Fishing In, Fishing Out: Transboundary Issues and the Territorialization of Blue Space*

Dedi S. Adhuri** and Leontine E. Visser***

I. Introduction

In this paper, we consider transboundary access to and appropriation of resources as a part of the territorialization of space by the state. This implies that environmental concerns about transboundary resource access are seen as inherently social and political in nature, and that they will be approached as processes of human interaction and decision making regarding the environment.

Scientific concerns about transboundary access to nature and natural resources are relatively recent, and appear to be triggered by several parallel developments, both within the sciences as well as in the physical and social world "out there". Firstly, there is a growing interest in, hence scientific analysis of the global mobility of goods, services, and knowledge, including both human and natural resources as commodities through transnational chain networks. Ranging from social and economic food chain research and the transboundary spread (or "pollution") of genetically-modified crops from the USA into Mexico, to human trafficking from Asia and Eastern Europe into Northwestern Europe, these studies concentrate on the environmental and economic or the social, economic, and political aspects of resource mobility. Transboundary mobility is shown to be a multiple-scale

---

* Revised version of the paper presented at the International Workshop on "Transboundary Environmental Issues in Southeast Asia", held by Center for Asia-Pacific Area Studies (CAPAS) and International Institute for Asian Studies (IIAS), November 16-17, 2006, Academia Sinica, Taipei, Taiwan.

** Post-Doctoral Fellow, The WorldFish Center, Penang, Malaysia.

*** Professor and Chair, Rural Development Sociology Group, Wageningen University (WUR), the Netherlands.

phenomenon that is global in the sense that it often takes place beyond the control of state and international institutions or - within state boundaries – of decentralized provincial and district governing agencies. However, we may have to specify this apparent "lack" of control of government agencies.

Transboundary resource capture is a historical fact, especially in Southeast Asia, that for a long time was neither the concern of states nor of international communities of interest, like in the case of transboundary fisheries in Southeast Asia where there is an age-old movement of certain groups of collectors from reef to reef that accelerated as prices rose and stocks of certain species quickly depleted in one area after another, for example in the case of trochus shell (Butcher 2004: 274). But since the late 1800s it did become a state concern, for example when the Australian authorities passed a regulation that all Indonesian fishing vessels operating in Australian waters should have a license. On paper it was said that the regulation was meant to protect Australian aborigines from the bad influence of the Indonesian fishermen with regard to diseases and alcoholism. But in practice the regulation was meant to protect Australian fisheries business, as well as to mark the boundaries of the Australian state (Macknight, 1976). In other cases, the application of new technologies challenged the control by the state of "fishing out" practices. For example, in the case of the expansion of Japanese fisheries in Southeast Asian waters from the late 1800s to the 1930s (Butcher 2004: 73). Recently, the issue is not only whether central state control is lacking, but also that decentralized governments may be "lax" to control transboundary fisheries on purpose, because its revenues support the regional economy. For example in the case of Eastern Indonesians "fishing out" into the Australian Fishing Zone to capture large mounts of shark (fin)s. Their catches are not only illegal, but often there is a significant tendency to underreport the amount of catch to avoid taxes and fees (Fegan 2003; Fox, Adhuri, Therik and Carnegie 2006).

Secondly, during the last decades environmental concerns have been socialized, and social concerns have been environmentalized. National states, financially and morally supported by international environmental organizations and their discourses, are stressing the need for action to conserve land-based species and landscapes, like tropical forests. Agrawal speaks of the "governmentalization of the environment" as the creation, activation, and execution of new procedures for surveying, demarcating, consolidating, protecting, planting, managing, harvesting, and marketing of forestry (Agrawal 2005: 12). Now it seems to be the turn of the sea to become a government project. The parallel developments of the concern for sustainable fishery systems (Charles 2001) and the increased commercial exploitation of the sea (Worm, Barbier, Beaumont, Duffy, Folke, Halpern, Jackson, Lotze, Micheli, Palumbi, Sala, Selkoe, Stachowicz and Watson 2006: 790) have placed the alleged need for marine resource management on national and international political agendas. Marine species and marine environments issues are now recognized by an international environmentalist movement, as was shown in the international political plea for the establishment of Marine Park Areas in favor of the conservation of marine species by establishing MPAs as no-go places excluding fishermen, in the Johannesburg Declaration of the United Nations in 2002.

Thirdly, the popularity of the term transboundary shares the theoretical and methodological dangers with other "hot" terms, that it may create blurred definitional boundaries between social processes that are invariably called transboundary, transborder, and transnational. What they have in common is the prefix trans- which places the notion and perspective of the state centre-stage (cf. Visser 2004). Resource access and appropriation is seen to take place across national borders and beyond institutional boundaries, but not necessarily outside the boundaries of a resource or ecological system. Thus, the term exhibits the social construction of environmental space and, more in particular, the social construction of the environment as seen by the state (cf. Scott 1998). Indeed, the recognition of national (or sub-national)

geographical, administrative, and political boundaries is conditional to the labeling of certain action as transborder or transboundary, and the term has recently gained popularity with geographers, sociologists, political scientists, and environmental scientists.

However, anthropologists recognize both the perspective of the state and of non-state actors. What is labeled as transboundary resource appropriation at state level, does not necessarily have the same meaning for a local Indonesian crew who are engaged in tuna or shrimp fisheries off the Northeast coast of Kalimantan on a trawler owned by a Chinese broker, and selling their produce on a nearby Malay market (see case study below). To them, the wealth of the Sulawesi Sea is what matters to their livelihood, whether their action is labeled "illegal" or not following state laws and regulations. Moreover, the transboundary livelihood of the Indonesian fishermen living in Kalimantan, including their patronage network (Chinese historical-migrant boss), technical conditions (Malay-owned trawl and gear) and economic practices (marketing in a Malay border town where the Ringgit is much stronger than the Indonesian Rp.) has many strategic opportunities for them that the Indonesian state may not recognize as such. Thus, we should be careful in applying the term transboundary unless we explicitly take the perspective of the state rulers, disregarding the views and values of the resource appropriators themselves. Here, we choose to put them first in the analysis of two cases. The first case study is about the "fishing in" for shrimps into the Indonesian waters Northeast of Kalimantan by Malay-owned trawlers. The second case study deals with the "fishing out" of Eastern Indonesian poor fishermen into Australian Fishing Zone. Both cases are examples of transboundary marine fisheries, but they differ in social, historical, economic, and political conditions and contextualization. Moreover, the use of both case studies allows us to show the multiple meanings of the term transboundary as a part of the territorialization of the marine environment as a governmental project.

II. Territorialization of the Blue Environment

In their paper on territorialization and state power in Thailand, Vandergeest and Peluso (1995: 387) consider territorialization as the state's territorial strategies to control people and their relations to land-based resources. They are concerned with the internal territorialization of state power and its relation to the allocation and realization of resource access rights (idem). In this paper we further elaborate on their study on forestry (1) by expanding the subject of territorialization to include the control of people and their relations to marine resources, and (2) by examining whether similar processes of territorialization can be observed at multiple scales, including the central state and its provincial and district governments, and whether the rationales and decisions differ according to governance contexts. Similarly, we do not intend to write on the political economy of space, focusing on the spatial distribution of economic activities and the spatial strategies of capital (cf. Castells 1996; or the migration literature on remittance, e.g. Russell 1986) nor on resource systems (Ostrom 1990; Charles 2001; Folke 2006).

