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Political Ecology and Socio-Ecological Conflicts in Southeast Asia

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INTRODUCTION

From July 2015 onwards, forest and peat fires raged once again in Indonesia, mainly on the remaining forests in Sumatra and Kalimantan. By the end of the year, acrid haze extended to the neighboring countries of Malaysia, Singapore, and Thailand, releasing CO_2 emissions equivalent to the annual emissions in Germany and driving a public health emergency across the region. Under the Haze Wave, everyday life in Indonesia was brought to a standstill, thousands of people were evacuated, and offices and schools were closed. Land clearance through slash and burn practices for industrial plantations that feed a massive global demand for palm oil and pulpwood were reported as the root cause of the fires (Balch, 2015; Osborn, Torpey, Franklin, & Howard, 2015).

The appropriation and control of land for these patterns of resource-based development – along with selective industrialization processes and rapid urbanization – have significantly contributed to economic growth in Southeast Asia. At the same time, the region – and especially marginalized groups – face the environmental and social costs of centuries of resource extraction (e.g., deforestation, water pollution, flooding, biodiversity loss, eviction of indigenous people or ethnic minorities, surge in urban poor) that give rise to resistance and conflicts against these forms of economic development. This special issue features a focus on such socio-ecological conflicts from a political ecology perspective. It brings together an interdisciplinary collection of expressions of conflict over land, forests, water, mining, and environmental assets, and discusses the power relations underlying these forms of contestation as well as the strategies of different actors to deal with the unequal outcomes of environmental and resource politics.

POLITICAL ECOLOGY, POWER RELATIONS, AND SOCIO-ECOLOGICAL CONFLICTS

In contrast to debates about natural scarcities, political ecology highlights the *societal* and *political* character of resource extraction and environmental impacts (Robbins, 2012). The interdisciplinary research agenda analyzes the appropriation of nature and the distribution and consumption of natural resources as an explicitly political process that is linked to social relations of ownership and

control (Bryant & Bailey, 1997; Neumann, 2005; Robbins, 2012). Society-nature relations hence evolve in historically and geographically embedded constellations that are linked to power, domination, and inequalities. Based on a political economy understanding, Bryant and Bailey (1997) conceptualize power as the "ability of an actor to control" (p. 39) the *access* to nature and natural resources as well as the access of other actors to these resources. Power is, then, the *control* that one person, social group, or state has over the access to and the distribution of natural resources of another person, social group, or state, both in material (e.g., control of access to land, natural resources, and environmental risks) and symbolic terms (e.g., control of access to knowledge systems and environmental discourses) (Pichler, 2016). Hence, the appropriation and transformation of nature is shaped by social relations of power and domination and the associated actors who control the access to natural resources (Wissen, 2015). As Blaikie and Brookfield (1987) put it: "one person's degradation is another's accumulation" (p. 14).

Focusing on the political character of environmental problems implies taking related conflicts into account. Conflicts serve "as a prime form and expression of politics" (Le Billon, 2015, p. 602) where underlying relations of power and domination, and (contradictory) interests are revealed. Whereas mainstream environmental research often strives for the prevention of conflicts, political ecologists challenge the depoliticization of environmental issues and highlight the emancipatory potential of contestation and conflict.

Over the last three decades, political ecology research has developed diverse conceptions of socio-ecological conflicts. Socio-ecological conflicts can be defined as struggles associated with the unequal access to, distribution of, and control over natural resources (e.g., land, water, forests) as well as ecological benefits and risks (Le Billon, 2015; Martinez-Alier, 2009; Peet & Watts, 2004; Pichler, 2016; Turner, 2004). Hence, "resource enclosure or appropriation" by powerful actors increases scarcities and accelerates conflict (Robbins, 2012, p. 200). Poststructuralist political ecologists have criticized this (Neo-)Marxist and structural explanation of power relations and conflicts (i.e., conflicts explained from political and economic hierarchies in vertically stratified societies), arguing for a more relational understanding of conflicts and power that evolves in assembled networks and rhizomes (Bennet, 2010; Rocheleau, 2015). Furthermore, feminist and postcolonial research has emphasized the role of culture and identity (evolving along intersectional lines of class, gender, ethnicity, religion, place, and colonial legacy) to understand the emergence of socio-ecological conflicts and struggles (Escobar, 2006; Nightinggale, 2011). The contributions in this issue employ a variety of these conceptions for understanding the contested nature of resource appropriation and control in Southeast Asia.

