

Summary of PhD thesis<sup>1</sup>

# Networks and knowledge at the interface

## Governing the coast of East Kalimantan

RINI KUSUMAWATI

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Promoter: Prof. Dr. Leontine Visser (Wageningen University)

Co-Promoters: Dr. Simon Bush (Wageningen University)

Prof. Dr. P.M. Laksono (Gadjah Mada University)

Wageningen University

### ABSTRACT

The thesis explores the actual processes of interaction between global and local actors regarding marine conservation and aquaculture development. The objective of the thesis is to analyse the collaboration, friction, and the cultural-historical, social, political, and economic contestations of the value and meaning of conservation from the perspectives of the district governmental agencies, the district head, local entrepreneurs and industry, and the international NGO. Concentrating on the dynamics of this global-local interface this thesis adds to existing literature because it helps us to understand *why* global environmental networks often face contention and even fail to be effective in their attempts to implement regulations or standards for a more sustainable production of coastal resources. The data were gathered during long-term anthropological fieldwork combining a political-ecology approach with environmental anthropology.

<sup>1</sup> The online publication of this thesis can be found at: <http://library.wur.nl/WebQuery/wurpubs/fulltext/305009>.

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RINI KUSUMAWATI took her Master degree from Gadjah Mada University in Sociology in 2006. In June 2014, she finished her PhD at the Rural Development Sociology Group of Wageningen University, the Netherlands. In March 2015, She started her postdoctoral research at Institute Pertanian Bogor (IPB) on the joint project between Universities and NGOs to study the technology innovations towards the sustainability and traceability of tuna supply chain in Indonesia. Rini Kusumawati may be contacted at [kusumawati.obidzinski@gmail.com](mailto:kusumawati.obidzinski@gmail.com).

## KEY WORDS

Marine conservation; aqua culture; coastal resources; NGO; political-ecology; Berau; East Kalimantan.

## INTRODUCTION

Coastal and marine resources that are the basis for local livelihoods and economies are increasingly becoming part of global networks accessing commodities available for exploration and exploitation, which also causes global concern about environmental degradation. The decentralization process in Indonesia is potentially an opportunity to improve the governance of the use of coastal natural resources as district government agencies have more flexibility to design policies that better respond to local needs. However, at the same time, it provides more space for the political-economic interests of local elites to access and exploit the marine and coastal natural resources (Satria and Matsuda 2004; Aspinal and Fealy 2003). Despite the importance of coastal areas for national and local economies in Indonesia (Visser 2004; Laksono 2007), the social and regulatory consequences of marine resource exploitation remains poorly understood. Experiencing the inconsistency and overlap of laws and regulations between sectors (Patlis 2005; Resosudarmo 2005) and lack of coordination between multiple levels of government, the central government's framework in governing the coastal resources is full of legal disconnects in defining, regulating and enforcing the regulations (Patlis 2008). Global environmental non-governmental organizations (NGOs) see this ineffectiveness as an opportunity to intervene directly at the district level, bypassing the central state, to improve the governance of coastal resources through collaborative conservation initiatives.

NGOs such as The Nature Conservancy (TNC) and the World Wide Fund for nature (WWF) take the lead in introducing and organizing conservation activities in target areas based on global narratives of environmental crisis in fisheries and aquaculture (Fox et al. 2012; Padiyar et al. 2012; Mohan and De Silva 2010; Djohani 2009; Halim, Soekirman, and Ramono 2008). These NGO-inspired tools and arrangements are diverse (Parkes et al. 2010; Jacquet et al. 2009; Roheim 2009). In the coastal areas of Southeast Asia, including Indonesia, two models have become prominent: spatial planning for marine conservation areas and better management practices standards for coastal shrimp aquaculture. They intend to build networks of global and local actors as a means to anchor the global knowledge to local socio-economic and political settings. However, the global and the local knowledge have different ontological bases. The global environmental knowledge is a product of scientific knowledge that is produced by scientists who have access to selecting the relevant theory and interpreting the data (Kontinen 2004). The knowledge of the local actors is shaped by a different ontological basis originating from the historical practices, cultural values, and experiences of the local people. Often this local knowledge conflicts with, or is opposed to the global knowledge that was brought in by the NGOs networks.

The global-local networks built by NGOs become tools in the process of transferring global knowledge to local actors (Tsing 2004). Scientific knowledge is thus being actively translated and negotiated into local practices. International environmental NGOs transfer global knowledge to local governmental actors, like the private sector and marine resource users through marine conservation areas (MCAs) and sustainable production standards. However, the local actors are not merely the objects of the global conservation activities. During the process of knowledge transfer and co-production, knowledge is transformed and re-inscribed into other knowledge-power constellations (Escobar 1999). Instead of employing a blueprint, transfer of conservation ideas, global actors are caught in what Tsing (2004) has described as friction; global actors are entangled with local actors in awkward, unequal and unstable interconnections. Applying this concept of friction instead of focusing on the possible conflicts in the process of the global-local knowledge interface, allows one to look at positive outcomes. Two case studies, on the development and implementation of the Berau MCA in Berau Delta and on the emergence of best management practices (BMPs) standards in Sesayap Delta were chosen to illustrate the dynamics of this global-local interface.

