, traditional agricultural practices, and large company projects.

Chapter 1 devotes special attention to the development of land policies and forest management in Indonesia since the days of Dutch colonization. It notes that to some extent, states have played a dominant role in the country’s land and forest management. During the Dutch occupation, the agrarian law with the specific principle known as domeinverklaring\(^1\) provided guarantees that enabled states to own the land. It also gave freedom to companies to lease state land for efficient and productive forest management. Before the policy was passed in 1870, the Dutch had also formed some institutions for more scientific forest management, passed regulations to manage excessive exploitation of timber forests in Java and Madura, abolished corvee labor or Blandong, and set up the Department of Forest Service. These institutions engaged in forest management in a way that was hostile to the community, as it demarcated forest boundaries, created maps, and specified expansion. Even so, it increased the tree forest.

This increased tree forest suffered from differences in forest management after Indonesian independence: through the Basic Forestry Act of 1967, all controlled forestland in the country was eligible for logging and industrial tree plantation. The act accelerated the process of deforestation in the country. Within this policy orientation, the state introduced a social forestry policy for the community as well as creating consensus on forest zoning.

Like Chapter 1, Chapters 2 and 3 also note the transformation of tropical forest, which has occurred mostly through the processes of degradation and afforestation. In order to promote an understanding of the processes, Chapter 2 introduces the biotic resource approach, which identifies the relationship of transformation between humans and the ecosystem with the process of modernization. This approach shows that hunter-gatherer lifestyles, swidden agriculture, commercial crops, transmigration, and forest fires are factors that influence forest degradation. In addition to this long observation, Chapter 2 proposes that afforestation through logging still allows some natural forest species to live. Therefore, it is necessary to have a nested conservation scheme. In addition, economic incentives such as payment for ecosystem services, forest certification systems, and the UN Collaborative Programme Reducing Emissions from Deforestation and Forest Degradation are also required to support initiatives for maintaining biodiversity.

Chapter 3 looks more deeply into the subject by evaluating the sustainability of reforested

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1) Domeinverklaring means that “all land which is not proved to be eigendom (subject to complete right of ownership of land possessed by European people) land shall be deemed the domain of the state” (p. 23).
areas through comparing the biomass stock of standing trees and biomass flow. Observations from acacia plantations between 2000 and 2005 show that secondary forest is sufficient to maintain the biomass balance. However, an assessment of carbon transfer through the decomposition process is necessary in order to see the complete balance. The authors of this chapter also suggest developing institutions and management that work in harmony with local communities and coexist with social forestry (pp. 112–114).

The second part of the book contains imaginative observations that take the reader from the tropical biomass region closer into peatland. As in the first part, the authors emphasize the necessity of recognizing basic knowledge of resource stock, native animals, and vegetation of peatland, as well as human relationships and the course of livelihoods from those resources in order to identify challenges and potential use of peatland. Recognition of resource stock and flow factors is important for regenerating degraded peatland. The author’s concern in Chapter 4 is that a basic level of knowledge is needed regarding plants and animals living in the peat swamp, as well as livelihoods and history of local inhabitants, in utilizing the peat swamp forest. This knowledge is required for peatland restoration as well as for the purpose of study in describing the peatland ecosystem.

This concern is partially addressed in Chapter 5 by tracing historical changes in the relationship between humans and peatlands. By focusing on Sumatra, Indonesia, as the observation site, Chapter 5 shows that river topography influences the distribution of local community settlements as well as trade commodities and patterns. The influx of migrants with different motives, foreign direct investment in petroleum, and Suharto’s developmentalist strategy of development are factors changing livelihood patterns.

This change is explained in detail in Chapter 6, where the authors highlight characteristics of peat swamps use by local communities in Riau. In order to describe the relationship between the local community and peatland, the Momose model, which is explained in a previous chapter, is used to classify villages in the peatland region. The authors note that during precolonial times, local communities regarded peatland as an extension of the ocean. It would require a huge investment for them to transform the area for production activities. This is not an incentive for Talang people living in the hinterland or in Pangkalan villages, other than collecting agricultural and forest products to use for economic activity. These products were sold in Muara villages at the confluence of the river. Laut people, inhabitants of fishing villages, would also trade their fishing and marine products. This relationship was broken with the arrival of migrants. At the present time, Pangkalan villages are an expansion area for palm oil plantations (p. 201).

Within this land use transformation of peatland for plantations and the phenomenon of abandonment due to decreasing productivity, Chapter 7 highlights rehabilitation of degraded peatland by reflecting on the implementation of Reducing Emissions from Deforestation and Forest Degradation with an addition of conservation (REDD+). Through examination of types of land use in
the conception of REDD+ and livelihood reproduction, it shows that natural and secondary forest has had the most effective greenhouse gas reduction, high biodiversity conservation, and land conservation. Therefore, it is necessary to conserve the remaining forest area. Meanwhile, plantations of rubber, palm oil, and fast-growing trees provide moderate greenhouse gas control but low biodiversity. Since these plantations are highly profitable, the system requires systematic management to prevent accelerated decomposition of peatland. In addition, swidden agriculture and the conversion of peatland for farmland activities should be minimized.