CONTESTED RESOURCES IN SOUTHEAST ASIA

For centuries, conflicts over the distribution and control of natural resources and ecological benefits have played a major role in Southeast Asia, from land occupations and resistance against dispossession from forests to opposition against mega-dams or mining sites (Hirsch & Warren, 1998). Land control, alienation, and dispossession have been central in land politics ever since colonial rule. Conflicts over land, that

is, the dispossession from and unequal distribution of land and the respective strive for nationalization of land and agrarian reforms, characterized all major revolutionary independence struggles in Southeast Asia from Indonesia to Vietnam and the Philippines (Borras, 2006; Lane, 2008; Moise, 1976). The subsequent years of mostly state-led development modernism and capitalist transformations through agricultural expansion (green revolution) and partial industrialization were characterized in many countries of the region by further large-scale land dispossession by central state institutions (e.g., Peluso, Afiff, & Rachmann, 2008, for Indonesia). The neoliberal turn in authoritarian states led to a further integration into the world market and intensified environmental impacts such as deforestation, pollution of waterways, degradation and conversion of agricultural land, and declining population of wildlife and biodiversity. In recent years, large-scale land acquisitions (denoted as land grabbing) for the production of export crops (for food, fuel, and fibre) have led to further enclosures and accelerated socio-ecological conflicts (Borras, Franco, Kay, & Spoor, 2011; Hall, 2011; Hall, Hirsch, & Li, 2011). In Indonesia, for example, oil palm plantations have expanded over 4.3 million ha of land since the turn of the millennium (Brad, Schaffartzik, Pichler, & Plank, 2015). In Vietnam, the boom crop coffee has spread over vast areas of land since the mid-1990s, when the country abruptly became the world's second-largest producer (Hall, 2011). In Laos and Cambodia, extensive amounts of land have been converted to plantations of fast-growing trees to serve the global demand for wood chips, pulp, and paper (Barney, 2009).

The contributions to this issue demonstrate that different groups of actors benefit from land politics and how these unequal power relations foster subtle or open forms of resistance. Rosanne de Vos examines a projected expansion of oil palm plantations in a village in West Kalimantan, Indonesia, and how a community succeeded to prevent the expansion in their area. Along the same vein, Yvonne Kunz, Jonas Hein, Rina Mardiana, and Heiko Faust address coping strategies of local communities against land dispossession in the course of large-scale agricultural expansion in Sumatra, Indonesia. Anne Hennings discusses the specific situation of large-scale land acquisitions in post-war Bougainville, Papua New Guinea, and develops a conceptual framework for the nexus of resistance, land acquisitions, and conflict transformation. In another case in point, Rosita Dewi analyzes current land grabbing strategies in the *Merauke Integrated Food and Energy Estate* (MIFEE) in the autonomous province of West Papua, Indonesia, and how corporate and government interests have taken possession of customary land for the expansion of industrial plantations. Rainer Einzenberger discusses the integration of Myanmar's resource-rich and unruly upland areas into state territory, the corresponding processes of land enclosures, and the growing importance of indigeneity as a new political discourse to oppose these strategies.