Berau coastal waters, despite being known as rich in marine species, coral reefs, migration routes and nesting grounds of sea turtles, suffer from destructive and illegal fishing activities (Gunawan and Visser 2012). Therefore, they have become a national, regional and international target area for a marine protected area networks (Kusumawati and Visser 2014). Together, concerned international, national and local environmental NGOs proposed the district government to collaborate in developing the Berau MCA. The Berau MCA was established on 2005 and acknowledged by the central government. North of Berau district, the district of Tarakan is known as the main regional processing and export district for farmed shrimp in East Kalimantan. Locally based processing companies are supplied with shrimp from traditional extensive aquaculture systems located on the small islands scattered throughout the estuary of the Sesayap River that extends beyond Tarakan to include Bulungan, Tana Tidung, and Nunukan districts (Kusumawati, Bush, and Visser 2013). Invited by one of the processing companies to assist them in mangrove replantation programs, WWF-Indonesia introduced better management practices (BMPs) in shrimp farming and initiated the process in developing BMPs that would fit the region. However, in both cases these global attempts to introduce and implement coastal conservation and management practices were hampered by local political-economic and cultural-historical forces.

The thesis is organized around two main research questions. The first research question is: How do global actors form networks in order to secure the process of global environmental knowledge transfer? How do these networks of actors produce power and knowledge disconnects and frictions? In answering these questions, the thesis will contribute to an understanding of the role of global environmental NGOs in Southeast Asia in their endeavour to transfer global environmental knowledge on conservation to the district

government and the local-political economic leaders, and the outcome. The second main research question focuses on the process of knowledge transfer and co-production: How do the actors co-produce environmental knowledge in defining and practicing sustainable coastal resource governance given the different ontologies of knowledge and values owned by the global and local actors? This question aims to contribute to an understanding of the role of the global environmental NGOs, district governments and the local political-economic leaders (*punggawa*) in framing the knowledge they use for defining the use of coastal resources and its outcome.

## METHODOLOGY

This thesis is not about local resistance to global influences. Instead, it explores the social dynamics that structures the global-local interface in which the global and local actors form networks, co-produce and contest environmental knowledge. It analyses the motivations and rationales based on the political-economic, social, and historical experience of the different actors and the ways in which they construct, interpret, claim, and contest global environmental discourses around marine and coastal conservation in Indonesia. Data are generated through long-term field observation and ethnographic case studies of the interface of global and local actors in governing the conservation of natural resources of the coastal waters of East Kalimantan. Such ethnographic method involves a multi-locale and multi-level approach (Gupta and Ferguson 1997). Instead of staying in one particular place, the networks of the global actors and the flow of their knowledge on conservation and shrimp aquaculture were traced in their encounters with local actors and their social environment and knowledge.

Fieldwork took place in the Berau district of East Kalimantan, where at the time environmental agencies, like The Nature Conservancy (TNC) and the World Wide Fund for nature (WWF) were active. There was evidently a struggle of the local political-economic leaders and entrepreneurs in interpreting and claiming their ways of conserving and defending the economic interests of what they regarded to be their coastal natural resources. To study a different conservation model, the second part of the research dealt with the emergence of better management practices in shrimp aqua culture in the district of Tarakan. The multi-locality of the research existed in travelling to Samarinda, Bogor, Jakarta, the Netherlands and Germany to interview the global actors involved, in order to trace back the process of how the global conservation knowledge arrived in these two places in East Kalimantan, Indonesia.

Field research was conducted from 2008 to 2011 with some additional interviews held in 2012 and 2013. Primary data were collected through qualitative methods. In-depth interviews were held with actors involved in the development process of the marine conservation area in Berau and those involved in the development process of better management standards took place in Tarakan. They included national and regional government officials, regional entrepreneurs, and international, national, and local NGO staff. For

the Berau case study, discussions and semi-structured interviews focused on the management of the coastal area of Berau, the development process of the Berau MCA and on the history of sea turtle management in Berau. In the Sesayap Delta case study, the discussions and interviews served to gather information about the development of the standards in shrimp production. Also here, the directors of locally based processor companies, shrimp collectors, shrimp workers, shrimp pond owners and their families were interviewed.

