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Community Dynamics and Ecological Sensibility for Sustainable Mangrove Governance in Sinjai Regency, South Sulawesi, Indonesia

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ABSTRACT

To promote devolution and participation in natural resource governance, the government of Indonesia encourages the collective management of natural resources through self-governed local communes. It also promotes consensual decision-making over the use and allocation of natural resources at the village, district, and regency level. This approach, when coupled with the commercialization of Indonesia's natural resources, is believed to encourage social inclusion, economic welfare, and ecological responsiveness.

The case of Sinjai's mangroves suggests that the presence of social institutions can stimulate social sensibility, encourage attachment to the natural landscape, and instigate collective responsibility for protecting the local mangroves. Community initiatives for mangrove planting within the village of Tongke Tongke emerged due to wave intrusion, soil erosion, and material loss. The hope to create new land and own mangrove trees sustained the motivation for land restoration and led to the initiation of the Aku Cinta Indonesia (ACI) mangrove organization. The ACI organization, whose aim is to establish clearly defined property and user rights for safeguarding the cultivators' hard work, provides community members with pride, identity, and platforms for mangrove conservation. Although the mangrove plots are privately owned by the 117 ACI members, they are also collectively managed and conserved by the multiple resource users across the landscape.

In Tongke Tongke, social institutions and local rules came into play and the people committed to protect the mangroves on behalf of the community. These social institutions took the form of kinship ties, collective identity, symbolic reciprocity, social responsibility, and ecological sensibility. The mangroves were not free access, but governed by formal and informal rules to maintain its benefits for the good of the community. The community, through the elders, determined the access and made decisions about management on behalf of them all. Community members acted in a way that benefited the overall good even when they were avowing individual rights. Individuals evolved behaviors that were commensurate with their responsibilities, leading to innovative power structures that were locally sensitive and environmentally appropriate.

Keywords: devolution, power relations, consensus, collective action, identity validation, reciprocity, social responsiveness, ecological sensibility

JEL Classification: Q2

INTRODUCTION

Indonesia's population reached 210 million in 2000; population growth rate is 1.8 percent per annum. Approximately 41 million people (22% of the population) live in or near coastal areas (BPS 2000). Half of them are dependent on local coastal resources for their livelihood. Marine-related activities account for 20 percent of total gross domestic product (GDP), and 19 percent of non-oil and gas GDP. Moreover, the coastal areas provide employment and income for about 16 million people, which is 24 percent of the national labor force (Bappeda-Sulsel 1998). Resources such as mangroves are overexploited for wood despite their importance for the sustainability of marine and coastal fisheries. As well, there is a potential for major expansions in aquaculture production and rice farming. These expansions, if not carefully planned and controlled, will destroy valuable natural resources including the mangroves (Andrianto 2006; Barber 2002).

During the Suharto era (1967–1998), natural resource governance was marked by an exploitation orientation. Suharto's regime emphasized a philosophy of development that was primarily based on centralized and top-down decision-making. This form of decision-making was adopted to ensure political stability and economic growth (Resosudarmo 2006). However, many of Suharto's natural resource governance initiatives were unsustainable, leading to further disempowerment and dispossession of community members (Siswanto 2005). Moreover, Suharto's initiatives were marked by power disparity and asymmetrical access to strategic and structural power bases. This undermined local democracy, curtailed community participation, and led to uncontrolled exploitation of the country's natural resources (Siswanto 2005). To promote social inclusion and sustainable

natural resource governance, the post-Suharto (1998–present) government of Indonesia (GOI) has adopted community-based natural resource governance, which focuses on decision-making at the village, district, and regency levels as regards resource allocation. The regency government, along with the district management and local user communities, was given the right to manage Indonesia's natural resources (Satria 2002).

This paper discusses a later phase of the GOI's community-based natural resource governance program in the regency of Sinjai, South Sulawesi Province. The program is the government-endorsed mangrove conservation scheme within the village of Tongke Tongke, which was initiated by local villagers (YTMI 2003). Many of Tongke Tongke's programs for promoting sustainable coastal resource governance were under the jurisdiction and authority of various regency government departments as opposed to being centrally administered through the adoption of an umbrella program (Prioharyono 2002). These programs contributed to the dynamics of a multiple-user community and created new space and opportunities for reinforcing the mangrove conservation discourse. The purpose of this paper is to examine the interaction between on-ground practice and government policies and programs for sustainable mangrove governance, and to understand the complex and dynamic power relations that influence collective action for resource sustainability and conservation. It also examines the social institutions and social relationships that need to be surmounted for social cohesion and local mangrove conservation to emerge and endure.

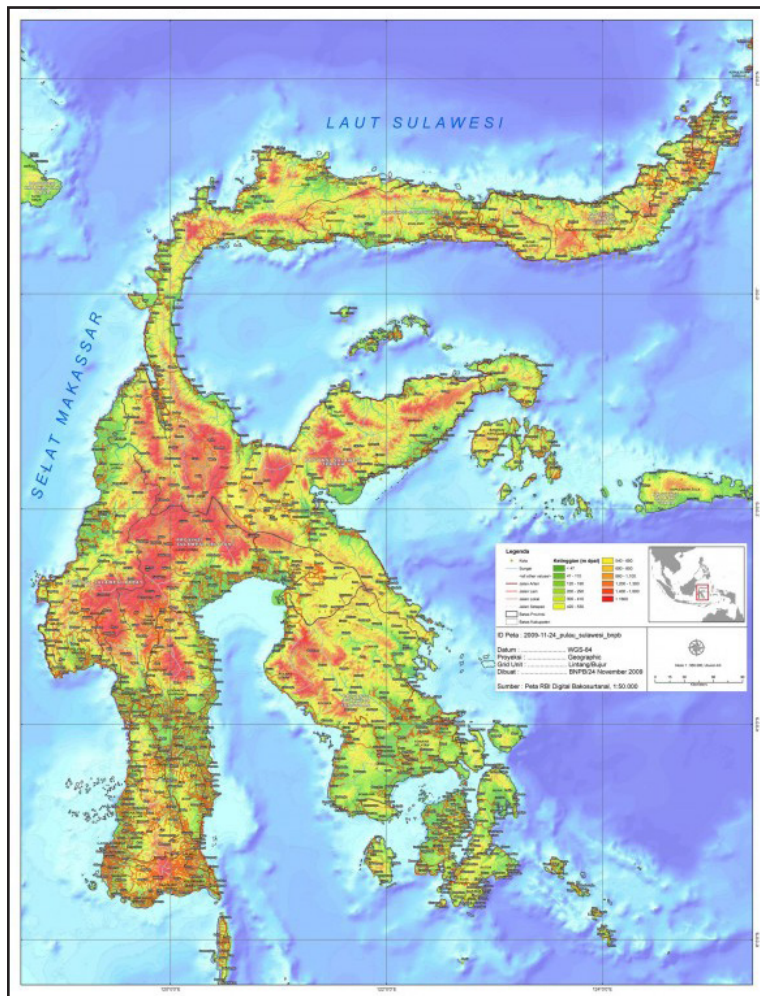
METHODOLOGY

This inquiry employed the ethnographic and qualitative research method. The unique nature of ethnography lies in its ability to