With similar dynamics to land-related conflicts, the control of forests has played a crucial role for colonial powers as well as in nation building processes and the expansion of capitalist development in Southeast Asia (Bryant, 1998, for Myanmar; Le Billon, 2000, for Cambodia; Leigh, 1998, for Malaysia; Peluso, 1992, for Indonesia; Vandergeest & Peluso, 1995, for Thailand). As highlighted by Le Billon's (2000) research on the interlinkage of forests and war politics, forest commodification and logging supported the capitalist transformation during the post-Khmer Rouge period in Cambodia. The mapping and categorization of state-controlled territories served

Suharto's authoritarian regime to establish control over land and forests in Indonesia (Peluso, 1992). The conflicts resulting from these enclosures address the establishment of timber plantations, the conversion of forest land for agricultural or industrial purposes as well as conservation projects that expel people from their lands and livelihoods (Corson, 2011; Osborne, 2011; Peluso, 2011). Regarding the latter, many political ecology studies reflect upon the quest for centralized state control of forests and its specific impact on indigenous peoples and ethnic minorities (Peluso & Vandergeest, 2001; Roth, 2004).

Recent years have seen new commodification dynamics – similar to the land grabbing phenomena – emerging from the appropriation and control of land and forests for allegedly 'green' and ecological purposes. "Green grabbing" (Fairhead, Leach, & Scoones, 2012) and associated conflicts emerge from the very policies and measures to deal with the environmental costs of industrialization and economic growth and include conflicts over conservation areas, payments for ecosystem services (e.g., REDD+), or agrofuels development (McCarthy, Vel, & Afiff, 2012, on green acquisitions in Indonesia; Pasgaard & Chea, 2013, on the social dimensions of REDD+ in Cambodia; Roth, 2004, on conservation policies and ethnic minorities in highland Thailand). In this issue, Nancy Peluso – in an interview with Melanie Pichler – reflects on the changing patterns of "political forests" in Southeast Asia, from state-led development to new instruments like REDD+. Kimberly Roberts analyzes the threatening dispossession of an ethnic minority community in northern Thailand and their "rooted networks" to retain access to a forest area proposed for a national park. Zachary Anderson reflects on the emerging green economy in Indonesia that materially and discursively shapes the new green appropriation of nature. In doing so, he focuses on the emerging environmental governance network in East Kalimantan, and the subtle ways in which actors align with or resist these strategies.

Mining has been another major source of socio-ecological conflicts in Southeast Asia, mainly in extractive regimes such as Indonesia and the Philippines. Indonesia is the leading exporter of coal by weight in the world (World Coal Association, 2016) and the Philippines represents the fifth richest country in mineral resources in the world, extracting nickel, gold, and copper (Department of Environment and Natural Resources, 2016). Mining conflicts mainly evolve from the negative environmental impacts and human rights abuses of extractive industries, often involving multinational corporations (Ballard & Banks, 2003). Environmental impacts are related to dam failure of tailings ponds and associated toxic contamination e.g., the ecological disaster of the Ok Tedi mine in Papua New Guinea (Ballard & Banks, 2003) or mercury exposure associated with gold mining in Philippine Mindanao or Indonesian West Papua (Appleton et al., 1999; Rifai-Hasan, 2009) or mercury exposure associated with gold mining in Indonesian West Papua (Rifai-Hasan, 2009) or Philippine Mindanao (Appleton et al., 1999). Human rights violations often stem from conflicts with indigenous people when mining sites expand to remote areas and indigenous populations face eviction and lose control over their land (Holden, Nadeau, & Jacobson, 2011, for the Philippines, Rifai-Hasan, 2009, for Indonesia). In recent decades, not only local protests but also separatist conflicts associated with autonomy endeavors in Southeast Asia revolved around mining, including the rebellion associated with Rio Tinto's copper and gold mine in the autonomous region of Bougainville, Papua New

Guinea, or the conflicts around the Freeport gold mine in the autonomous province of West Papua, Indonesia (Ballard & Banks, 2003). In this issue, Anne Hennings discusses the socio-ecological conflicts culminating in the uprising against the Panguna copper mine in Bougainville in the late 1980s and reflects on the implications of these assemblages for contemporary struggles against land grabbing in the autonomous region. Anna Fünfgeld evaluates the consequences and conflicts arising from urban coal mining in East Kalimantan's capital of Samarinda, Indonesia, and reflects on the role of the state in these conflicts. From a political economy perspective, Alvin Camba discusses the neoliberal restructuring of the Philippine mining regime since the 1980s that has shifted the terrains of struggle from protest in the streets into the domains of state agencies and scientific networks.