The state project of territorial control over people and their access to natural resources has expanded, particularly over the last two decades, by including the marine environment and marine resources. There are many interesting comparisons to be made between the territorialization of forestry and marine resources as an internal strategy of the central state or of decentralized state governments. Sometimes, like in our first case, we shall see that internal territorialization strategies may indeed be instrumental to external boundary marking between states. Decentralization of governance in Indonesia and elsewhere in Southeast Asia has added a highly relevant condition to the practice of internal territorialization, and challenges neo-institutionalist approaches (Fox, Adhuri, and Resosudarmo 2005; Hadiz 2004; Hidayat and Firdausy 2003). Decentralization increases the strategic actions of central, provincial, and district governments of staking claims to access and control of environmental wealth. This leads to more rather than

less internal territorialization and competing claims over resources within state boundaries, resulting in a boom of boundary marking and zonation that is not only frustrating to those who have to live off the sea, but it also further alienates the state actors from the resource appropriators.

Although the term transboundary may be a bit confusing, the key concern here are the governance strategies to claim access and control over resources in certain (physical) spaces that are beyond the boundaries of their district or provincial governance realm, but still internal to the state. Therefore, we regard transboundary resource access and appropriation primarily as a strategy of internal claim making and control over both human resources or people and their access to natural resources. Nevertheless, internal territorialization by decentralized governments may very well support central state strategies for external, geopolitical, boundary marking.

Where authors like Agrawal (2005) today write in terms of governance strategies in Foucauldian terms of technologies of "environmenmentality", statements about similar processes have already been made two decades ago. Sack pointed out (1986, cited in Vandergeest and Peluso 1995: 387-388, 419) that territoriality is "the attempt by an individual or group to affect, influence, or control people, phenomena, and relationships by delimiting and asserting control over a geographic area". It might be relevant to highlight the social process of territorialization, and to study how such control works by proscribing or prescribing specific activities within spatial boundaries. But it seems equally relevant to see what happens if these activities are purposely extended beyond certain spatial boundaries, into a marine space that does not politically and legally belong to the state, and yet these actions are legitimized - explicitly or implicitly - by the state's institutions? For example in the case of Kalimantan transboundary trawl fisheries, where institutional and individual actors from provincial and district governments, the military, and private businessmen are all involved in the legitimation and legalization of transboundary fisheries (see case 1).

Given the definition of territorialization as an internal state governance technology, it does not matter in principle whether these actions are taking place within or outside state borders. So, transborder or transboundary resource access and appropriation are indeed a part of strategies of territorialization, either by purposeful involvement of state actors or, for reasons of internal politics (Hadiz 2004) by exhibiting a seemingly *laissez faire* attitude towards practices that are legally and politically across boundaries, like in our second case study.

Vandergeest and Peluso (1995) focus their analysis on state actors and strategies. In this paper, we want to show that this process of internal boundary making and marking follows different paths and rationales from those of the resource appropriators themselves. In the actual practice of shrimp trawling, state as much as non-state actors like the fisheries businessmen, decentralized government officials, and military actors of various ethnic, historical, and national origin are engaged in the everyday search for wealth at sea. In other words, their conscious border crossing and transgression of state-planned fisheries zones is embedded in fluid livelihood strategies in search of wealth and livelihood improvement in a marine environment with a decreasing biodiversity and biomass.

III. Seeing Like a State or Follow the Resource Appropriators?

The present popularity of the term transboundary is remarkable, and it may be related to the - competing - international economic and environmental interests and the interdisciplinarity of the research on forestry and, more recently, on fisheries, together with the fact that environmental systems and their resource units (cf. Ostrom 1990: 30) do not acknowledge state boundaries. Both logging and shrimp fisheries are forms of resource appropriation that are caught between global desire and local deprivation. Global and regional markets for commodities like tropical hardwoods, panaeid shrimps, and sharkfins put high pressure on the

resource systems and on the resource units themselves. In the case of "grounded" marine resources like sea cucumber, clams, trochus shells, and coral reefs, the mobility of the resource appropriators, the fishermen themselves, also differs from land-based cultivation and resource appropriation, probably with the notable exception of pastoralists (Bruijn, van Dijk and Foeken 2001). Local resource depletion is then very likely to happen, and historical evidence shows that fishermen are very well aware of this risk and act accordingly.

The historical evidence of Butcher (2004) shows that new terms sometimes cover historical practices that have never been labeled as such. Transborder fishing in Southeast Asia has a history of more than a century, as the Celebes Trading Company held oyster beds in the Torres Strait and near Aru in the 1880s, and Okinawan fishers setting muro ami nets on coral reefs were based in Singapore, Batavia, and Manila, and fished as far as the Gulf of Siam, in the eastern part of the Java Sea, and along the west coast of Sumatra in the 1920s (Butcher 2004: 73; 145-150).

If, like in our Kalimantan case, fisheries involves the access and appropriation of marine resources that are spatially outside the realm of the Malay state and within Indonesian waters, the action can be labeled "transborder" or "transboundary" and - by implication – "illegal". But terms are related to political, economic or geographical discourses that assign a dominant role to physical space and the political-economic process of demarcation; a perspective that differs from, but often dominates a social-anthropological perspective.

When we follow the actual practice of the resource appropriators, like the Malaysian crews who are engaged in the catching of shrimps in the Indonesian EEZ and vice versa, these men are very much aware of the fact that they are spatially intruding into each other's national and provincial territorial zones. But these actions do not have the prime purpose to externally mark the national boundaries like it is the purpose of territorialization. Economically, the picture may be more blurred in case a

Malay trawler has an Indonesian crew who are fishing in Indonesian waters, and subsequently land their produce in a Malaysian market town.

It is important to realize that from the perspective of these actors, border-crossing is a fluid activity in the process of mobile resource appropriation. Yet, it is often a conscientious act and the involved risk is consciously taken. Legal and political boundaries are subordinate to the social, economic, and cultural values and needs of those who "follow the resources" in an increasingly empty sea.

Mobility is an umbrella term that encompasses all types of movements including travel, exploration, migration, tourism, refugeeism, pastoralism, nomadism, pilgrimage and trade. In these forms, mobility is essential to the livelihood of many, and a means of survival to some. In fisheries society, like in pastoralist society and possibly in most African societies (Bruijn, van Dijk and Foeken 2001: 1, 2) a spatially mobile livelihood is often a reality that is taken for granted. Often, mobility or migration is seen as a "rupture" in the normal order of society as a result of the – Western - normative identification of civil society and sedentarization. Similarly, this normative state-informed image of society as a land-based, sedentary society lies at the basis of a structural marginalization of mobile groups and individuals, like nomads, pastoralists, and fishers. We could very well expand de Bruijn's observation by including fishers populations all over the world for whom mobility, including transnational migration (Akyeampong 2001: 127-144) is a fact of everyday life. In Southeast Asia, the spatial mobility of marine fisheries is caused by environmental as well as social drivers, like the monsoons, the biological productivity of the different ecological spaces, the multispecies fishery that is typical of Southeast Asia (Butcher 2004: 7, 10, 21), and of course gear and boat technology development, and multiple-level rules and regulations influencing the access to and exploitation of marine resources. Interestingly, in the recent literature on migration and transnationalism, the resource related mobility of fisheries is seldom mentioned. Despite evident parallels between the livelihood strategies of pastoralists and fishermen and

their lack of property to the resource substratum of land and sea, respectively, these parallels are hardly systematically researched and social sciences still have a strong land-based bias. Here lies a challenge.