Figure 1. Map of the Indonesian archipelago



Figure 2. The island of Sulawesi and the village of Tongke Tongke



provide detailed accounts of social interactions within small-scale settings and to reveal the rules people use to construct, maintain, and transform their everyday social reality. This research used ethnography because of its ability to disclose the social and political constructions of the ecological landscape and the natural resources found within the case study site as well as to disclose the social practices that create, maintain, and transform power relations associated with natural resource governance (Fetterman 1989). Detailed chronicles of the events and discourse that emerged, as well as the researcher's reflections over these chronicles, were recorded, compared, and analyzed to disclose the habits, attitudes, and beliefs of the various research subjects (Baba 1994).

Qualitative inquiry was adopted to enrich knowledge of the field setting and provide a "thick description of the specifics." (Geertz 1973, 17) An important aspect of qualitative research is the researcher's ability to follow and understand research subjects as they interact with others in the communities in which they live. The lived experience of research subjects is examined to gain a better understanding of reality construction, social action, and decision-making processes involving mangrove management and conservation. Qualitative inquiry aims to describe and understand ordinary events in their natural settings, as opposed to studying events in contrived and invented settings (Herda 1999). By using qualitative inquiry, the research holds a number of interpretive assumptions (Harmon 1986; Lee 1998). The inquiry assumes the absence of a single perspective and the presence of multiple and incomplete subjectively derived realities that coexist (Law 2004), thus contributing to the negotiation of the discourse surrounding mangrove management and conservation. As well, the research assumes complex interactions

and interdependence between the researchers and the subjects and phenomena being studied (Law 2003). Lastly, the inquiry assumes that through social interaction, reflection, and a heightened learning capacity within ordinary settings, groups and individuals develop the capacity and opportunity for increased social responsiveness and natural resource protection (Marcuse 1988; Van Loon 2001; Lyotard 1979).

Data were collected through participant observations, in-depth and biographical interviews (Pels 2003), and compilation of secondary data in relation to government policies, programs, and projects in South Sulawesi, Indonesia. Adoption of the above methods stemmed from the need to acquire detailed accounts of the social and political phenomena associated with natural resource governance in South Sulawesi (Wenger 1998). In conducting in-depth interviews, the researcher used unstructured but thematically-focused interviews to understand how social phenomena and their meaning are constructed and perceived by the diverse social actors (Turnbull 2001; Yin 1984). In addition to the above data collection methods, the researcher also wrote and compiled daily accounts of observations and experience in diary format.

A pilot study in South Sulawesi was conducted from August to October 2004 to acquire networks and connections within the field site and obtain rudimentary data involving site topography and natural resource management programs held within the site. Data were collected in South Sulawesi from March to August 2005. The researcher returned to Sinjai in 2008 and 2009, each for two months, to look at how recent perspectives and insights may be incorporated in the analysis. Government officials from South Sulawesi were interviewed in Makassar (South Sulawesi's capital) and in Sinjai City (Sinjai's capital). Tongke Tongke villagers were

also interviewed. Interviews with community leaders were conducted at home in the absence of others, which was their preference; whereas interviews with non-community leaders were conducted at home and/or outdoor in the presence of one to three other persons who were relatives and neighbors of the research informants. After regular visits and routine communication exchanges, research informants began to open up and share their perspectives on local participation for the collective management of natural resources, especially the mangroves. Primary data from in-depth interviews were transcribed at the field site. They were then triangulated through interviews, participant observation, and a closer scrutiny of the physical landscape. An issue with ethnographic research is the length of time required for associating with the research subjects and collecting data. Time limitation led the researcher to associate with and interview mostly those who contributed significantly to the program's complexity and dynamics; nevertheless, triangulation was conducted to ensure the incorporation of various perspectives and decision-making in governing local natural resources. Another issue besetting ethnographic research is that of fostering and maintaining trust; in order to promote trust the researcher engaged the research subjects in communication and exchange on a daily basis and assured them of the confidentiality of the raw data (Neuwman 2003).

Secondary data were obtained from government departments, donor agencies, nongovernment organizations (NGOs), government consultants, and academicians both directly through private meetings and indirectly through their publications. A number of reasons prevailed for the need to collect secondary data. At the outset there was a need to understand the perspectives and interests of the officers involved in planning and implementing the natural resource governance

policies, programs, and projects (Cornwall 1994). In addition, the research required comparing and contrasting the findings and the subjects' accounts of the initial objectives of the policies and programs. It also needed to venture into the various critics' perspectives of Indonesian policies, programs, and projects for the sustainable governance of natural resources. Textual analysis was used to analyze the secondary data. Inquiry was conducted by comparing and contrasting secondary and primary data.

This qualitative research utilized the N-Vivo program for data storage and organization. The following analytical sequences were used for analyzing and assessing every narrative and/or text contained within the primary data (Fetterman 1989; Neuwman 2003). First, the texts obtained from the interviews and the researcher's daily notes were coded (Bryman 2001; Crotty 1998). The coding process involved categorizing texts into key ideas to explain what happened within the texts. The categories were policy, expected outcomes, economic empowerment, social-ecological awareness, and natural resource protection. Next, the researcher compared data and contexts across the interviews to accentuate and explain the specific and unique (Bryman 2001; Crotty 1998). This was necessary for analyzing the divergence and convergence in perspectives and social practices relating to the constructions underlying the mangrove organization; the outcome was coded according to the various social constructions and significance surrounding the organization (Edwards 1998; Edwards 1999). The illustrative method was then applied to determine the core categories and their sub-dimensions, and to integrate ideas into hypotheses between core categories (Bryman 2001; Crotty 1998). One of the categories is the government's perspective of resource users' relationship with nature, which is defined in terms of

nature's instrumental values (Eckersley 1992). Another category points to the researcher's field notes in which resource users' relationships with nature are defined in terms of the political, cultural, and symbolic elements that emanate from nature's social constructions (Eckersley 1992). From the above stemmed the hypothesis on the discrepancy between policy objectives and the proceeding of events surrounding the implementation of such policies.