Water politics constitute another contentious terrain in current resource strategies. In recent years, socio-ecological conflicts have centered in the Mekong region that has seen an unprecedented shift from a Cold War front line to an integrated economic cooperation playground since the 1990s (Asian Development Bank, 2013; Bakker, 1999; Middleton, Garcia, & Foran, 2009). The World Bank and the Asian Development Bank have promoted the privatization of the Greater Mekong Subregion with a focus on large-scale hydropower development along the Mekong river. Political ecologists documented the commercialization of the water resources and the associated local livelihood losses (e.g., fisheries) as well as the further marginalization of local communities through scientific expertise and capitalization, especially in Laos and Cambodia (Goldman, 2004; Molle, Foran, & Kakonen, 2012). Furthermore, the increasing regional integration has fostered transborder mobilization and conflicts over the unequal distribution of costs and benefits related to large-scale dams, for example, dam construction in Laos to feed the energy demand in Thailand (Middleton, 2012; Sneddon & Fox, 2006). Already in the 1980s, similar developments raised awareness in Indonesia, where an anti-dam movement formed against the Kedungombo dam in Central Java (Aditjondro, 1998). Somehow connected but on a different front, political ecologists have turned to flooding and the unequally distributed vulnerabilities to floods that have intensified due to climate change, and stream control associated with rapid urbanization and economic growth (Pelling, 1999; Ranganathan, 2015). In this issue, Lukas Ley analyzes flood management in urban Central Java, Indonesia, and the specific forms of dealing with the ecological crisis that evolved in poor communities in the coastal city of Semarang.

Political ecology research has documented the diverse forms of resistance and contestation associated with the asymmetric power relations in the control of nature and natural resources, ranging from legal strategies and peaceful protests (e.g., civil disobedience, boycotts, strikes) to violent rebellion or more subtle weapons of the weak. These latter forms of resistance are especially important in authoritarian contexts where open confrontation might be especially dangerous. According to Scott (1985), this "everyday form of resistance" is often fought with 'ordinary' weapons such as "foot dragging, dissimulation, false compliance, pilfering, feigned ignorance, slander, arson, sabotage, and so forth" (p. 29). In recent years, poststructuralist political ecologists have contributed to and expanded Scott's work and conceptualize the emergence of resistance in "rooted networks" (Rocheleau & Roth, 2007) that connect territory, power, and ecology and allow for an exploration of subtle and polycen-

tric actions that resist dominant powers. For the Southeast Asian context, Malseed (2008) documented informal inter-community action and solidarity amongst Karen villagers in authoritarian Myanmar that enable control over land and livelihoods where formal organization is difficult. Peasants, for example, illegally harvest forest products or plantation crops and village heads often underreport crop harvests or other resources to meet livelihood needs. In this issue, Kimberly Roberts uses the concept of rooted networks to analyze the organizing efforts of an ethnic minority village in northern Thailand through networking between villages, creating counter maps, establishing community forestry, and collaborating with civil society and local government to retain forest access.

In recent years, judicial strategies to counter increasingly "licensed exclusions" (Hall et al., 2011, p. 27) or "legal dispossession" (Pichler, 2015) have gained importance. These include, for example, counter-mapping activities (e.g., participatory mapping) of indigenous peoples against land grabbing processes or the filing of law suits for human rights adherence regarding the appropriation of natural resources. In this issue, Rosita Dewi analyzes participatory mapping and the potential pitfalls of this strategy in the MIFEE project in West Papua, Indonesia. Yvonne Kunz et al. examine how local communities in Jambi, Indonesia, mimic formal legal practices of land formalization to prevent dispossession from and conflicts over land.

THE TRANSFORMATIVE NATURE OF CONFLICTS?

