The governance of Tongke Tongke's mangroves in Indonesia suggests that social institutions and local rules lead to their protection and sustainability. Social institutions, as neighbourly ties, collective identity, reciprocity and a shared obligation to protect the social and ecological landscapes, motivate community members to make responsible decisions over mangrove management. Community members act to benefit the overall good even when avowing individual rights. This leads to innovative power structures which are more locally sensitive and environmentally appropriate. Through anthropological inquiry, this book explores the nuts and bolts of power relations and social capital at play within the community level for sustainable governance.

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The Policy and Practice of Community Based Natural Resource Governance:

Lessons Learned in Building Resilience towards Ecological Sustainability

Astrid Meilasari-Sugiana, Ph.D

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Abstract

The aim of the work was to analyze community dynamics and collective action for sustainable natural resource governance in decentralized Indonesia. The exploration was an ethno-methodology scrutiny in which in-depth interview and participant observation were used for data collection. Data analysis was carried out by examining the distribution of narratives provided by the respondents, and by carrying out a thematic analysis in which emerging themes were used to produce a complex and coherent narrative of the discourse found within the case study site. The work aims to explore the various practices of natural resource governance and the complex social relations which influence collective action for the sustainable governance of natural resources.

Natural resource governance in modern Indonesia is marked by the tension between the centralized policy strategy of the Suharto period and the reactive strategy of Post-Suharto decentralization. To some extent, decentralization led to devolution of power and opportunities for local resource users to make consequential decisions over the natural resources upon which they depend. Nonetheless, this approach rested upon the capacity of communities to reach a consensus untainted by local politics, commercial imperatives and traditional power structures.Moreover,decentralization had not given the majority to strategic and structural decision making power.

Empirical findings from TongkeTongke's mangroves in Sinjai, South Sulawesi suggest that social institutions and local rules came into play and the people honored to protect the resource on behalf of the community. These social institutions took the form of neighborly ties, collective identity, reciprocity and social and ecological responsibilities. TongkeTongke's mangroves was not free access but governed by local and informal rules to maintain its benefits for the good of the community. The community, through the elders, was determining access and making 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. This book argued that individuals evolved

behavior which commensurate with their responsibilities, leading to innovative power structures which were more locally sensitive and environmentally appropriate. The case study in the village of TongkeTongke within the Regency of Sinjai suggested a rebuttal of Hardin's *Tragedy of the Commons*. In line with Ostrom's theory, the commons is governed by local and often informal rules which induce behavior that are in line with a collaborative mentality to maintain its benefits for the good of the community. Nonetheless, as suggested by Bookchin and argued in the thesis, collective natural resource governance is also about individuals who comply and resist in shaping civic collaboration and ecological sustainability.

In addition, barriers and enablers for sustainable natural resource governance need to emerge from local contexts; they could not emerge as a consequence of top down devolution alone. Moreover, no preparation of local communities could be made to assume the unintentional consequences of complex power relations. In line with Etzioni's theory, empirical findings suggest that real power relationships in real resource management contexts can undermine the possibility of democratic and equitable consensus making. Nonetheless, this work argued that social reciprocity, identity validation and symbolic capital can motivate resource users to behave in line with a collaborative mentality for mangrove protection.

List of acronyms and abbreviations

ACI	'I Love Indonesia' Community Mangrove Organization
AUD	Australian Dollar (Currency)
BALITBANGDA	Provincial Research and Development Centre
BAPPENAS	National Planning Board
BAPPEDA-SULSEL	Provincial Planning Board of South Sulawesi
BAPPEDA-SINJAI	Regency Planning Board of Sinjai Regency
BPS	Central Bureau of Statistics
BARUGA	Government Offices in Villages
BUBU	Hand held equipment for capturing fish made from bamboo
BRI	Indonesian National Bank
BUPATI	Regency Head
CAMAT	District Head
CBNRM	Community Based Natural Resource Management
CIDA	Canadian International Development Agency
CPR	Common Pool Resources
DIRJEN	Directorate General
DinasKehutananSinjai	Regency Forestry Department - Sinjai
DPR or PRC	People's Representative Council
EMPANG PARIT	Mixed Planting and Aquaculture Farming
GDP	Gross Domestic Product
GNRHL	NationalLand and Forest Rehabilitation Program
GOI	Government of Indonesia
HAJI or HJ	Title for Citizens having conducted the Haj Pilgrimage
ICZM	Integrated Coastal Zone Management
ID	Identification
IDR	Indonesian Rupiah (Currency)
JBIC	Japan Bank for International Cooperation
JICA	Japan International Cooperation Agency
JOLLORO	Large boats for 8 people used in South Sulawesi
KATINTING	Machines and/or engines attached to small boats
KADES	Village Head
KALPATARU	Indonesia's National Environmental Protection Award
KEPMEN	Ministerial Decree
KEPPRES	Presidential Decree
MPA	Marine Protection Area
MPR or PCA	People's Consultative Assembly
MUSRENBANG	Development Coordination Meetings for Consensus
NGO	Non Government Organizations
NRM	Natural Resource Management
OPEC	Organization of the Petroleum Exporting Countries
PDIP	Indonesian Democratic Party
PEMP	Coastal Community Economic Development Program
PERDA	Provincial or Regency Level Regulation
PONGGAWA	Land and/or Boat Owner in South Sulawesi
PUKAT	A set of fine nets and rakes to comb sea water and trap fish
ROMPON	Fish house to attract fish to come up to the surface
SAWI	Laboring Fishermen
SISWASMAS	Community Based Marine and Fishery Monitoring
SIUPP	License for Marine and Fishery Resource Extraction
SULSEL	South Sulawesi
TIBO TIBO	Village women who act as traders of local fishery resources
TUMPANGSARI	Mixed Planting and/or Mixed Cropping
UNEP	United Nations Environment Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
USAID	United States Agency for International Development
YTMI	Indonesian Self Growth Foundation (NGO)