Subsequently, through several iterations the researcher moved from vague ideas and concrete details in the data to complex and comprehensive analyses of the issues (Bryman 2001; Crotty 1998). Examples of concrete details are the social and political alliances of resource users, the power configurations within the policy and village community, the rules underlying the social and political engagements among natural resource users, and the customs, imagination and aspirations of project officers and community members. These concrete details were then used to generate a comprehensive analysis of emerging issues associated with collective natural resource governance (Bryman 2001; Crotty 1998). Moreover, these concrete details were also used to acquire new insights on facilitating social responsiveness, active participation, and inclusive governance toward the sustainable governance of Indonesia's natural resources. Lastly, while contextualizing data within the complexity and dynamics of their environment, the researcher attempted to discern thoughts and/or behavior patterns by comparing, contrasting, and sorting the various categories that emerged from the data (Bryman 2001; Crotty 1998). For example, when using the core category on community engagement and the analyses on collective action, the researcher analyzed and discussed the dynamic patterns of domination, reflection, and change.

The informants invited to participate in the research were those involved in the development and implementation of policies, programs, and projects within the village of Tongke Tongke. Community members and officials targeted by government policies, programs, and projects were also invited to participate in the research. The implications of government-induced initiatives can reverberate to community user groups who were not targeted, thus user groups who were not directly targeted but were indirectly affected by the initiatives were also invited to participate in the research. In general, the selection of informants was based on the extent of environmental issues that emerge within the locality, the extent of the research subjects' involvements in coastal resource governance, the implications of policies, programs, and projects within the field site, and the need to triangulate so as to ensure adequate representation of community user groups. The categories of research informants who were invited to participate in South Sulawesi, along with their numbers and reasons for each category, are depicted in Table 1.

During the first month substantial information on life and local governance in the village and the regency level was acquired. The information gathered encompassed the following: livelihoods of local community members, power structure within the village and government bureaucracy, contentions and contenders in coastal resource use and governance, and environmental issues and corresponding interventions adopted by regency government officials and community members. Through this information the researcher was able to determine the various user groups involved in coastal resource use and governance. As well, through successive observation and engagement with diverse community user groups, the researcher

Table 1. Reasons for inviting the research informants in South Sulawesi

Research Informant	Reason	Research Informant	Reason
NGO representatives (2 informants)	Aid government officials in facilitating conflict resolution among mangrove cultivators	Village officials (3 informants)	The frontline personnel in promoting and implementing new initiatives in villages
Project consultants, researchers and academicians (2 informants)	Aid the regency planning board in planning its annual coastal zone management programs and projects	Community leaders from mangrove and religious groups (5 informants)	The status quo in Tongke Tongke—they are respected and aspired to by villagers
Members of the house of representatives (2 informants)	Approves the selection and funding of policies, programs, and projects	The elderlies who left the mangrove organization (4 informants)	The status quo – they are respected and aspired to by villagers
District head (1 informant)	The frontline personnel responsible for managing issues and projects within the villages	Bat poachers (2 informants)	Contended with mangrove cultivators and plot owners for poaching bats in forest
Provincial planning board (2 informants)	Coordinates coastal zone development policies across the regencies	Aquaculture farmers who are mangrove owners (5 informants)	Targeted by the mangrove and fishery policies and programs
Provincial forestry department (2 informants)	Collaborates with the regency's forestry department to promote the village's mangroves	Landowner, fish merchant, and capital lender (1 informant)	Middle class at the frontline to induce initiatives and change
Regency planning board (1 informant)	Plans and approves the selection and funding of policies, programs, and projects forwarded by various regency government sectors	Mangrove cultivators (15 informants)	Contentions among cultivators led to insurgency, changing power relations and participation in villages
Regency marine and fishery resource department (2 informants)	Plans, implements, and funds fishery and aquaculture development projects and fishery management projects	Migrant laboring fishermen and migrant farm laborers (5 informants)	Targeted by the fishery policies, programs, and projects for improved sustainability
Regency forestry department (2 informants)	Plans, implements, and monitors policies, programs, and projects related to forest management	Nonmigrant in-land fishermen (5 informants)	Decision-makers and owners of boats targeted by projects
Regency spatial planning board (1 informant)	Collaborates with donor agencies and government departments for developing infrastructure and managing land use within villages	Housewives and women fish traders (5 informants)	Play key roles in household decision-making and targeted by development projects

came to know of the depth and extent of their involvements in the use and governance of local coastal resources. After having observed and engaged diverse community user groups on a deeper level, the researcher began interviewing them informally. Through these informal interviews the research informants indirectly disclosed those they would like the researcher to interview and those they considered “undeserving.” This led the researcher to expand the research focus to incorporate emerging discourse and interview increasingly diverse user groups based on the need for triangulation.

COMMUNITY-BASED NATURAL RESOURCE GOVERNANCE IN INDONESIA

Goal 1: Ensure Devolution through Village-Level Mangrove Organization

During the late 1990s, indigenous uprising, resistance from provincial and regency government, and the demand for regional independence by separatist movements all contributed to Suharto’s downfall in May 1998 (Thorburn 2001). Suharto’s downfall carried with it a new era of rapid and wide-ranging changes to Indonesia’s social and political configurations. Consequently, natural resource governance during the post-Suharto era requires the government to address issues of multiple-user community, indigenous uprisings, and demand for regional independence through devolution and social inclusion (Bebbington 2006).