Much political ecology research highlights the potential of socio-ecological conflicts for the rupture or defeat of unequal power relations and structures of domination – as if conflicts were intrinsically about social justice and change. The above presented insights on the subtle, complex, and rooted forms of resistance challenge these assumptions and call for a closer look on both transformative and stabilizing strategies. Research on socio-ecological conflicts also shows that actions and strategies that question the current forms of appropriation of nature and natural resources do not necessarily transform society-nature relations but may be coopted and therefore alter power relations in complex ways. Rosita Dewi shows these processes with regard to the use of participatory mapping in West Papua. Whereas NGOs introduced the strategy as an important tool to support a community's fight against land grabbing, it has simultaneously enabled the establishment of a land market through the formalization of land tenure and encouraged land leases to corporations and the local government. The contribution also points to the ambivalent role of NGOs. Whereas NGOs are frequently celebrated as 'rescuers' of societal and environmental problems, the role of NGOs in the course of participatory mapping in this particular case shows that their contribution to either progressively transform or legitimize power asymmetries depends on multiple factors (e.g., community capacity, involvement in policy processes). Providing another example of coping strategies, Lukas Ley discusses a local flood management project in Semarang, Indonesia, and the subtle conflicts arising from it. Instead of creating the conditions for radical change, flood-related conflicts simply allow some individuals and collectives to produce the conditions necessary to 'endure' situations of social instability and uncertainty. Conflicts take the shape of silent critique that never erupts onto the political stage but is moderated by local

communities (and their representatives) themselves. This is especially true for marginalized urban communities, for whom ecological crisis (materialized through daily flooding of their houses) is chronic rather than temporary.

To explain the relative stability and the co-option of socio-ecological conflicts and strategies despite inherent contradictions, power relations, and inequalities in capitalist society-nature relations, political ecologists resort to critical state and hegemony theory to reflect on the role of institutions and more specifically of the state in stabilizing the control of nature and natural resources. Following Gramsci, the state is a terrain where conflicting and contested interests are stabilized via hegemonic political projects (Brand, 2013; Brand & Wissen, 2013; Gramsci, 1971; Jessop, 1990). In hegemonic projects, particular groups of actors are able to generalize their particular interests and frame them as the 'general good' (e.g., the extraction of natural resources to boost economic growth or the eviction of 'illegal' residents for urban infrastructural development). This generalization of particular interests is not necessarily enacted through coercion but through consensus, that is, these particular interests and strategies are accepted by the majority of the people (Pichler, 2015). Hegemony therefore requires alliances between elites (e.g., plantation or mining companies, local landowners, regional banks) and the broader population (e.g., workers, peasants, indigenous people, urban poor) and (material) concessions to meet the latter's interests. These may comprise the inclusion of smallholders in the course of oil palm expansion or wage increases for miners in order to prevent strikes (Camba, 2016; Pichler, 2015).

Despite examples and tendencies of co-option and the stabilizing effects of current society-nature relations, the role of socio-ecological conflicts as expressions of politics make them a reference point for any transformative strategy and practice. In his research on workers' struggles in Malaysian oil palm plantations, Pye (2015) shows that everyday forms of resistance by workers offer possibilities of empowerment and collective action. Going beyond consumer-oriented campaigning and connecting an organized labor movement with environmental justice claims may open up new opportunities for transformation. In this issue, Rosanne de Vos examines a land conflict related to oil palm plantations in West Kalimantan that erupted into violence and eventually led to the rejection of the planned plantation. She focuses on the multiple functions of land for local communities (e.g., food security, income stability, flexibility to respond to crises and opportunities) that villagers saw threatened through the oil palm plantation project and the mobilizing effect of these functions to reject the plantation project. Kimberly Roberts analyzes more subtle achievements by highland communities in Thailand that up to now have retained their de facto access to forest resources against several threats of eviction. She argues that these are not the result of open confrontation or isolated mobilizations but that these efforts have been successful due to networked activities and negotiation processes in an assemblage of relations.