Transboundary resource access and appropriation is particularly evident in the case of increased resource scarcity of the spatially highly mobile, pelagic fisheries. Tuna and sharks, for example, are pelagic species that follow migratory routes through seasonal time and large marine spaces. National and international control of the amount of tuna or shark caught and marketed are severely hampered by the fact that much of the marketing is illegal (Fegan 2003) and takes place transboundary. Hausfather (2004) shows that statistics on landings vary and that it is difficult to track the mostly informal exports. The majority of shark fins landed in India are exported to Hong Kong/China or Singapore, but imports of Indian shark fins reported in Hong Kong (a duty free port) appeared to be 5 times higher than FAO data on Indian landings. This clearly shows an underestimation of actual transboundary trade volumes but it also indicated the need to cautiously use formal statistical data as indicators of marine biomass. The literature as well as the cases below clearly show that the practice of transboundary fisheries is at crossroads with neo-institutionalist and environmentalist approaches to fisheries or socio-ecological systems (eg. Charles 2001; Folke 2006).

IV. Case I: Fishing In: Transboundary Shrimp Fisheries in East Kalimantan

The first trawler used in Indonesian waters was a copy of Malaysian trawlers operating in the Malacca Strait (Bailey 1997). The technique was adopted by Indonesian Chinese in Bagan Siapi-api, North Sumatra who were likewise attracted by the wealth of panaeid shrimps. The case study used in this paper concerns the coastal waters in the Celebes Sea of the districts Berau, Nunukan, and Tarakan of the province of Kalimantan Timur. Although the practice of transboundary fisheries has a long history, it has

only recently become an issue as a result of the decentralization of governance rules. The Local Government Act No. 22/1999 that was replaced by the Act No. 23/2004 delegates more authority to provincial governments to manage the marine space until 12 miles from the shoreline. Within this provincial space of 12 miles, the first 4 miles are under the authority of the district, and the remaining 8 miles toward the sea are under provincial governance. In addition, the Minister of Agriculture issued the decree No. 392/1999 dividing the coastal waters into three fishing zones; Zone I and II covering the provincial waters, and Zone III stretching beyond the 12 mile zone to the national boundaries of the Exclusive Economic Zone (EEZ) of Indonesia (see Table 1).

In 2005 there were about 3.150 trawlers smaller than 5 GT operating in the coastal waters of Berau, Tarakan and Nunukan districts, and hundreds of larger (10-30 GT) trawlers (Kompas 2005.03.16). The smaller trawlers were mostly based at, and owned by Tarakan fishermen, but the bigger trawlers were mostly based at both sides of the Indonesian-Malaysian border, in Nunukan and Tawau respectively. These larger vessels were either owned by Indonesian fisheries businessmen from Tarakan or Nunukan or other Indonesian towns, or jointly owned by Indonesian and Malaysian businessmen, the latter often Malaysian Chinese from Tawau. There were also Malay owned vessels that were registered under an Indonesian name, while a fourth category included Malay owned trawlers based at Tawau (Malaysia) but operating in Indonesia by a primarily Indonesian crew. In other words, the practice of transboundary fisheries does not only relate to space (where the shrimps are caught, and/or landed) but also to ownership and to human and technical capital (crew operating the trawler).

Table 1. Fishing Zones (*Jalur Penangkapan Ikan*) of MoA Decree No. 32/1999

Zone	Sub-zone	Allowed fishing vessels and gear
Zone I (minimum low tide -6 miles)	Minimum low tide – 3 miles	- Stationary fishing gear - Non-modified non stationary fishing gear - Un-motorized vessel with 10 meter length maximum
	>3 – 6 miles	- Modified Non-stationary gear - Un-motorized or outboard engine with max 10 meter long - Outboard or inboard engine with maximal 12 meter long or less than 5 GT - Purse seine maximum 150 meter - Drift gill net maximum 1000 meter long
Zone II (outside of zone I – 12 miles	No sub-division	- Vessel of maximum 60 GT - Vessel with purse seine max. 600 m operated from single vessel or max.100 m operated by a two vessels - Tuna long line of max. 1200 hooks - Drift gill net max. 2,500 meter long
Zone III Outside zone II – outer line of EEZ	No sub-division	- Indonesian vessel of maximum 200 GT, with exception of all vessels using purse seine for large pelagic fisheries that are forbidden to operate in Teluk Tomini Bay, Maluku Sea, Seram Sea, Banda Sea, Flores Sea and Sawu Sea. - Indonesian EEZ in Malaca Strait is open for maximum 200 GT Indonesian vessels, with exception of minimum 60 GT vessels using fish net - EEZ outside of Malacca strait is open for: Indonesian or foreign vessels of maximum 350 GT of all gear types; Vessels >350-800 GT using purse seine are only allowed to operate beyond 100 miles from the Indonesian outer coastal line; Purse seines operating in a group are only allowed to operate beyond 100 miles from the outer coastline of Indonesia archipelago.

Source: Minister of Agriculture Decree No. 32/1999.

The large number of trawlers fishing in the Indonesian coastal waters is remarkable in the light of the legal prohibition of the so-caller Trawler Ban of 1980 (Presidential Decree No. 39/1980) when all trawlers were banned from fishing in the Sumatra Sea and Java Sea, due to widespread and violent conflicts between trawler operators and non-trawler fishermen. In 1981 this ban was expanded to cover all Indonesian waters except the Arafura Sea. These legal actions lead to the assertion of Bailey that "Indonesia is the only

country in the region to have addressed this issue of competition and conflict effectively" (Bailey 1997: 225).

Then how is it possible that we find such a large number of trawlers operating in the East Kalimantan waters, and what kind of conflicts are taking place along the coast of Kalimantan Timur? One explanation is the notable ineffectiveness and ambiguity of the Indonesian state in implementing the Trawler Ban. On the one hand, the ban has never been lifted and we can still observe navy ships or speed boats of the Department of Marine Affairs and Fisheries patrolling the area and occasionally apprehending trawlers whose crew would be brought to court. On the other hand, both the former and the present Ministers of Marine Affairs and Fisheries allowed the operation of shrimp trawlers in the border zone of Kalimantan Timur, Tarakan and Nunukan, and even stimulated larger trawler owners to act as patrons to small-scale fishermen[1] in order to stimulate the regional economy of the newly decentralized state through translocal shrimp business networks.