A major achievement during the post-Suharto era is the promulgation of Forestry Act No. 41/1999, which recognizes the contribution of indigenous groups and their territories (Siswanto 2005). The 1999 Forestry Act is supplemented by Ministerial Decree No. 5/1999, which stipulates the procedure for resolving conflicts over land use and indigenous

rights (Benda-Beckmann 2001). Savitri (2006) noted that in 2002, Regulation No. 34/2002 on forest management was adopted by the national government as a supplement to Forestry Act No. 41/1999 to address issues of indigenous rights and social justice. Furthermore, the implementation of Law No. 34/2002 stipulates that “all development activities undertaken by government agencies... must promote the spirit of good governance, meaning that local government should take the authority and responsibility for conducting development activities in a transparent and accountable manner” (Siswanto 2005, 144). With regard to natural resource governance, the adoption of these laws reinforces the government’s commitment to collective management at the regency and community levels. Consequently, the regency government, acting as an autonomous entity, is given the authority to work with community members for the inclusive and sustainable governance of Indonesia’s natural resources (Munasinghe 1995). The international pressure to acknowledge indigenous rights and devolve natural resource governance to community user groups led the government to adopt community-based natural resource governance, where local user communities are given the rights to decide and enforce natural resource allocation at the village level, provided that it is in line with regency initiatives and national directives (Moeliono 2006). Interviews with provincial and regency government officials suggested the perceived need to devolve Tongke Tongke’s mangrove governance to local community user groups.

Based on their initiative, community members in Tongke Tongke cultivated and nurtured the village mangroves to protect against wave encroachment and material loss in the early 1980s. Interest in mangrove cultivation stemmed from the need to create new land and protect the village against tidal waves. With the passing of time, community

members' attachment to the mangroves grew, and the mangroves were perceived as a source of identity, pride, social status, and material wealth. In the late 1980s the cultivators formed a mangrove organization called ACI (*Aku Cinta Indonesia* or I Love Indonesia) to acknowledge the efforts to protect the community's mangroves. In 1995 Tongke Tongke received the *Kalpataru* Environmental Award from Indonesia's president. Due to the mangrove's ability to attract national projects, the regency and provincial governments converted the mangroves into a park, endorsed the ACI, and appointed one of the cultivators as ACI's head in 1999. Today Tongke Tongke's mangroves cover 550 hectares and the ACI has a head, deputy head, and treasurer. The mangroves have a set of unwritten rules over its use, allocation and governance. These rules stipulate that the extraction of plants and animals within the mangrove forest requires consent from the mangrove owners and the ACI head. According to ACI's senior members, these unwritten rules also encompass those who are allowed to enter the mangrove forest, the procedures taken before entering the forest, the marine biota allowed for extraction and by whom, the tree trunks permitted for cutting and by whom, and the sanctions accruing to trespassers and violators. Mangrove owners allow villagers to extract dead tree trunks and hermit crabs for self-consumption and for sale in the local market. However, outsiders are not permitted to take anything or even enter the mangrove forest without the owners' consent: "we have to protect the trees and the land from foreigners who want to enter for research, recreation, and business," stated Mr. ABDRE. Sanctions for cutting live mangroves include having to plant and nurture the same number of trees until they reach maturity. These rules were not formulated through joint decision-making nor were they

formalized in meetings and village regulations.

As well, the unwritten rules for privatizing Tongke Tongke's mangroves are perceived necessary to protect private interests, safeguard the resource from external parties, and reassert familial ties to the land and the coastal water. According to ACI's deputy head, Mr. ZNDN, immigrants from the outer islands began settling in the village when community members started cultivating the mangroves; hence, cultivators saw the need to privatize the mangroves to protect individual property and maintain familial ties to the land and the coastal water. Despite being privatized, the discourse underlying the governance of Tongke Tongke's mangroves suggests the need for collective management and resource conservation.

Issues

Issues within ACI are historically rooted within Tongke Tongke's traditional power structure (Friedberg 1977). These perceived issues take the form of credit taking, power grabbing, and social and political exclusion. The ACI members come from diverse backgrounds and social status; among them are landowners, boat owners, laboring fishermen, farm laborers, and middle-aged inland fishermen who later left the organization due to a perceived unfair advantage of some member over others. Tongke Tongke's sea *pongawas* are boat owners who venture out to sea with the laboring fishermen (*sawi*) to fish. Whereas the land *pongawas* are landowners and intermediaries who remain on land to market the catch and provide funding, logistics, and capital to the fishermen. In return the fishermen are expected to store their catch with the land *pongawas*. In most cases the land *pongawas* loan money to fishermen to acquire boats and/or boat motors. The loan serves as a contract between the land *pongawas*

and the fishermen, payable in installments within an unspecified time frame as long as the fishermen remain the *pongawas*' clients. Hence, decisions over the budget, equipment, and fishing locations are largely dependent on the *pongawas*. In Tongke Tongke there are more inland fishermen who sell their catch in the local market than those working as laboring fishermen (*sawi*). The relationship between *pongawa* and *sawi*, which is characterized by power and hierarchy, benefits both parties and is common in coastal communities across Indonesia.

Credit taking

Fieldwork data indicate various stories surrounding the founding and advancement of ACI. The ACI deputy head claims it was he who initially united the different mangrove cultivators under the name ACI. Mr. TYB, ACI's former head who was deposed by other members due to perceived credit taking, corruption, and domination of ACI, has a similar assertion—that he was responsible for founding the organization since he introduced ACI to government officials, NGOs, and donor agencies. ACI's discontented members who left the organization, Mr. TPD and Mr. BMBNG, among others, also take credit for initiating the mangrove cultivation scheme and the alliance with government officials. Moreover, according to these cultivators there is no need to maintain the present ACI, which they perceived to be corrupt, since the members of older generation are very well known and respected by others without having to resort to the ACI organization.

The various claims to ACI's founding notwithstanding, its deputy head, former head, and former members all indicate the importance of forming an alliance to protect the fruit of their labor. Hence, conservation values are safe for safeguarding the collective needs of both the ruling family and the community members in Tongke Tongke.

Misuse of power

Subsequent to receiving the *Kalpataru* award, Tongke Tongke began to receive funding and infrastructure development projects from government and donor agencies. In 1996 ACI's mangrove seed trade with the other provinces began to flourish, with government officials acting as the intermediary. Mr. ZNDN, the present ACI deputy head, recalled that 1996 was the year of the boat incident. That year, the Department of Marine and Fishery Resources within the regency and provincial level gave ACI a state-of-the-art fishing boat. Although the boat was recorded in ACI's inventory list, Mr. ZNDN said it was solely used by Mr. TYB and his relatives. Because of this issue Mr. TYB was demoted from his position as ACI head. The villagers' ability to do this and Mr. TYB's willingness to give up his role reflect a high level of responsibility, cohesion, and social justice within the group. This was done in spite of limited response from the regency government departments. This incident shows that Tongke Tongke has social institutions and social capital to ensure that collective efforts to protect the mangroves and the organization are not undermined.