In sum, the contributions in this issue highlight the complex and diverse forms of socio-ecological conflicts in Southeast Asia that constantly transform society-nature relations in unpredictable and often contradictory ways. Thereby they also show the transformative potential of collectively mobilizing people, even in the most marginalized and seemingly powerless contexts.

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REFERENCES

Aditjondro, G. J. (1998). Large dam victims and their defenders: The emergence of an anti-dam movement in Indonesia. In P. Hirsch & C. Warren (Eds.), *The politics of environment in Southeast Asia: Resources and resistance* (pp. 29-54). London: Routledge.

Appleton, J. D., Williams, T. M., Breward, N., Apostol, A., Miguel, J., & Miranda, C. (1999). Mercury contamination associated with artisanal gold mining on the island of Mindanao, the Philippines. *Science of the Total Environment, 228*(2), 95-109.

Asian Development Bank. (2013). *Assessment of the Greater Mekong Subregion energy sector development: Progress, prospects, and regional investment priorities*. Mandaluyong City: Asian Development Bank.

Bakker, K. (1999). The politics of hydropower: Developing the Mekong. *Political Geography, 18*(2), 209-232.

Balch, O. (2015, November 11). Indonesia's forest fires: Everything you need to know. *The Guardian*. Retrieved from http://www.theguardian.com/sustainable-business/2015/nov/11/indonesia-forest-fires-explained-haze-palm-oil-timber-burning

Ballard, C., & Banks, G. (2003). Resource wars: The anthropology of mining. *Annual Review of Anthropology, 32*, 287-313.

Barney, K. (2009). Laos and the making of a 'relational' resource frontier. *The Geographical Journal, 175*(2), 146-159.

Bennett, J. (2010). *Vibrant matter. A political ecology of things*. Durham: Duke University Press.

Blaikie, P., & Brookfield, H. (1987). *Land degradation and society*. London: Methuen.

Borras, S. M. (2006). The Philippine land reform in comparative perspective: Some conceptual and methodological implications. *Journal of Agrarian Change 6*(1), 69-101.

Borras, S. M., Franco, J. C., Kay, C., & Spoor, M. (2011). *Land grabbing in Latin America and the Caribbean viewed from broader international perspectives*. Santiago de Chile: FAO.

Brad, A., Schaffartzik, A., Pichler, M., & Plank, C. (2015). Contested territorialization and biophysical expansion of oil palm plantations in Indonesia. *Geoforum, 64*, 100-111.

Brand, U. (2013). State, context and correspondence. Contours of a historical-materialist policy analysis. *Austrian Journal of Political Science, 42*(4), 425-442.

Brand, U., & Wissen, M. (2013). Crisis and continuity of capitalist society-nature relationships. The imperial mode of living and the limits to environmental governance. *Review of International Political Economy, 20*(4), 687-711.

Bryant, R. (1998). The politics of forestry in Burma. In P. Hirsch & C. Warren (Eds.), *The politics of environment in Southeast Asia: Resources and resistance* (pp. 107-121). London: Routledge.

Bryant, R. L., & Bailey, S. (1997). *Third world political ecology*. London: Routledge.

Camba, A. A. (2016). Philippine mining capitalism: The changing terrains of struggle in the neoliberal mining regime. *Austrian Journal of South-East Asian Studies, 9*(1), 69-86.

Corson, C. (2011). Territorialization, enclosure and neoliberalism: Non-state influence in struggles over Madagascar's forests. *Journal of Peasant Studies, 38*(4), 703-726.

Department of Environment and Natural Resources. (2016). *Mineral resources*. Quezon City. Retrieved from http://www.denr.gov.ph/news-and-features/latest-news/16-mineral-resources.html

Escobar, A. (2006). Difference and conflict in the struggle over natural resources: A political ecology framework. *Development, 49*(3), 6-13.

Fairhead, J., Leach, M., & Scoones, I. (2012). Green grabbing: A new appropriation of nature? *Journal of Peasant Studies, 39*(2), 237-261.