A third explanation lies in the external territorialization of the Indonesian state where indeed the demarcation of external boundaries was at stake in the political conflict over territory between Indonesia and Malaysia. In 2004 Indonesia had lost two islands to Malaysia in the International Court in The Hague, the Netherlands: the islands of Simpadan and Ligitan. So, when there was a sign that Malaysia might claim Ambalat (see Figure 1 and 2) as their territory, the Indonesian government strongly opposed it. An incident was created when a Malaysian navy ship "disturbed" the construction of a navigational tower (but also, politically, a sign of Indonesian claim on the territory) in Karang Unarang in the vicinity

[1] The former Minister of Marine Affairs and Fisheries, Dr. Rokhmin Dahuri, visited Nunukan and Tawau in 2004. He stated that trawlers could indeed operate in Eastern Kalimantan on 4 conditions: (1) this policy would only apply to trawlers owned by "traditional" fishermen; (2) they should be operated beyond 3 miles from the shore; (3) trawl operation would be prohibited during spawning season, and (4) the local government should look for investors who were willing to become a parton for small-scale fishermen (Kompas 2004.04.26).

of Ambalat and was chased out by an Indonesian navy ship.[2] Also, strategically, the Indonesian central government urged Indonesian fishing fleets to go and fish in that area in an effort to claim the Ambalat space. These happened to be the trawlers based in Tarakan and Nunukan.

Where the Ambalat issue clearly has a wider international political impact,[3] the territorial claims are clearly triggered by the wealth of the marine ecosystem. The Indonesian government faces a "catch[4] 22" situation with its Trawler Ban denying Indonesian trawlers to access the waters around the contested islands. Meanwhile, Malaysian businessmen are not impeded by Malaysian laws to send their trawlers to illegally cross the border to fish in the Indonesian coastal waters. Consequently, both the Indonesian government and the Indonesian shrimp businessmen experience the prohibition to fish in Indonesian waters as "unfair" in their competition with Malaysian trawlers encroaching "their" fishing space uncontrolled. The following statement of the Indonesian Marine Affairs and Fishery Minister, Freddy Numberi, the external territorialization and the strengthening of the regional economy of Northeast Kalimantan are clearly related:

> *"The special treatment [that is allowing to use trawl] of fishermen in the border area, particularly in Nunukan, will be implemented for a period of two or three years. This special treatment is meant for Nunukan fishermen to compete with Malaysian trawlers and at the same time show to the other country [Malaysia] that the Ambalat Blok and Karang*

---

[2] A similar incident occurred again in February –March 2007.

[3] *"Treatmen atau perlakukan khusus [yaitu memberikan ijin menggunakan trawl] terhadap nelayan di wilayah perbatasan terutama di Nunukan tersebut akan diberlakukan selama dua atau tiga tahun. Perlakukan khusus ini agar nelayan-nelayan Nunukan bisa beroperasi dan menyaingi kapal-kapal trawl dari Malaysia, dan sekaligus menunjukkan kepada Negara lain bahwa perairan di Blok Ambalat dan Karang Unarang adalah wilayah RI."*

[4] *"Treatmen atau perlakukan khusus [yaitu memberikan ijin menggunakan trawl] terhadap nelayan di wilayah perbatasan terutama di Nunukan tersebut akan diberlakukan selama dua atau tiga tahun. Perlakukan khusus ini agar nelayan-nelayan Nunukan bisa beroperasi dan menyaingi kapal-kapal trawl dari Malaysia, dan sekaligus menunjukkan kepada Negara lain bahwa perairan di Blok Ambalat dan Karang Unarang adalah wilayah RI."*

Unarang belong to the territory of the Indonesian Republic." (Harian Radar Kaltim 2005.04.03)

This policy of allowing trawler operation was well received by district governments of Tarakan and Nunukan, as well as by the trawler businessmen and their crews. In fact, this was what they had been struggling for over the last few years, particularly after the implementation of the local government act of 2000 on decentralization and regional autonomy. Trawl fisheries is one of the most important livelihoods of coastal people supporting thousands of families, as well as a source of revenue for the local government and the state. For the local government, other than releasing the political-economic pressure from trawler crews/fishermen, registration fees and taxation associated with the shrimp trade are important sources of government revenue. In the present era of regional autonomy, local revenues are vital as an indicator of success of the development project of the local power holders, and their political career.

The above case shows how decentralization increases rather than decreases business type shrimp exploitation in East Kalimantan (cf. Satria and Matsuda 2004). Decentralized resource policies not only create incentives to local fishermen and translocal businessmen to increase the number of operating trawlers, it also stimulates strategic "administrative" border crossing and transboundary fisheries by Malaysian-owned trawlers. Malaysian fisheries businessmen in Tawau are responding to the ministerial (temporary) legitimation of trawler operation in the Ambalat and Karang Unarang waters by strategically legalizing their illegal operations, using their Indonesian trader-partner and his client network. They now send their vessels to Tarakan or Nunukan and have them registered under the name of their Indonesian partners.

These transnational trade networks between Malaysian Chinese businessmen in Tawau and Indonesian fish traders or fisheries businessmen is far from new. Such toke patronage relationships have a long institutional history. Usually, the connection takes the form of Indonesian fish traders

selling the fish to the Malaysian Chinese toke, in return for the cash prize of the sold fish, access to borrowing fishing gear, or loans to further technical and material improvements of the fisheries livelihoods of their clients in their coastal villages. In other words, the transborder trade networks between individual Malay and Indonesian businessmen include a much wider social and spatial patron-client network along the coast of northeastern Kalimantan. Moreover, these relationships are not resource bound. Their institutional strength is precisely that the actors follow a multiple resource strategy, and that they are flexible through time depending on the flow of goods and prices at regional and global markets. Therefore, it would not surprise to find the same families and individuals involved over the last generations in - illegal and legal – transboundary appropriation and trade of logs, weapons (in the 1960s), and marine resources (Obidzinski 2003; Casson and Obidzinski 2002)

Figure 1. (1) Berau, (2) Tarakan, (3) Nunukan, (4) Tawau

Source: Modified from http://library.thinkquest.org/26300/media/indomap1.gif

Evidently, this policy and its ensuing practises have intensified pressure on resource access and appropriation, and it has even created new conflicts. Conflicts have increased between different categories of trawlers operators, especially between operators of trawlers less than 5 GT and bigger trawlers

(see Table 1). The main issue of this conflict is the transgression of the fishing zone by the larger trawlers entering Zone I, the zone exclusively allocated for the smaller size vessels. Other conflicts arise between the local trawler owners and those operators and local businessmen who are involved in a joint venture with the Malaysian Chinese across the border in Tawau, or those who allow their names to be used for the registration Malaysian trawlers in Indonesia. Of course, they are primarily contesting access to fishing grounds and scarce marine resources. But the issue of transboundary ownership also plays a role in this conflict. The Indonesian trawler-owner who is involved with a Malaysian Chinese in a joint venture, or those lend their name to "legalize" a Malaysian trawler are accused of "selling their nationhood" to the Malaysian Chinese for cheap pocket money. In other words, it is important to realize that competing claims for transboundary resources bears the potential risk of regional (or wider) ethnic-religious nationalism to develop.