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Dedicated to YustinusSunyoto and Amelia Sherina

I

Indonesia's Natural Resource Governance across the Regimes

1.1 A background to natural resource governance in Indonesia

This book analyzes collective action in the governance of Indonesia's natural resources. Through analysis of the country's coastal resource management initiatives, this book examines the implications of complex settings on natural resource governance in terms of devolution, participation and sustainability. Using a coastal site and having a particular focus on South Sulawesi's mangroves, as the case study, the intent is to provide a better understanding for incorporating community members and promoting sustainability. The exploration aims to support the Government of Indonesia in promoting social cohesion and sustainable development. Through an investigation into South Sulawesi's mangrove governance, the exploration makes inquiries into the gaps between strategy and practice and observes how these gaps shape the landscape for social capability and ecological sensibility towards collective natural resource protection. In addition, these gaps are also analyzed and discussed, to shed light on community dynamics and their relevance to the collective versus individual choice debate found within **Ostrom's Common Pool Resource Theory** and **Bookchin'sTheory of Eco-Anarchism**.

A large number of Indonesia's population depends on the country's natural resources for their sustenance and income. In recent years Indonesiahas expe-

riencedan enormous strain on its natural resources so they are in need ofsome grave protection. Many of Indonesia's natural resource governance initiatives during the Suharto era were unmanageable, leading to the further disempowerment of the majority of community members (**Moniaga 2000**). Conventional natural resource governance is marked by an exploitation orientation. Suharto's regime similarly emphasized a philosophy of development which was primarily based on centralized and top down decision making. This form of decision making was considered important by the **Suharto** government and was adopted to ensure political stability. However, this approach also led to apower discrepancy withunequal access to strategic decision making, potentially undermininglocal democracy and curtailing community participation. To promote participative engagement and social inclusion, during the **Post-Suharto** era the Government of Indonesia (GOI) adopted a policy which focused on community user groups and the regency government. Under this policy the regency government and the various user groups were given the rights and responsibilities to manage the country's natural resources. The GOI considers these rights and responsibilities key to promoting social structure and lasting sustainability.

This chapter provides an introduction to the governance of Indonesia's natural resources. Past and present management practices of Indonesia's resources are highlighted and discussed, taking into account the actions taken by the GOI and the challenges faced in encouraging participation and social inclusion. This chapter also provides a discussion of the limitations of government efforts in facilitating sustainability. The relevance of the exploration and the case study approach to both theory and practice will also be discussed briefly in the last part of this chapter.

Thecountry's islands and coasts

Indonesia, a nation of more or less 17,500 islands, is a coastal oriented nation with an estimated coastline of 81,000 km **(Titahelu 2003)**. Approximately 7.1 million of Indonesia's 9 million square kilometers encompass marine and coastal waters **(UNEP 1995)**. Although Indonesia comprises only 1.3 percent of the earth's land surface, it harbors a disproportionately high share of its biodiversity, including 11 percent of the world's plant species, 10 percent of its mammal species, 16 percent of its reptile and amphibian species, and 17 percent of its bird species **(Barber 2002)**. Indonesia's great expanse of territorial waters and the richness of the Indo-Pacific seas further add to the country's biodiversity and marine assets.