Goldman, M. (2004). Eco-governmentality and other transnational practices of a 'green' World Bank. In R. Peet & M. Watts (Eds.), *Liberation ecologies: Environment, development, social movements* (pp. 166-192). Oxon: Routledge.

Gramsci, A. (1971). *Selections from the prison notebooks*. New York: International Publishers.

Hall, D. (2011). Land grabs, land control, and Southeast Asian crop booms. *Journal of Peasant Studies, 38*(4), 837-857.

Hall, D., Hirsch, P., & Li, T. M. (2011). *Powers of exclusion. Land dilemmas in Southeast Asia*. Singapore: NUS Press.

Hirsch, P., & Warren, C. (Eds.). (1998). *The politics of environment in Southeast Asia: Resources and resistance*. London: Routledge.

Holden, W., Nadeau, K., & Jacobson, R. D. (2011). Exemplifying accumulation by dispossession: Mining and indigenous peoples in the Philippines. *Geografiska Annaler: Series B, Human Geography, 93*(2), 141-161.

Jessop, B. (1990). *State theory: Putting the capitalist state in its place*. Cambridge: Polity Press.

Lane, M. (2008). *Unfinished nation. Indonesia before and after Suharto*. London: Verso.

Le Billon, P. (2000). The political ecology of transition in Cambodia 1989-1999: War, peace and forest exploitation. *Development and Change, 31*(4), 785-805.

Le Billon, P. (2015). Environmental conflict. In T. Perreault, J. McCarthy, & G. Bridge (Eds.), *The Routledge handbook of political ecology* (pp. 598-608). London: Routledge.

Leigh, M. (1998). Political economy of logging in Sarawak, Malaysia. In P. Hirsch & C. Warren (Eds.), *The politics of environment in Southeast Asia: Resources and resistance* (pp. 93-106). London: Routledge.

Malseed, K. (2008). Where there is no movement: Local resistance and the potential for solidarity. *Journal of Agrarian Change, 8*(2–3), 489-514.

Martinez-Alier, J. (2009). Social metabolism, ecological distribution conflicts, and languages of valuation. *Capitalism Nature Socialism, 20*(1), 58-87.

McCarthy, J. F., Vel, J. A., & Afiff, S. (2012). Trajectories of land acquisition and enclosure: Development schemes, virtual land grabs, and green acquisitions in Indonesia's Outer Islands. *Journal of Peasant Studies, 39*(2), 521-549.

Middleton, C. (2012). Transborder environmental justice in regional energy trade in mainland South-East Asia. *Austrian Journal of South-East Asian Studies, 5*(2), 292-315.

Middleton, C., Garcia, J., & Foran, T. (2009). Old and new hydropower players in the Mekong region: Agendas and strategies. In F. Molle, T. Foran, & M. Kakonen (Eds.), *Contested waterscapes in the Mekong region: Hydropower, livelihoods and governance* (pp. 23-54). London: Earthscan.

Moise, E. E. (1976). Land reform and land reform errors in North Vietnam. *Pacific Affairs, 49*(1), 70-92.

Molle, F., Foran, T., & Kakonen, M. (2012). *Contested waterscapes in the Mekong region: Hydropower, livelihoods and governance*. London: Earthscan.

Neumann, R. P. (2005). *Making political ecology*. London: Hodder Education.

Nightinggale, A. (2011). Bounding difference: Intersectionality and the material production of gender, caste, class and environment in Nepal. *Geoforum, 42*, 153-162.

Osborn, M., Torpey, P., Franklin, W., & Howard, E. (2015, December 1). Indonesia forest fires: How the year's worst environmental disaster unfolded – Interactive. *The Guardian*. Retrieved from http://www.theguardian.com/environment/ng-interactive/2015/dec/01/indonesia-forest-fires-how-the-years-worst-environmental-disaster-unfolded-interactive

Osborne, T. (2011). Carbon forestry and agrarian change: Access and land control in a Mexican rainforest. *Journal of Peasant Studies, 38*(4), 859-883.