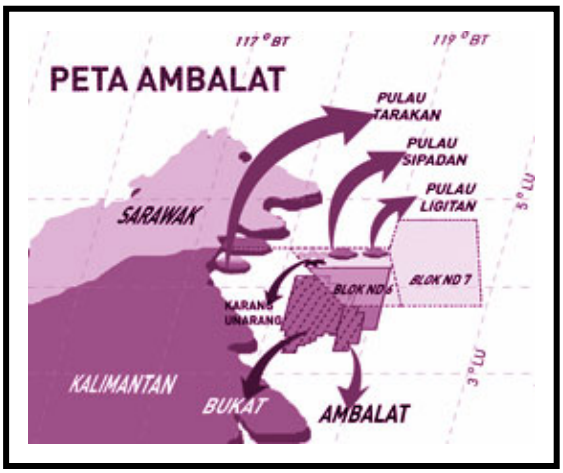

Figure 2. Ambalat

Source: http://berita.karebosi.com/62_428/Peta_Ambalat_4.html

What action did the district government take in this situation? In fact, part of the problem was the conflict between the two Indonesian districts of

East Kalimantan province, Tarakan and Nunukan, particularly between the two District Heads (*bupati*), over the economic and political control of trawler fisheries. As we mentioned earlier, patrols by both the Indonesian Navy and by speed boats of the Ministry of Marine Affairs and Fishery (MMAF) were occasionally conducted, and the apprehended vessels were brought to court. The basis of both the bases of the Navy and the MMAF happen to be in Tarakan. In effect, the larger vessels were the ones mostly apprehended and brought to court, but most of these were owned by businessmen from Nunukan and based there. This upset the Head of Nunukan District because he took this (state) action as an intentional act of discrimination against Nunukan in order to combat their access and claims to the marine space in favour of the Tarakan District economy and Tarakan based fisheries operators. In 2004/2005, this conflict became quite serious and could only be stopped when the Governor of East Kalimantan facilitated a meeting and proposed a solution to the two district heads.

V. Case II: Fishing Out: Eastern Indonesian Shark Hunters in the Australian Fishing Zone

The practice of Indonesian fishermen fishing in the Australian fishing zone (AFZ) has become a serious problem over the last decade. Apprehension of Indonesian fishermen by the Australian authorities and its corollary such as the death of a detained fisherman in 2004 often disturbed the relationships between Indonesian and the Australian states. The seasonally highly intensive shark transboundary fisheries by Indonesians in Australian waters, particularly the Arafura Sea involves a high risk action that is undertaken by poorer, small-scale fishermen from eastern Indonesia. Their livelihoods and that of their families depend on this kind of practice. There seems to a connectivity between the illegal, but largely uncontrolled fishing in of foreign and Indonesian large trawlers into the fishing Zone I designed for trawlers operating small-scale, the consequent exclusion from access and appropriation of marine resources of these small-scale fishermen

(see case I), and their subsequent fishing out and search for wider horizons.

Historically, the practice of Indonesian fishing in Australian waters started even before the birth of the modern Indonesian state and the Australian state. Early voyages of Indonesian fishermen into Australian waters and even on land started in the first half of the 17th century when trade networks of Chinese and from China were established. At this early stage, fishermen particularly from Makassar (South Sulawesi) harvested tripang or sea cucumber in Australian coastal seas, brought them ashore in Australia to be dried and processed, and took them back to Indonesia for selling to a Chinese merchant for the Chinese continental market (Campbell and Wilson 1993: 9). Butcher (2004: 272-274) describes how the "age-old movement of certain groups of collectors from reef to reef accelerated as prices rose and stocks of certain species quickly depleted in one area after another" in the case of trochus shell and tripang (Butcher 2004: 274).

Figure 3. Sea Cucumber Sold in Taipei

Source: Photo taken by Visser, November 2006.

The same can be said of live reef fish, shellfish, etc. fisheries where

global market demand, improved technologies for resource spotting like GPS and satellite sensing (Butcher 2004: 267, 270) rapidly increase the scale and time intensity of the exploitation of these commodities. When fish and sea cucumber or tripang became less abundant within the national waters of The Philippines, Indonesia, Malaysia, Thailand, Korea, and Japan, these highly commoditized natural resources are appropriated from spaces beyond their national borders, both legally and illegally.

The exclusion of Indonesian fishermen from fishing in Australian coastal waters started in 1880 when the Australian authorities passed a regulation that all Indonesian fishing vessels operating in Australian marine space should have license. Formally, this regulation was meant to protect the Australian Aborigines from diseases and bad influences of the Indonesian fishermen regarding their use of alcohol. However, its implicit objective was to protect the Australian fisheries bussiness, and to control the external boundaries of the Australian state (Macknight 1976).

Over more than a century Australia has developed many ways to exclude foreign fishermen from enroaching their fishing grounds to collect tripang or hunt sharks for their high prized fins. The strongest effort was the ratification of the United Nations Conventions on the Law of the Sea (UNCLOS) in 1960 (Stacey 1999). The signing of UNCLOS has led to the signing of a Memorandum of Understanding in 1974 between the Australian and Indonesian governments. This MoU outlines the restriction of Indonesian fishermen in all Australian Fishing Zones except in five spots, the so-called MoU Box including (1) Ashmore Reef, (2) Cartier Islet, (3) Scoot Reef, (4) Seringapatan Reef and (5) Browse Islet (see Figure 4). It is stipulated that only "traditional fishermen" that are allowed to collect particular sea resources (throchus, sea cucumber, green snail, sponges and all kind of sea shells, all kind of turtles are prohibited to be taken).

This example indicates that transboundary practices are not necessarily illegal. In fact they may well be acknowledged by international agreements. These spaces were open only to "traditional fishermen" defined as

"fishermen who have traditionally taken fish and sedentary organisms in Australian waters by methods which have been the tradition over decades of time". (Butcher 2004: 278, 279-80). Today, these very marine spaces contain highly contested transboundary resources.

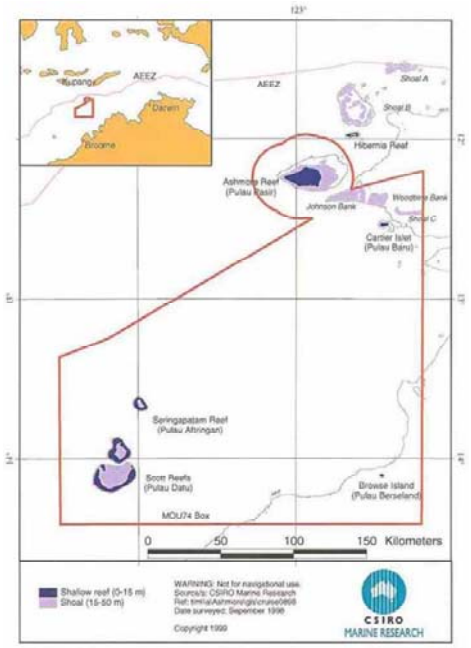

Figure 4. The 1974 MoU Box

Source: Commonwealth Scientific and Industrial Research Organisation (CSIRO), Marine Research

The definition of 1974 causes a dilemma for several reasons. Indonesian fishers claim historical rights of access and tenure to these transboundary spaces on the basis of their customary fisheries trips, and the 1974 MoU. The problems derive from the use of the term "traditional" which was not appropriately defined. In the MoU the term refers to the fishermen and methods. It states that: "the fishermen who have traditionally taken fish and sedentary organisms in the Australian waters by methods which have been their tradition over decades." Later, in 1986, a revision to the MoU was issued in an effort to clarify the meaning of the word traditional. In this

revision "traditional" relates to any un-motorised fishing boat and gear. However, there are two problems with this regulation and its implementation. First, the expectation that fishermen could comply with all regulations, including the exact geographical positioning of their fishing activities is unfair. Sailed *perahu* do not give fishermen full control of over their boats. When there is no wind they may easily drifted off on the current of the sea, out of the boundaries of the so-called MoU Box (see Figure 4). In other words, the very restriction on the use of engine power also limits their spatial control, thus increasing the chance of being caught in "illegal fishing." Secondly, the association of the term traditional with un-motorised fishing boats and gear, has in fact created a *de facto* open access to the MoU Box in the sense that all fishermen using un-motorised boats and gear can access and appropriate the fisheries resources within the MoU Box. It has in fact resulted in more pressure on the fishing grounds, as there is no shortage of un-motorised fishing boats in Indonesia since the majority of the Indonesian fishing fleet consists of un-motorised fishing boats (*perahu*).