Social exclusion

In 2004 Sinjai's Forestry Department intervened in Tongke Tongke's mangrove conservation through the department's land and forest rehabilitation (GNRHL) program. This program included initiatives on conserving and reforesting Indonesia's coast through the cultivation of mangroves. Nonetheless, the land and forest rehabilitation program in Tongke Tongke boiled down to distributing funds among ACI members for planting new mangroves and for demonstrating novel techniques for selective cutting and mangrove cultivation to community members. ACI's deputy leader, Mr. ZNDN, was responsible for recruiting village

laborers who will plant the mangroves and for paying them their wages. He noted that within the GNRHL program “it is the government officials who decided on technical matters such as how much and which of the land should be rehabilitated and how this rehabilitation should proceed.” Moreover, he remarked that “there is never a clear message concerning the direction of the program, the structure of the program, the funding for the program, and the opportunities for participation in decision making.” He recalled that ACI members were reluctant to participate in the GNRHL program, hence, it was up to the ACI leaders to assist the government in implementing the GNRHL program in Tongke Tongke.

To a certain extent, the GNRHL program led to disputes and polarization among ACI members. Members claimed that government officials simply endowed ACI’s elites with money. It was then up to the elites in ACI to find suitable villagers to (re)plant the mangroves and pay them. “Government officials simply stated to Mr. ZNDN that the laborers be paid a certain amount of money on a daily basis, but it was really up to Mr. ZNDN to distribute the money and organize the workers,” said Mr. TPD, a former ACI member. Contrary to being passive and powerless, the community members weighed the implications of the government policies and programs in the face of complexity and change. Moreover, when participating in government programs, the villagers align to the bits and pieces which pertain to their needs and interests while jettisoning others. Moreover, not all user groups can participate due to power imbalance and information gap. Nonetheless, the dependency between government officials and community members is a two-way street, and this can lead to villagers’ aligning with the government’s discourse on protecting Tongke Tongke’s mangroves for future projects and funding opportunities.

Goal 2: Joint Decision-Making and Consensus across Government Levels

Some government officials believe consumer demand for coastal resources will lead to their depletion and degradation. Hence, they see the need to protect local coastal resources through collective governance and co-management. This, according to officials, can be facilitated through consensus and joint decision-making in policy and program formulation (Ostrom 1990). Government and community representatives conduct consensus building across the various levels of governance. According to Mr. BDMN, the head of Sinjai’s Marine and Fishery Resource Department, “government officials hold yearly meetings with community members to incorporate local aspirations, promote participation, and encourage sustainable development through collective action.” These meetings are called MUSRENBANG or *Musyawahar Rencana Pembangunan*. Fakhri (1996) noted that in the name of national growth, development, and prosperity, the Suharto administration asserted its legitimacy by centrally administering the governance of natural resources, leaving a much reduced opportunity for indigenous groups to reap benefits from local natural resources. Issues that beset natural resource governance during Suharto’s administration include authoritarianism and one party dictatorship, intolerance of pluralism and dissent, widespread political intimidation, corruption and nepotism, displacement of responsibilities, and ecological devastation (Muniaga 2000; Galdikas 2001). The post-Suharto administration considers social inclusion and political stability through MUSRENBANG vital in achieving sustainable development goals (Rohdewohld 1995).

Government officials have suggested the promotion of social inclusion by aligning and aggregating diverse needs and interests (Kurian 2000). Figure 2, which is based on inputs

from government officials at the provincial and regency levels during interviews, shows how interests are aggregated in policy and program planning. The diagram within Figure 3 is also commonly found in government posters hanging in Sinjai's government offices. With goodwill and benign intentions to facilitate social inclusion, the head of Sinjai's Marine and Fishery Resource Department indicated the need to encourage *tudang sipulung* or consensus building. With regard to policymaking, he said "the community members will follow government rules and regulations when they are drafted together with the community".

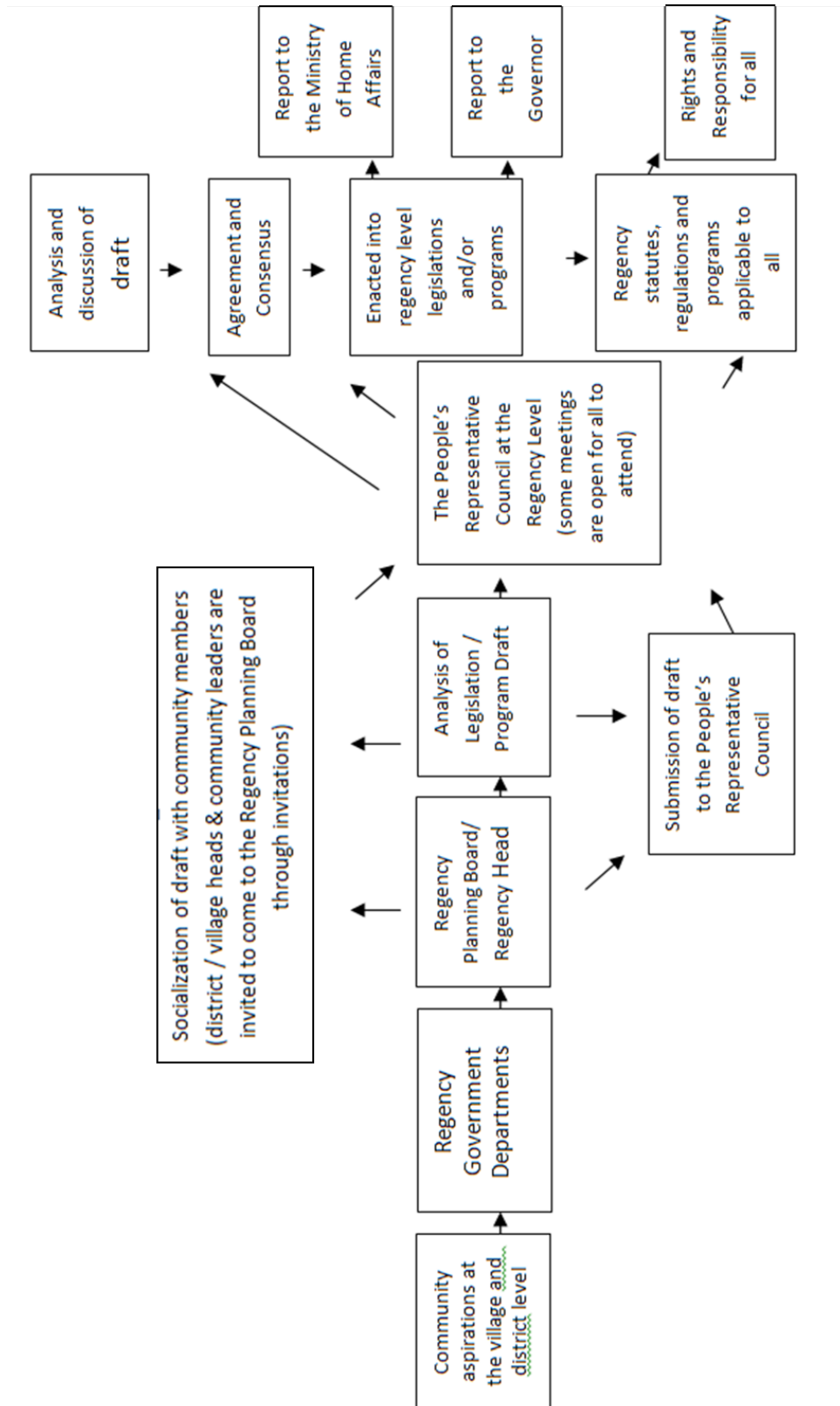
An official from Sinjai's Forestry Department, Mr. NWR, referred to "the need to develop a common vision and mission with community members when promoting participation, social inclusion, political stability, and continuity in government policies and programs." Another executive from Sinjai's Forestry Department, Mr. SRJDN, remarked that "every year through technical coaching and consultation meetings we communicate our vision and mission, and state our limitations... this is done to acquire commonalities of vision on policies and programs and to gather aspirations from the bottom." Hence, according to government officials, social inclusion, political stability, and the sustainability of conservation programs can be facilitated through aggregated interests and consensus building in policy and program planning within MUSRENBANGs. Further, government officials believed that through MUSRENBANG wide-ranging representation in consensus building could be facilitated. While the social and ecological landscape is marked by multiple management regimes, the complexity of local contexts cannot be made subservient to a certain form of natural resource governance (Steins 1999). Moreover, egalitarianism and consensus building processes neither guarantee the lateral relationship one imagines nor do they warrant the emergence of