In addition, the nation also supports a rich variety of coastal and marine habitats. The mangrove forests which line the coasts of Kalimantan have long been the lungs of South East Asia, whereas the extensive reef system in the deep clear seas off Sulawesi is among the richest in specimens of corals, fish and other reef organisms **(Barber 2002)**. Seven thousand species of marine and freshwater fish are the major source of protein for the Indonesian people **(Barber 2002)**. The nation's coastal and marine habitat is one of Indonesia's greatest assets, and conserving them is crucial for sectors as diverse as forestry, agriculture, fishery and tourism. Accordingly, Indonesia's natural resources support a variety of economic activities for the country and its people. These activities include transport, fisheries, aquaculture, agriculture, forestry, tourism and the subsistence of coastal communities.

In the year 2000, Indonesia's population reached 210 million, and the population growth rate was 1.8 percent per annum **(BPS 2000)**. Approximately 41 million people (22% of the population) live in or near coastal areas. Half of the 41 million people live in coastal villages and are dependent on local natural resources for their livelihood **(UNEP 1995)**. Marine - related activities account for 20% of total Gross Domestic Product (GDP) and 19% of non oil and gas GDP. Coastal and offshore activities account for 17% of foreign exchange earnings, mainly in oil, gas, fishery and tourism (UNEP 1995). Moreover, the coastal areas provide employment and income for about 16 million people or 24% of the national labor force **(UNEP 1995)**.

Figure 1 - Map of the Indonesian archipelago (UNEP 1995)

Research suggests there is a potential for permanent damage to Indonesia's natural resource base **(Resosudarmo 2006)**. Resources such as mangroves and sand are over-exploited for wood and construction materials despite their importance for the sustainability of marine and coastal fisheries **(Barber 2002)**. Upland erosion and domestic waste damage ecosystems and threaten species of corals and other biological organisms **(Resosudarmo 2006)**. Moreover, there is a potential for major expansions in aquacultural production and rice farming. These expansions, if not carefully planned and controlled, will destroy valuable ecosystems and natural resources **(Ketchum 1972)**.

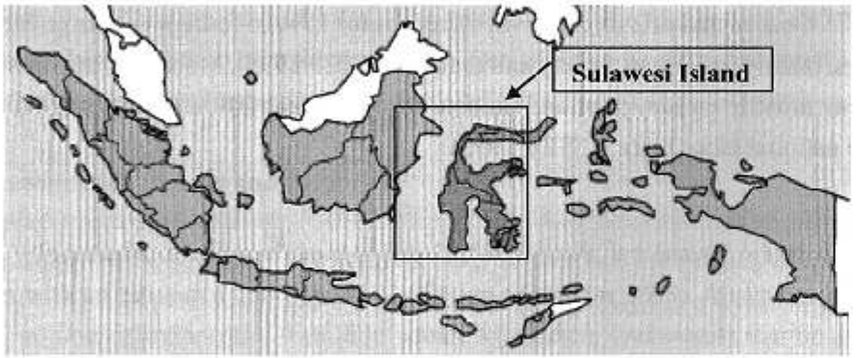

Figure 2 – The island of Sulawesi within the Indonesian archipelago (USAID 2004)

The ecologist's perspective on natural resource governance

According to **Ketchum** (1972), the coastal area encompasses both the coastal water and its adjacent shore land. **Ketchum** further noted that the coastal water includes the estuarine zones, namely the protected waters of the bays, lagoons and tidal rivers which have an unimpaired natural connection with the open seas. Alternatively, the shore land is the land which has a significant impact oncoastal waters, and is home to the various coastal wetlands found within the coastal areas. These coastal wetlands include the ponds, bogs, marshes, streams and deltas which drain directly into the coastal water basin **(Ketchum 1972; Clark 1977)**. The shore land is also marked by the presence of mangrove swamps.

Ketchum (1972) noted that the most challenging and distinctive characteristics of the coastal area are the aggregation of various interrelated physical systems which are ecologically fragile. Due to its specific characteristic, ecologists such as **Woodley** (1993) noted that the management of the coastal area requires a distinctive approach which can address the problem of integrated ecosystem management. According to **Woodley**, mitigatingthe degradation of natural resourcesshould take into account the interrelation of ecosystems and the roles which diverse shareholders play as an integral part of the natural world.

In its endeavor to protect Indonesia's natural resources, the government addresses the interrelatedness of ecosystems by integrating the various user groups and government departments in its policy and program planning and implementation. Collaboration and co-ordination mechanisms in the form of legislations, institutions and umbrella agencies are instituted to incorporate diverse user groups and ensure the integrated management of natural resources. The Government of Indonesia, along with the various donor agencies acting as partners, incorporate the ecologist's perspective of natural resource governance as opposed to the sociologist's perspective **(USAID 2000)**.