Technically, there are important differences between the case of the large shrimp trawlers "fishing into" Indonesia, and the relatively small-scale boats "fishing out" into the Australian waters in search of the place-bound sea cucumber and shark schoals seasonnally passing through the Arafura Sea. We can be sure that in the early days of Indonesian fishing in the AFZ, all fishermen used sailed un-motorised praus, but technological changes over the last decades made stronger engines become availalbe which improved the boats both in shape, and speed. Today, except some sailed boats called lambo in the village of Oelaba on Rote Island, all fishing vessels operating in the AFZ are motorised boats. In the earlier phases fishermen used to be (free-)diving to collect tripang and other sedentary species such as throchus. Since the 1980-90s they use compressors to collect their target. Today, long line and nets are used to catch sharks. Like in our first case of shrimp fisheries, the - mainly regional - desire for sharkfins in Singapore, Hong Kong, Taipei, and mainland China is all but decreasing and indeed

increasing with a higher standard of living of a new middle class (Figure 5). The shift to pelagic fish has also triggered the technical improvements of their boats, and today some of them are even equiped with a geo-positioning system (GPS), modern compass and nautical maps. Meanwhile, the Australian government declared Ashmore Reefs as national park managed by the Australian National Parks and Wildlife Service (ANPWS) recognizing the high biodiversity of the Ashmore Reef environs (Stacey 1999). This change of environmental status subsequently makes any fisheries action illegal in that area, especially if the application of modern fishing gear, improved engine power and supporting techniques already challenges the meaning of the term traditional. These governance decisions regarding the Reef should have oriented the transboundary fisheries activities more toward the Arafura Sea and away from the Northwestern reefs. However, the shift in the Asian market demand toward sharkfins and the technical advance of other foreign vessels "fishing out" into the Arafura sea were too powerful for the Indonesian fishers in smaller boats, and forced them to keep sailing south to the AFZ.

Figure 5. Shark Fins in a Shop in Taipei

Source: Photo taken by Visser, November 2006.

Who are these fishermen "fishing out" into the Australian waters, and what drives them? The Indonesian fishermen involved in fishing in the Australian waters have various ethnic backgrounds and origins.

> *"There are at least five distinct fishing and sailing populations in eastern Indonesia, each of which can be distinguished by the language(s) they speak, the kind of boats they sail, and by other specific cultural differences and former local political allegiances. The main populations are: (1) the Madurese; (2) the Makassarese; (3) the Bugis (or Buginese); (4) the Bajau Laut or Sama-Bajau (who are sometimes referred to as "sea gypsies") and (5) the Butonese."* (Fox and Sen 2002)

These diverse etchnic groups started their journey into the AFZ from various ports (see Figure 6). From the most western to the eastern parts of Indonesia, these include the (1) Raas Island (Madura), (2) Makassar (South Sulawesi), (3) Wakatobi (Southeast Sulawesi), (4) Kupang and Rote Island (East Nusa Tenggara), (5) Saumlaki and (6) Dobo (Maluku) and (7) Merauke (Papua). The last four places are the main ports where the fishing starts and ends. In 2005, the numbers of boats involved in transboundary fishing into the AFZ from these places were an estimated 750 - 950 (Fox, Adhuri, Therik and Carniege 2006).

Interestingly (or ironically?), despite the vigorous efforts of the Australian government to stop Indonesian fishermen to encroach their waters, the intensity of the fishermen "fishing out" to the AFZ is increasing. Recent studies in Kupang and Rote Island and Merauke show that boat building for the purpose of "fishing out" from these places is still going on. In Kumbe, one of the boat building centres in Merauke, 30 - 50 boats were built every year in the last three years (Adhuri 2006). Similarly, boat building centres in Kupang and Rote Island were all year around full of new bodi, the local name for the type of boats fishing in the AFZ, (Adhuri, Indrawasih and Wahyono 2005). Thus despite the increased numbers of cases of apprehension by the Australian authorities (Table 2), the "fishing out" problem is far from being solved.

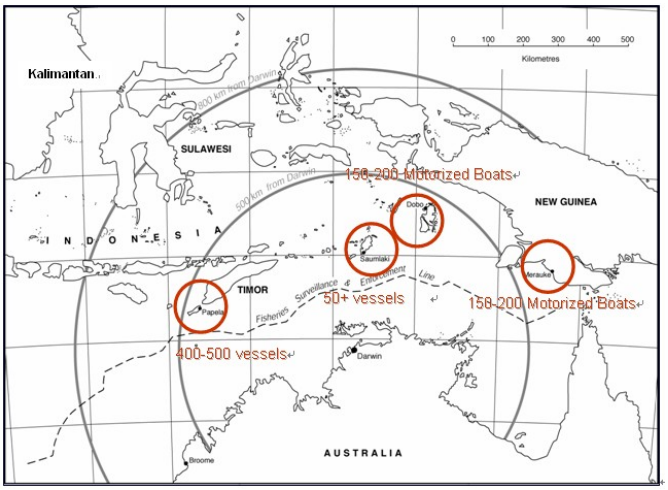

Figure 6. Main Ports of Origin of Indonesian Fishermen and Numbers of Boats

Source: Fox, Adhuri, Therik and Carnegie (2006).

Table 2. Numbers of Indonesian Vessels and Fishermen Apprehended in the AFZ

Year	Number of fishing boats	Number of Fishermen
1975	3	No data
1980	2	No data
1985	5	No data
1987	1	No data
1988	46	No data
1989	29	No data
1990	43	No data
1991	38	No data
1992	15	No data
1993	23	No data
1994	111	No data
1995	76	No data
1996	97	No data
1997	122	No data
2004	159	418
1 Jan-28 Feb 2005	36	257[v)]
12-21 April 2005	No data	272*
Mei 2004-Mei 2005	No data	3.900*

Note: [v)] Indonesian consulate in Darwin, * Kompas (2005.05.17).
Sources: Adhuri, Indrawasih and Wahyono (2005), adapted from Stacey (1999: 287).

There appears to be a multiplicity of drivers, motivation, and strategies causing the increase of Indonesian transboundary fisheries, despite Australian efforts to control their external boundaries by increased patrols and detention of Indonesians caught.

First, there is a connectivity of "fishing into" the Indonesian waters and Indonesians "fishing out" into the Australian waters. Transboundary fishing conducted either legally or illegally by foreign vessels in Eastern Indonesia causes over-exploitation and the degradation of marine resources and environment. The local fishermen are pushed to search elsewhere, where the competition of large trawlers is less felt. Hence the increase of mainly Eastern Indonesian fishermen trying their luck in the AFZ (Fox, Adhuri, Therik and Carniege 2006; Resosudarmo and Napitupulu 2006).