social reciprocity and social validation that are required for incorporating cultural sensitivity and environmental consciousness into people's thoughts and imaginations (Soja 1989; Light 1998).

Process and mechanistic issues in representation

Representation, whether by community leaders or government officials, may be fraught due to process and mechanistic reasons (Rourke 1986). Process issues include the narrow selection of representatives, the preference for certain information over others, and the flow of information to and from the represented. Mechanistic reasons include attendance and language barriers. In representation "what may appear to be a consensus is in fact the more or less one-sidedly enforced outcome of the dominant power relations under the often deceptively unproblematical form of an agreement producing communicative interchange" (Meszaros 1989, 28). This can be a top-down directive from the regency or a one-party decision carried out by village officials and elites. An example concerns the promulgation of property and commodity tax by Tongke Tongke's village officials. Village officials taxed community members for owning properties such as boats, bamboo huts, aquaculture ponds, and livestock. During Tongke Tongke's biannual budget meeting, officials from the village planning board noted that community members avoided paying the taxes stipulated by the village government. They said this was due to a lack of effort to socialize the taxes. In a meeting, village officials asserted the need to employ debt collectors for socializing and ensuring tax payments. Some villagers noted that "suddenly the village officials informed the villagers of the need to pay taxes for their land, ponds, and houses."

Figure 3. Consensus Building for Policy and Program Planning



Tongke Tongke's community leaders and ACI members, including some sea *pongawas* (Mr. MSTMN, Mr. BMBNG, and Mr. MSTF), observed that community participation in policy and program planning for sustainable coastal resource management was very much limited. These meetings discussed the mangrove forest rehabilitation program, the sustainable aquaculture farming program, and the fishery monitoring program in the Bay of Bone where Tongke Tongke is located. Moreover, these community leaders felt that they were not represented in policy and program planning despite their membership in ACI and their elite status. They said "those who know about the programs and are involved in planning and implementations are only those who interact with government officials, namely, the village officials and deputy head of ACI". In addition, these community leaders noted that policy and program planning was marked by a top-down and one-way flow of information from representatives to the represented. These could deny community members the voice, the identity, and the agency (Dyrberg 1997). On the other hand, the deputy head of Tongke Tongke's ACI mangrove organization said that "it is too formal for the community if they hold a meeting and say that it is a meeting. Often times the community does not want to come if they are invited to a meeting." He added that meetings with government officials were usually conducted in processions filled with protocols, esoteric language, and reverence for the hierarchy within the bureaucracy. Community members preferred to refrain from these meetings because they felt dislocated from themselves and their everyday surroundings when attending them. Villagers avoided associating with the culture and circumstances surrounding these meetings. Moreover, villagers in Tongke Tongke spoke a local dialect (*Bugis Pesisiran*), whereas meetings with government officials used *Bahasa Indonesia*.

Implications for power sharing

Power is defined as "the capacity to introduce change in the face of resistance" (Etzioni 1968, 670). Power can be classified as utilitarian, coercive, and persuasive power (Etzioni 1968). Utilitarian assets include economic possessions, technical-administrative capabilities, and manpower (Etzioni 1968). Coercive assets are the weapons, installations and manpower which the military, the police, the court, and the government use (Etzioni 1968). Persuasive power is exercised "through the manipulations of symbols, such as appeals to the values and sentiments of the citizens" (Etzioni 1968, 331). It is exercised "in order to mobilize support and penalize those who deviate by excommunicating them" (Etzioni 1968, 331). Consequently, persuasive power rests in the interpersonal ties that bind the members of a unit to each other (Etzioni 1968). With regard to natural resource governance, the narratives from Tongke Tongke suggest that these various sources of power influenced groups and individuals in multidimensional ways (Nuijten 2005).