Pasgaard, M., & Chea, L. (2013). Double inequity? The social dimensions of deforestation and forest protection in local communities in Northern Cambodia. *Austrian Journal of South-East Asian Studies, 6*(2), 330-355.

Peet, R., & Watts, M. (2004). *Liberation ecologies. Environment, development, social movements*. 2nd edition. London: Routledge.

Pelling, M. (1999). The political ecology of flood hazard in urban Guyana. *Geoforum 30*(3), 249-261.

Peluso, N. L. (1992). *Rich forests, poor people: Resource control and resistance in Java*. Berkeley: University of California Press.

Peluso, N. L. (2011). Emergent forest and private land regimes in Java. *Journal of Peasant Studies, 38*(4), 811-836.

Peluso, N. L., & Vandergeest, P. (2001). Genealogies of the political forest and customary rights in Indonesia, Malaysia, and Thailand. *The Journal of Asian Studies, 60*(3), 761-812.

Peluso, N. L., Afiff, S., & Rachmann, N. F. (2008). Claiming the grounds for reform. Agrarian and environmental movements in Indonesia. *Journal of Agrarian Change, 8*(2-3), 377-407.

Pichler, M. (2015). Legal dispossession: State strategies and selectivities in the expansion of Indonesian Palm oil and agrofuel production. *Development and Change, 46*(3), 508-533.

Pichler, M. (2016). What's democracy got to do with it? A political ecology perspective on socio-ecological justice. In M. Pichler et al. (Eds.), *Fairness and justice in natural resource politics* (pp. 34-52). London: Routledge.

Pye, O. (2015). Transnational space and workers' struggles. Reshaping the palm oil industry in Malaysia. In K. Dietz, B. Engels, O. Pye, & A. Brunnengräber (Eds.), *The political ecology of agrofuels* (pp. 186-201). New York: Routledge.

Ranganathan, M. (2015). Storm drains as assemblages: The political ecology of flood risk in post-colonial Bangalore. *Antipode 47*(5), 1300-1320.

Rifai-Hasan, P. A. (2009). Development, power, and the mining industry in Papua: A study of Freeport Indonesia. *Journal of Business Ethics, 89*(2), 129-143.

Robbins, P. (2012). *Political ecology*. 2nd edition. Chichester: Wiley-Blackwell.

Rocheleau, D. (2015). Roots, rhizomes, networks and territories: Reimagining pattern and power in political ecologies. In R. L. Bryant (Ed.), *The international handbook of political ecology* (pp. 70-88). Cheltenham: Edward Elgar.

Rocheleau, D., & Roth, R. (2007). Rooted networks, relational webs and powers of connection: Rethinking human and political ecologies. *Geoforum, 38*(3), 433-437.

Roth, R. (2004). On the colonial margins and in the global hotspot: Park-people conflicts in highland Thailand. *Asia Pacific Viewpoint, 45*(1), 13-32.

Scott, J. C. (1985). *Weapons of the weak: Everyday forms of resistance*. New Haven: Yale University Press.

Sneddon, C., & Fox, C. (2006). Rethinking transboundary waters: A critical hydropolitics of the Mekong basin. *Political Geography, 25*(2), 181-202.

Turner, M. D. (2004). Political ecology and the moral dimensions of 'resource conflicts': The case of farmer–herder conflicts in the Sahel. *Political Geography, 23*(7), 863-889.

Vandergeest, P., & Peluso, N. L. (1995). Territorialization and state power in Thailand. *Theory and Society, 24*(3), 385-426.

Wissen, M. (2015). The political ecology of agrofuels: Conceptual remarks. In K. Dietz, B. Engels, O. Pye, & A. Brunnengräber (Eds.), *The political ecology of agrofuels* (pp.16-33). New York: Routledge.

World Coal Association. (2016). *Coal market and prices*. Retrieved from http://www.worldcoal.org/coal/coal-market-pricing

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