The second driver is environmental: a decrease of marine livestock and the access to the target species. A recent study conducted by the Research Center for Capture Fishery of Ministry of Marine Affairs and Fishery (MMAF) found some indications of over- exploitation in all nine fishing management zones of Indonesia (Table 3). Furthermore, it was reported that the production of sea cucumber had significantly decreased in Nusa Tenggara Barat in 1994. (Fox 1996: 195). This is another indication of the overexploitation of the resource. The same resource is more difficult to access and indeed getting scarcer in the MoU Box and other reefs due to marine governance (Stacey 1999).Together with the "fishing in" back home, this is pushing more fishermen south to "fish out" into the AFZ. In addition, the Australian fisheries governance rules on the Ashmore Reefs and environs have pushed fishermen out of the MoU Box, and shift to shark fishing in other fisheries spaces within the AFZ.

Thirdly, the changing international market demands for sharkfin and sedentary species. Sharkfin has become the main attraction for the Indonesian fishermen to risk a journey into to Australian waters. The demand of these products has pushed up the price which is an incentive for the fishermen to continue or even increase their efforts (Table 4).

Table 3. Species Overexploitation in Indonesian Fishery Management Zones

Java Sea	All fish resources
Malaka Straits	**All fish resources**
Makassar and Flores Sea	**Demersal fish species and shrimp**
South China Sea	**Shrimp species**
Banda Sea	Small demersal fish species and shrimp
Seram Sea and Tomini Bay	Shrimp species
Sulawesi Sea and Pacific	**Large pelagic species and shrimp**
Arafura Sea	Large pelagic species, demersal species and shrimp
Indian Ocean	Demersal species and shrimp

Source: Research Centre for Capture Fishery (2001)

Table 4. Price of Sharkfin (Rote/Kupang: 2005)

	Rp per kg	A$ per kg
Class I (Size > 60 cm)	1,200,000 per kg	$171.00
Class II (Size 40 – 60 cm)	800,000 per kg	$114.00
Class III (Size 40 cm)	200,000 per kg	$29.00
Base (of Shark Tail)[5]	65,000 per kg	$9.00

Source: Fox, Adhuri, Therik and Carniege (2006).

Fourthly, fishermen's motivation to act the way they do also depends on their access to and ownership of modern technology. The adoption of new and more advance technologies, by those who can afford them, that has stimulated more "fishing out." The availability of smaller but more powerful inboard engines which can be fitted in a small boat, facilitates fishermen to move in and out of the AFZ much quicker. The use of high-powered engines is one of the strategies of fishermen to evade Australian patrols and one reasons of the booming of their practices in recent years. This new category of fishermen also has access to modern

[5] All shark fin is said to be exported. The base of the tail can also be used to make soup. These tail ends are retained for the domestic market and used for soup in local Chinese restaurants. The price of a bowl of "shark tail, alias shark fin soup" in Surabaya is Rp 300,000 (A$43.00).

spatial orientation techniques (GPS, nautical maps). Still, there are fishermen who do not have access to these new technologies. Their understanding of the transboundary prohibitions in Australia is another answer to the question. While the Indonesian fishermen are well aware and cognizant of the AFZ laws and regulations, there is little they can do when they lack a strong engine and nautical devices to prevent them from crossing borders under adverse wind and marine environmental conditions.

Finally, and related to the previous issue, is the wider aspect of culture and livelihood strategies. The Indonesian fishermen usually perceive their being caught, detained, and sent to prison or being deported back to Indonesia as a matter of fate (*nasib*) determined by God. In other words, regardless of how comprehensive the boundary marking regulations and their implementation by the Australian state are, they see it as God's will whether they escape apprehension or not. Incidentally, especially younger fishermen see their risky venture as a challenge. If they succeed, and they return succesfully from a series of transboundary trips, they may be regarded as a hero or *jago*. Their success gives them status and prestige, and potentially a better chance finding an up-market marriage partner. Interestingly, the very fact of being aprended, detained, sent to jail or deported, is given a "positive" meaning by these fishermen. They believe that, besides the will of God or "bad luck," their proper treatment during detention or in jail, the qualities of the food, the hot shower and the bed, are perceived as enjoyable – and these facilities may indeed be better than what they have at home.[6]

VI. Conclusion

This paper has addressed the theoretical issue of territorialization and expanded it to include the imminent practices of transboundary fisheries in Souteast Asia and Australia. The two case studies analyze examples of what

[6] "*Makanan, mandi air hangat, dan tempat tidur di penjara di Australia seperti hotel berbintang di Indonesia* (The food, hot water shower, and bed in an Australian jail are like in a star hotel in Indonesia)," as one informant put it. (Adhuri, field notes).

has been called "fishing in" and "fishing out" as regarded from the perspective of the Indonesian marine space. The first case deals with the transboundary fisheries of foreign shrimp trawlers into the Indonesian waters northeast of Kalimantan, while the second case is that of Indonesians "fishing out" of Indonesia and into the Australian Fisheries Zone (AFZ). The two cases together imply that there is a certain connectivity between those who are excluded from accessing marine resources near to their homes, are forced to search for marine space out of the Indonesian waters and into Australian waters in order to secure their livelihood.

Sometimes, like in our first case, internal territorialization strategies are indeed instrumental to external boundary marking between states. Decentralization of governance in Indonesia and elsewhere in Southeast Asia is strengthening the political and economic need for internal territorialization as it increases the strategic actions of central, provincial, and district governments of staking claims to access and control of environmental wealth. This leads to more rather than less internal territorialization and competing claims over resources within state boundaries, resulting in a boom of boundary marking and zonation that is not only frustrating to those who have to live off the sea, but it also further alienates the state actors from the resource appropriators.

The transboundary "fishing in" of Malay trawlers moving south into East Kalimantan shows the complex interaction of social, economic, and political events and actions within particular institutional settings. Trawl operations in East Kalimantan, particularly in Tarakan, Nunukan and Tawau, are an example of the complexity of how transboundary practices are more fluid and diversified than the concept originally indicated. In decentralizing Indonesia the access and approapriation of marine resources shows that transboundary resource access involves different administrative and political institutions, ranging from district, province to central government and inter-sate interactions.

At the same time, individual trawler owners reconstruct the notion of

transboundary, moving beyond and outside any conceptual or institutional fix. The strategy of the Malaysian Chinese trawl owner who registers his vessel under the name of Indonesian business partner is an example of how the status of "trans" boundary can be transformed into an inter-state issue. The same accounts for actions to access fishing grounds.

In the case of Indonesians "fishing out" into the Australian Fishing Zone, we observed that this phenomenon is increasing rather than decreasing, despite Australian patrols and regular apprehension of boats and crews. There seem to be two transnational drivers: the Asian desire for sharkfin and sea cucumber creating a market boom, and competing claims from foreign trawlers fishing in the Indonesian waters. It seems that access to marine space is subordinate to access to the resource.

Especially in the case of pelagics, the fishermen follow the resource across national boundaries in search of a better livelihood, although they are fully cognizant of the risks and legal consequences. Recently, their economic success in transboundary fisheries has enabled some fishermen to technologically improve their boats, challenging the Australian patrols.