As indicated by Etzioni (1968, 336), the narratives from Tongke Tongke's mangrove governance suggest that "while persuasive power may support normative control, it tends to neutralize normative control in the absence of monitoring and enforcement." This "occurs macroscopically when a sub-collectivity is mobilized against societal leadership" (Etzioni 1968, 336). In Tongke Tongke, this was seen in a conflict between two elites. One of the parties, which was composed of former ACI members, mobilized the persuasive power of the community members within the unit (Etzioni 1968, 336). Contentions between leaders with normative and persuasive power surfaced when those who sought to mobilize an un-mobilized group were confronted by "apathy institutionalized in social bonds"

(Etzioni 1968, 337). This occurred when the disgruntled ACI members mobilized others to depose its former head, Mr. TYB, and recurred when the discontented ACI members who left the organization mobilized others to dispute the current vice head's unfair domination of the organization and its associated benefits. It is possible that the various forms of power "tend to slant compliance in its own direction which is partially incompatible with that of the others" (Etzioni 1968, 353) and, hence, tended to neutralize each other. The multidimensionality and the various forms of power also exacerbate plurality in decision-making. In the case of Tongke Tongke's mangroves, "the controlling over layers of several societal units is shown to mix various kinds of power without giving clear priority to one kind" (Etzioni 1968, 355). Nonetheless, as suggested by Etzioni (1968) and portrayed in Tongke Tongke, some of the power may have been lost due to the neutralization effect. This contributed to the contingent emergence and dissipation of multiple management regimes in Tongke Tongke's mangrove governance and, to a certain extent, created a space for the distribution and sharing of power among wider community user groups.

In Tongke Tongke, the use of power by community members, along with the need to involve higher level authority, was associated with timing, perceived urgency, and pace of change. Etzioni (1968, 364) noted that "the less overdue and the more rapid the transformation of a societal structure, the less need there is for order enforcing organization and the more slow a transformation, the greater the need for such organization whereby power and force are involved." Despite the present lack of initiatives from ACI leaders, narratives from Tongke Tongke suggest that power 'negotiations' among the various members contributed to a dynamic and ongoing protection of Tongke Tongke's mangroves.

Goal 3: Protect Natural Resources through Commercialization and Conservation Policies

After 1997 the regency government has protected Tongke Tongke's mangroves through legal measures. An example is the implementation of regulations on the use, allocation, and governance of Tongke Tongke's mangroves. In 1997 Sinjai's Forestry Department enacted Regulation No. 23/1997 (1997), which stipulates that logging and destruction of the forest cover area will be met with a fine of IDR (Indonesian Rupiah) 500 million (USD 50,330.24) or a maximum of 10 years imprisonment. However, this law is contradictory to Local Regulation No. 09/1999 (1999), which says that selective cutting of the mangroves is permitted 50 meters (m) inland from the coast (i.e., from the reach of the highest tide), provided that users obtain a permit from the head of the region or the extension officer from Sinjai's Forestry Department. A breach would result in three month's detention and/or a fee of IDR 50,000.00 (USD 5.03) (Kehutanan 2002). The contradiction in these laws has caused the villagers to perceive them as trivial and non-binding.

ACI members and villagers considered the enactment of these conservation statutes as authoritarian and top-down. Nonetheless, they welcome the laws. The ACI members simultaneously detest and respect the statutes promulgated by government officials. On one hand, the ACI members viewed the government officials as encroaching on their mangroves and taking the credit for the members' cultivation initiatives. On the other hand, the government regarded its action as validating the members' identity and labor while protecting their material and symbolic interests and providing them with a place to differentiate themselves from others.

According to the head of Sinjai's Regency Planning Board, Mr. SYMSQMR, awareness

of protecting local coastal resources can arise through their commodification and commercialization. Commercialization of local coastal resources can take many forms, including promoting ecotourism, processing and marketing local fish products, and selling locally made handicrafts. Some officials believed that stimulating ecological awareness to protect local coastal resources is grounded on the need to commodify and commercialize local coastal resources for improving social welfare. The head of Sinjai's Regency Planning Board observed that the mangroves' ability to attract funding from the international community stimulates awareness and motivation for their protection. In a similar vein, the Samataring District head, Mr. ADNR, said "if we try to promote our mangrove to countries outside Indonesia, foreigners would automatically come here... we can try to make something out of our mangroves, such as an ecotourism site, so the mangroves can provide the villagers with income." An official from the regency's Forestry Department, Mr. SN, pointed to the need to transform Tongke Tongke's mangroves into a bank from which villagers can obtain financial security. In promoting ecological awareness, the perceived need for attaching commercialized value is evident through policies and programs that combine sustainable development initiatives and natural resource commercialization efforts (Batterbury et al. 2003; Beck 1999; Beck 2000).

With benign intentions, government officials strove to integrate development, sustainability, and ecological education through initiatives such as the construction of mangrove-enclosed aquaculture ponds, the ban on destructive fishing, and the protection and utilization of Sinjai's reefs as breeding grounds. Mr. BDMN, head of Sinjai's Marine and Fishery Department, described the mangrove enclosed aquaculture pond as "a project involving the fishery and forestry department

and the community to encourage both mangrove conservation and economic development." Selective mangrove cutting is permitted 500 m from the coast, whereas the composition is 60 percent mangroves and 40 percent ponds. The ponds are expected to produce milkfish, which is sold locally; the mangroves can also be used for economic purposes. In Sinjai, wood and twigs from the mangroves are sold locally for use as firewood, whereas the seeds have a value and a price. The leaves are also sold in the village for use as feeds for goats and other livestock.

The Samataring District head acknowledged that commercializing local coastal resources can discourage ecological awareness and exacerbate natural resource overutilization. Moreover, when coupled with a preoccupation for private profit, the presence of investors, commercial values and potential market demand for local coastal resources can discourage environmental sensibility and encourage resource overutilization. This contradictory opinion suggests that some officials are aware of the need to venture beyond utilitarianism in facilitating ecological awareness, devolution of responsibility, and social cohesion. However, the officials seemed to have trouble stepping out of the bureaucracy-induced rationality and the perceived need for funding. The presence of funding does not necessarily deter the emergence of social and ecological sensibilities. Contrary to being passive and powerless, both community members and government officials had been weighing the implications of government policies and programs in the face of complexity and change.

Capture by commercial imperatives

It was when symbolic and authoritative resources began flowing from the mangroves and its social constructions that the majority of the resource users became keen on protecting

them. However, when ACI's former head utilized the mangroves to accumulate private gains and dominate the organization, the ACI members perceived the mangroves as a probable instrument of domination and marginalization. This illustrates that multiple social constructions and multiple attachments to the mangroves underlie Tongke Tongke's conservation efforts. The attachments go beyond utilitarianism and resource commodification. Space can be created for multiple attachments to flourish; nonetheless, this space can also be deterred, undermined, and curtailed due to power imbalance and complexity within the social and ecological landscapes.