The third part of the book is concerned mostly with looking at the consistency of the approaches and definitions introduced in previous chapters, such as biomass production, resource stock and flow, nested conservation, peatland biodiversity, and the relationship of river topography, social economy livelihood, and social forestry thorough direct observation in the Giam Siak Bukit Batu (GSK-BB) Biosphere. GSK-BB is the first private-initiative conservation biosphere built in the peat swamp area. The surveyed areas, as explained in Chapter 8, are separated into two zones: the Bukit Batu River Estuary and Tanjung Leban Village. In the conception of Momose, these zones have characteristics allowing them to be classified as migrant and fishing villages. The first zones are rich in alluvial soil and have strategic locations as trade points. Most of the village area in this zone is an extension of the natural peat swamp reservation area and the Sinar Mas Forestry acacia plantation. Therefore, it is interesting that Chapter 12 looks at the biodiversity and land use in this area. As one of the first systematic studies on animal diversity in the peat swamp forest, this chapter shows that the population sum and biodiversity of birds and mammals in the acacia forest is lower compared to the natural forest. Separation between the natural forest in the protected areas and the wildlife reserve by canals is one of the factors in this lack of diversity (p. 373). Therefore, this chapter suggests the importance of internal patches of rubber forest to link natural forest and secondary forest. This link is important for the movement of birds for the process of ornitokori, or bird population rebuilding. Chapter 14 also observes local communities and their efforts at forest restoration. It shows that the surveyed households have a high motivation to participate in the conservation of the forest. However, this chapter also notes that this desire is influenced by socioeconomic factors (p. 415).

The second zone is mostly a peat swamp area that has extended up to the coastal area. With such important resources in this area, the remaining chapters try to investigate the process of land cultivation (Chapter 9), hydrological environment (Chapter 10), livelihood activities (Chapter 11), and production of biomass by corporations and small farmers (Chapter 13). Chapter 9 notes that land use change is caused by given social characteristics of the people in the area, which was primarily peat submerged under water with abundant timber resources on top of it (latent cause). Even during the existence of panglong or loggers, the majority of peatland was still intact. It was dramatically changed with the expansion of acacia and palm oil plantations (trigger cause). Chapter 10 especially highlights the changing hydrological cycle of peatland with the presence of the plan-
tations. It clarifies the climatic conditions of concentrated rainfall and the characteristic of groundwater levels in the peat swamp. Chapter 11 acknowledges that although palm oil plantations are at risk of burning, village people still invest their capital for future uncertain harvests. The chapter notes the potential of developing the area as people’s forestry for two indicators: the available abandoned land and potential diversion of source income from non-peatland cultivation. In addition to these, local knowledge of cultivating trees native to the peat swamp and openness to ethnic diversity show the existence of social capital for people’s forestry.

In the last section of the book, the authors provide an epilogue as a space to link the conception of the Humanosphere, which is explained in the introduction, and discussion as well as findings of the chapters. The epilogue also further elaborates recommended solutions for regenerating peat swamp through people forestry and by observing the harmonization of different motives of actors in the biomass production system.

Being an edited volume, this book suffers from consistency of writing structure in some chapters. Several chapters (1, 2, 4, 8, and 11) end strongly, with a conclusion as an answer to the main question or objective. Meanwhile, most of the chapters satisfy the readers by showing summaries. This book would be more neatly organized if problems such as redundancies of acknowledgements in Chapter 12 (p. 376) were omitted.

Apart from these issues, it is clear that the sustainable Humanosphere in biomass production requires harmonization of the motives of survival, profit, and conservation by different actors. Such harmonization can be achieved through the recommended conception of people forestry. Within people forestry, biomass society can live and maintain its relationship with the environment, companies can still earn profits, and the government as well as NGOs can be satisfied with conservation results. Framing the Indonesian government with a conservationist motive is intriguing, knowing that the highlighted Suharto development policy orientation is far from conservationist. An explanation of the government’s natural resource appropriation, supposedly in order to position it as a conservation agency, is missing in the book. Had it been included, it would bridge government conservation consciousness with particular implicit or explicit policies of the environmental protection trajectory in the various countries. This would clearly depict social forestry as the commonweal for actors in the sustainable Humanosphere (Warren and McCarthy 2009).

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References


Varkkey, Helena. 2016. The Haze Problem in Southeast Asia: Palm Oil and Patronage. New York:
In January 2016, Japan’s Emperor Akihito and Empress Michiko visited the Philippines as state guests. Mass media reported that the royal couple had wanted to visit the country as part of their pilgrimage for the victims of World War II. On January 28, the royal couple met with 86 second-generation (Nisei) Japanese descendants (Nikkeijin). The Nisei have lived extraordinarily difficult lives because of the war. Their Majesties politely listened to the stories the Nisei had kept for seven decades. Reading *Transforming Nikkeijin Identity and Citizenship: Untold Life Histories of Japanese Migrants and Their Descendants in the Philippines, 1903–2013* by Shun Ohno, we can imagine how precious this meeting was. It would probably not have been made possible without the persistent efforts of sincere journalists—as Ohno was—for decades to seek justice for the Nikkeijin in the Philippines (“Philippine Nikkei” in the book), particularly the Nisei. Journalists, together with concerned citizens and Nikkeijin associations, have demanded the Japanese government’s recognition of its war responsibility for the Nisei. Nisei (often forcibly) collaborated with—or were even conscripted into—the Japanese military in the Philippines during World War II but were abandoned thereafter; no chance of repatriation was given. They were exposed to the threat of ambush. They lost practically everything—family, property, job, opportunities for education—but received no compensation at all.

The book is a culmination of Ohno’s life work. It summarizes the history of Japanese male emigrants to the Philippines in the early twentieth century and that of their children and grandchildren until recent times. Their life has been tossed about by rapidly changing bilateral relations between Japan and the Philippines at each historical moment. At the same time, colonial and postcolonial Philippines throughout the twentieth century and beyond has been under the influence of the United States, and that has also affected the Philippine Nikkeijin in many ways.

As a journalist at that time, I wrote about the Philippine Nisei’s impoverished and miserable post-war lives without Japanese fathers, and pointed out the inescapable responsibility of the Japanese government for having invaded the Philippines, conscripted many mestizo Nisei as Imperial Japan’s soldiers and gunzoku [paramilitary personnel], and abandoned them without any assistance after the war. (pp. 129–130)