Our case studies of the actual practices of marine resource appropriation shows that transboundary resource access and appropriation is a fluid notion, covering actions through space and time that challenge state-dominated discourses and practices of control of human and natural resources . Moreover, these everyday practices shatter the dream of common property resource control, and co-management between state and local communities as an institutional fix. Finally, we contend that the use of the term transboundary shows a bias toward the role of the (central) state through the territorialization and environmentalisation of social interaction, at the expense of the dynamics, risks and opportunities of transboundary livelihoods of resource appropriators involved.

References

Adhuri, Dedi S. 2006. Illegal Shark Fishing in Merauke. Unpublished Report. Jakarta: PMB-LIPI.

Adhuri, Dedi S., Ary Wahyono and Ratna Indrawasih. 2005. *Fishing in, Fishing Out: Memahami Konflik-Konflik Kenelayanan di Kalimantan Timur dan Nusa Tenggara Timur (Fishing in, Fishing Out: Understanding Fishery Conflicts in West Kalimatan and Southeastern Nusatenggara)*. Jakarta: PMB-LIPI.

Agrawal, A. 2005. *Environmentality: Technologies of Government and the Making of Subjects*. Durham/London: Duke University Press.

Bailey, C. 1997. Lessons from Indonesia's 1980 Trawler Ban. *Marine Policy*, 21: 225-235.

Bruijn, M. de, R. van Dijk and D. Foeken, eds. 2001. *Mobile Africa: Changing Patterns of Movement in Africa and Beyond*. Leiden: Brill.

Butcher, J. G. 2005. *The Closing of the Frontier: A History of the Marine Fisheries of Southeast Asia c. 1850-2000*. Leiden: KITLV Press.

Campbell, B. C. and B. V. E. Wilson. 1993. The Politics of Exclusion: Indonesian Fishing in the Australian Fishing Zone (Indian Ocean Centre for Pacific Studies, Monograph No. 5). Perth: Indian Ocean Centre for Pacific Studies.

Casson, A. and Obidzinski, K. 2002. From New Order to Regional Autonomy: Shifting Dynamics of "illegal logging" in Kalimantan, Indonesia. *World Development*, 30: 2133–2151.

Castells, M. 1996. *The Information Age: Economy, Society and Culture, Vol. I: The Rise of the Network Society*. Malden, MA/Oxford: Blackwell.

Charles, A. 2001. *Sustainable Fishery Systems*. Oxford/London Blackwell Science.

Fegan, B. 2003. Plundering the Sea: Regulating Trawling Companies is Difficult When the Navy is in business with Them, in Inside Indonesia. http://www.insideindonesia.org/edit73/Fegan%20fishing.htm

Folke, C. 2006. Resilience: The Emergence of a Perspective for Social-ecological Systems Analyses. *Global Environmental Change*, 16: 253-267.

Fox, J. J. 1996. Fishing Resources and Marine Tenure: The Problems of Eastern Indonesian Fishermen. Pp. 163-174 in *Indonesia Assessment 1995 Update*, eds., C. Barlow and J. Hardjono. Canberra and Singapore: Research School of Pacific and Asian Studies & Institute of Southeast Asian Studies.

Fox, J. J. and S. Sen. 2002. A Study of Socio-economic Issues Facing Indonesian Fishers Who Access the MoU Box. Report prepared for the Department of Environment and Heritage. http://rspas.anu.edu/people/personal/foxjj_rspas/recent_papers.php

Fox, J. J., D . S. Adhuri and I. A. P. Resosudarmo. 2005. Unfinished Edifice or Pandora's Box? Decentralisation and Resource Management in Indonesia. Pp. 92-108 in *The Politics and Economics of Indonesia's Natural Resources*, ed., B. P. Resosudarmo. Singapore: Institute of Southeast Asian Studies (ISEAS).

Fox, J. J., Therik Adhuri and Carniege. 2006. Searching for Livelihood: The Dilemma of Small-boat Fishermen in Eastern Indonesia. Paper presented at the Workshop on Development and environment in Eastern Indonesia: Papua, Maluku and East Nusa Tenggara. Canberra, Australia, April 18.

Hadiz, V. R. 2004. Decentralization and Democratization in Indonesia: A Critique of Neo-institutionalist Perspectives. *Development and Change*, 35(4): 697-718.

Harian Radar Kaltim. 2005. Melanggar, tapi tetap diizinkan saingi Malaysia. Kapal trawl Nunukan boleh beroperasi. *Harian Radar Kaltim*, April 3.

Hausfather, Z. 2004. India's Shark Trade: An Analysis of Indian Shark Landings Based on Shark Fin Exports. *MAST (Maritime Studies)*, 3(1): 25-39.

Hidayat, S. and C. M. Firdausy. 2003. *Beyond Regional Autonomy: Local State-Elites' Perspectives on the Concept and Practice of Decentralisation in Contemporary Indonesia*. Jakarta: PT Pustaka Quantum.

Kompas. 2004. Nelayan tradisional Nunukan segera diizinkan gunakan pukat harimau. *Kompas*, April 26.

_____. 2005. Kapal "trawl" Malaysia curi ikan di Ambalat. *Kompas*, March 16.

Macknight, C. C. 1976 . *The Voyage to Marrege': Macassan Trepangers in Northern Australia*. Melbourne: Melbourne University Press.

Obidzinski, K. 2003. Logging in East Kalimantan, Indonesia: The Historical Expedience of Illegality. Unpublished PhD Thesis, University of Amsterdam, the Netherlands.

Research Center for Marine Capture (MMAF). 2001. *Pengkajian Stok Ikan di Perairan Indonesia 2001*. Jakarta: Pusat Riset Perikanan Tangkap, Departemen Kelautan dan Perikanan.

Resosudarmo, B. Y. and L. Napitupulu. 2006. Illegal Fishing in the Arafura Sea. Paper presented at the Workshop on Development and Environment in Eastern Indonesia: Papua, Maluku and East Nusa Tenggara. Canberra, Australia, April 18.

Satria, A. and Y. Matsuda. 2004. Decentralization of Fisheries Management in Indonesia. *Marine Policy*, 28: 437-450.

Stacey, N. E. T. 1999. "Boats to burn": Bajo Fishing Activity in the Australian Fishing Zone. Unpublished PhD Thesis, Northern Territory (Charles Darwin) University, Austarlia.

Vandergeest, P. and N. L. Peluso. 1995. Territorialization and State Power in Thailand. *Theory and Society*, 24: 385-426.

Visser, L. E., ed. 2004. *Challenging Coasts: Transdisciplinary Excursions into Integrated Coastal Zone Development*. Amsterdam: Amsterdam University Press.

Worm, Boris, Edward B. Barbier, Nicola Beaumont, J. Emmett Duffy, Carl Folke, Benjamin S. Halpern, Jeremy B. C. Jackson, Heike K. Lotze, Fiorenza Micheli, Stephen R. Palumbi, Enric Sala, Kimberley A. Selkoe, John J. Stachowicz and Reg Watson. 2006. Impacts of Biodiversity Loss on Ocean Ecosystem Services. *Science*, 314(5800): 787 – 790.