PRIVATE OWNERSHIP AND COLLECTIVE GOVERNANCE

The collective governance of natural resources is associated with the need for collective ownership and co-management; it assumes that private interests are contradictory to collective needs (Ostrom 1990). Ostrom's common pool resource (CPR) theory suggests that collective governance can be facilitated through common ownership, consensus, and joint decision-making (Ostrom 1990). The narratives from Tongke Tongke suggest that private ownership of the mangroves and the need to protect them are not contradictory. Private ownership of the mangroves is more associated with public obligations as opposed to private rights. One story is that mangrove ownership by local user groups led to its protection. The perceived need to protect the mangroves and its social constructions is so great that villagers refused bad judgments, which can undermine the collective management of the mangroves. For example, when Sinjai's Marine and Fishery Resource Department collaborated with Mr. TYB to advocate the construction of aquaculture ponds within the mangroves, the villagers objected, saying Mr. TYB, the former head of

ACI, was misusing his power, subverting the other ACI members, and undermining efforts to protect the mangroves. This suggests that social constructions underlying property and user rights in Tongke Tongke influenced social and ecological responsiveness for natural resource protection.

In *The Tragedy of the Commons*, Hardin (1968) assumed there are only two choices in natural resource management, either through privatization or state intervention in which public ownership prevails. The failure to promote socially viable and ecologically sustainable decision-making leads to the argument for public ownership by the state. Nonetheless, privatization of Tongke Tongke's mangroves can coexist with social capability and public obligation for their protection and conservation. Noting Hardin's narrow categorization of natural resource management, Ostrom (2007) remarked that multiple management regimes are present and that Hardin undermined the presence of social institutions created through mutual engagements. On the other hand, what Ostrom (1990, 1993, 1994, 1995, 2001, 2005) fails to recognize is that the anticipation of personal rewards emanating from the privatization of local resources can increase the resource users' motivation for their protection. In Tongke Tongke mangrove owners were highly motivated to protect and conserve the mangroves due to the symbolic rewards (e.g., status, identity, political space) they received from the private ownership and the collective management of the plots. Tongke Tongke's experience also suggest that the mangroves' private ownership and collective management led to their association with non-market resources such as those of family time, social life, and ecosystems as opposed to their association with market commodities.

CONCLUSION

Collective action to protect natural resources cannot be maintained solely through collaboration and consensus since contentions and antagonistic relations are present within the social and ecological landscapes. Tongke Tongke's experience suggests that collective action is contextualized within the dynamics and complexity of local settings. In democratic societies, collective action for natural resource protection cannot be dictated or enforced by external agents (Habermas 1987). The concept of collective action has to make room for differences in the resources required to change an individual (Friedman 1992; Plumwood 2002). Resource users change through their personal experience of engaging with one another and through a reflection of themselves and the social and ecological landscapes (Thompson 1994). Changing an individual is different for different people, meaning that the length of time and amount of resources required to change a person vary from one individual to another.

Collective action for natural resource protection is shaped by individuals acting on the social and ecological landscape. It is the transformations within groups and individuals that hold the greatest promise for the collective and sustainable governance of natural resources. Nevertheless, any willed action by an individual will inevitably be context dependent. Therefore, when speaking of the initiation and maintenance of collective action, there is the obligation to take up a position on the matter of agency (i.e., human actions) and social structural forces (Soja 1989). The need to involve others and promote collective natural resource governance looms large in the face of Indonesia's mass environmental degradation and structural inequality. To promote participation and collaboration for natural resource protection, resource users need

to be given a sense of importance and dignity, which appeals to their identity and imagination (Weick 1995). Only then can individuals be actively involved in supporting the cause to protect Indonesia's natural resources.

The narratives from Tongke Tongke suggest that an individual's sense of importance, recognition, and obligation to act for the common good will motivate him/her to perform extraordinary actions beyond his/her everyday practice, including that of protecting local natural resources (Lacan 1999; Etzioni 2004). However, participation and inclusion cannot take place in the absence of complex reciprocity among various groups and individuals (Giddens 1981). The principle of reciprocity underscores the mutual need for power, recognition, and validation in order for social responsiveness and ecological sensibility to emerge (Harvey 1996). Tongke Tongke's experience further suggests that complex patterns of reciprocity among groups and individuals shape the discourse surrounding the mangroves and influence the barriers and enablers for participation in natural resource protection.

Undermining reciprocity can result in power imbalance, resistance, and decreased social capability (Holub 1992; Kiros 1985). The narratives from Tongke Tongke suggest that when power imbalance surfaces, when reciprocity is undermined, and when private interests override local social institutions, suspicions and mistrust arise, fueling the potential for overutilization of the natural resources (Lesser 2001). On the other hand, the narratives on Tongke Tongke's mangroves tell that power struggles and resistance can lead to the emergence of social space and competing discourse for the sustainable governance of natural resources. The emergence of space and competing discourse in Tongke Tongke requires the formation of alliances (Etzioni 2004). These alliances not only provide identity and voice for the various resource users, they also motivate

groups and individuals to mobilize and participate in the contingent restructuring of the landscapes (Etzioni 2004). On the other hand, resistance and mobilizations are also contingent on the alignment of competing timelines and the complexity of events within the landscapes. They tend to be fragmented and diffused.

Complex patterns of reciprocity among user groups promoted attachment to the mangroves and the natural landscape. This attachment also emerged from a history of living within landscapes. A person's tie and commitment to nature cannot be dictated solely by institutions, policies, and monetary incentives (Fararo 1992). It is very personal and is precipitated by the person's identity, imagination, and sense making (Elliot 1999). Moreover, it is dynamic and multidimensional as opposed to being static and mono-dimensional (Leuwis 1993). This is because an individual's construction of natural resources and their governance is fluid and dependent on the complexity of local circumstances (Leuwis 1993). Tongke Tongke's experience on its mangroves shows that when ties to the social and natural environment are rewarded with recognition, validation, and differentiation, groups and individuals will feel obliged to retain these ties while protecting the social and ecological landscapes. Moreover, the ties to the mangroves stimulated the emergence of a reflective capacity to collectively protect the mangroves.

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