Additionally, participant observation included attendance at meetings and workshops organized by the agencies at the district, national, and international level, and visiting shrimp farms in Bulungan and Tarakan. In both cases secondary data were gathered by reviewing and examining a variety of scientific papers and other sources from libraries, websites, newsletters, newspaper articles, and reports to complement my field data.

#### ORGANIZATION OF THE THESIS

The thesis combines anthropological and political ecological approaches (Brosius 1999; Robbins 2004; Peet, Robbins, and Waats 2011) to obtain a better understanding of the global-local interface in the context of coastal governance and knowledge transfer and co-production in East Kalimantan. As part of the Wageningen funded RESCOPAR (Rebuilding resilience of coastal population and aquatic resources) program in Indonesia and Vietnam, case studies were carried out in two different conservation settings in East Kalimantan, Indonesia.

The Berau Delta case study focuses, firstly, on the interaction of multi-scale actors and knowledge during the formation of global-local environment collaboration over the period of five years (2004-2010). It is explored and explained how global-local collaboration shapes different actors' perceptions and perspectives on marine conservation and resources extraction in the context of decentralized marine governance. The results show that the political-economic and cultural-historical role of local entrepreneurs political elites (*punggawa*) are particularly important in shaping knowledge and power disconnects, apart from producing legal disconnects (Patlis 2008) between global and local actors. The second focus of this case study explores the role of local political-economic forces that shape the discourse on marine conservation. The results provide a deeper understanding Tsing's (2004) concept of friction, which emerges when the values, knowledge, and discourses of global NGOs, local power brokers or patrons, and local government coalesce. By not adequately resolving the differences between these interests, values, and knowledge of these actors, the complex planning and implementation of MCAs is undermined and new uncertainties are created over the future governance of coastal resources.

The second case study illustrates the relative influence of private and public actors who contribute to different but related environmental regulatory networks around shrimp production in Sesayap Delta. The results show how these different networks interact and influence the reach and impact

of global environmental governance introduced through standards for better management practices (BMPs) by WWF. While it appears that local economic elites are again the determining factor in affecting the interactions of the environmental regulatory networks, this case study demonstrates that “external” networks led by global NGOs and the central government largely ignore the local economic elites and the networks in which they are embedded. I further explore how these actors with different types of knowledge interact in co-producing and negotiate best management practices (BMPs) in the extensive shrimp aquaculture practice in the area. I examine whether co-production of knowledge in developing the BMPs is simply a matter of translation of international principles or an arena to negotiate the balance between the technical and the social condition of production. The results show that BMPs contribute and even reinforce the politicization of social and environmental issues around shrimp aquaculture. The meetings organized by the World Wide Fund for Nature and the pilot project at pond level with producers following the development of the BMPs standards, further strengthen the patron-client dependencies of the shrimp aquaculture practices, as well as the politics of control over the natural resources.

## CONCLUSION AND RECOMMENDATION

The findings of this thesis show about the unequal interplay of the different networks that has consequences for how the coastal resources are governed, and the dilemma of knowledge co-production in the global-local interface in improving the governance of natural resources and a sustainable coastal environment.

A major finding here is that in the process of collaboration and network formation the global environmental NGOs tend to ignore the multiple patron-client relationships that characterize the networks of local elites in governing the coastal resources. Consequently, the failure to recognize these networks of local elite has significant implication for the implementation of any conservation initiatives. Moreover, decentralization grants the local elites’ networks more power to decide upon the management of their natural resources. This inevitably affects the process of translation and negotiation of the global environmental knowledge in the process of knowledge co-production with the local actors. Therefore, to co-produce locally relevant and effective knowledge to govern the conservation and the use of coastal resources, the global actors need to grant more space to the historical and empirical knowledge and need to actively engaging with the complex networks of local actors.

This research contributes to existing literature on global-local interaction, particularly the translation, negotiation, and co-production of knowledge in the context of conservation initiatives when they are embedded into decentralized local political-economic context. It offers policy recommendations to improve the coastal governance, paying particular attention to creating enabling conditions for effective involvement of multi-level actors such as global

environmental NGOs, district government agencies, and local political-economic leaders. First, the global actors need to change the way they approach and engage the local elites to better understand their diversity and find appropriate ways to accommodate their social, political, and economic interest. Second, the global actors need to provide space and time for local and global knowledge to engage in debate and negotiation to find more effective ways towards sustainable resource governance. Finally, the local political-economic leaders and patrons need to be more open and receptive to the opportunities for interaction with the global actors. This may not only result in better solutions for coastal resource governance, but may also be financially viable.

For the future research agenda, it is important to look more closely into the question of decentralization. How does this link up with the theme of local political ecology networks? What is the role and space for NGOs to step into this political mix and what are the best ways to devise steps towards better natural resource governance? Further, more research is needed to go beyond the descriptiveness local political ecology and delve into the specifics of what pragmatic steps can be taken to advance better natural resource governance.

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