Development activities and natural resources in our coastal areas

The impact of development activities on the country's ecosystems presents a major challenge for policy makers and citizens all over Indonesia, and

is pervasive and intense. Land clearing, dredging and site preparation in the coastal watershed can lead to soil erosion and sedimentation **(El Swaify 1983)**. Sediment accumulation leads to the formation of a shallower basin, and has adverse effects on water quality, circulation and the general ecosystem function **(El Swaify 1983)**. Although the high productivity of marshes, mangroves and coral reefs is of vital importance to the various coastal components, marshes in rural areas increasingly are becoming sites of reclamation for community dwellings and aquacultural farming. Moreover, the relatively calm water of the marsh has become a suitable location for the development of docklands. Population growth and the sprawling of dwelling areas require greater volumes of fresh water to be pumped from the ground for human activities, thus resulting in a lowered water table and intrusion of salt water **(Ketchum 1972)**.

The presence of well managed mangrove forests can support the valuable production of lumber and other forest products. In addition, mangrove forests and swamps can sustain sizable offshore fisheries, especially for the commercial harvest of prawns. In developing countries a substantial portion of fishermen's income comes from fishing in waters adjacent to mangrove swamps **(Novaczek 2001)**.One of the greatest threats to mangrove swamps in South East Asia has been their conversion into fishponds for aquacultural purposes, primarily for the commercial production of prawns and milkfish. Aquaculture results in the removal of trees, the dredging of silt and mud, and the construction of dikes **(Dursin 2001)**. In addition, mangroves and other coastal wetlands are often used for solid waste disposal sites and garbage dumps, leading to land and water pollution through the introduction of toxic substances and pathogens. Moreover, destructive fishing through the use of dynamite and cyanide can damage nurseries and coral reefs in various ways including the burial and destruction of the coral itself. Damage and destruction of the coral reefs lead to a decline in the productivity of harvestable reef resources and a decline in aesthetic value. In addition, damage and destruction of the coral reefs can adversely affect the buffering capacity of the reef, resulting in coastal erosion **(Ketchum 1972)**.

Using a coastal site in South Sulawesi, Indonesia, as the case study, the investigation aims to support the Government of Indonesia, in promoting enduring sustainability. This bookdiscusses coastal resource governance initiatives within the village of **TongkeTongke in Sinjai Regency**, South Sulawesi. The investigation in South Sulawesi focuses mainly on **TongkeTongke's** mangrove cultivation and conservation scheme initiated by community user groups and supported by the regency and provincial government.

Natural resource governance across regions and periods

Natural resource governance in Indonesia has beenshaped by the various regimeswhich influenced the nation's political and economic landscapes. The governance of Indonesia's resources can be classified into four major periods, namely that of the **Dutchcolonization** era, the **Sukarno** era, the **Suharto** era, and the **post-Suharto** era.

Prior to the Dutch colonization period, Indonesia's natural resources were governed by a common property regime. Thisregime was marked by collective governanceof natural resources by local communities who depended on them for their livelihoods. Examples of this traditional collective management approach, continuing into the present, include the ***sasilaut*** and ***sasidarat***community based coastal resource governance systems within the Maluku Province in East Indonesia **(Novaczek 2001)**.

During the Dutch colonization era, natural resource governance fell into the hands of the elite colonizers in the form of monopolistic trusts administered and provisioned by the Dutch crown **(Resosudarmo 2006)**. Subsequent to Indonesia's independence in 1945, natural resource governance came under the control of community user groups within the various localities. The **Sukarno** era was marked by an attempt to unify Indonesia's diverse communities through charismatic leadership, inclusion of ethnic groups, and the promotion of unity in diversity **(Resosudarmo 2006)**. Natural resource governance during the **Sukarno** era came under the authority of indigenous inhabitants and community user groups. During the Sukarno era the country was moving towards political unification as opposed to progressing economically through the centrally planned commodification and commercialization of its natural resources. The country's abundant forests, minerals and natural resourceshad not been exploited for economic development during the **Sukarno** era.

The **Suharto** regime initiated the nationalization of natural resource use, allocation and distribution. Consequently, natural resources became the property

of Indonesia, the government and its people, rather than being the domain of local user communities. Natural resource governance wasmarked by a centralized model of policy and program planning at the national level, which relied heavily on the roles of super agencies to incorporate cost cutting issues and coordinate related stakeholders across various levels of government. Due to the complexities of relationships and diversities of stakeholders involved, costcutting policies and programs for infrastructure development, community empowerment and integrated natural resource management were perceived to require super agencies for planning and co-ordination.

The roles of government departments at the provincial and regency levels were to authorize, adapt and execute policies and programs promulgated at the national level through vertical lines of command and pre-determined co-ordination mechanisms **(Rohdewohld 1995)**. Natural resource governance during the **Suharto** era shifted from indigenous management to that of public and private management **(Lynch 2002)**. In public management access to natural resources is held in trust by the state, whereas in private management tradable rights to natural resources are owned by an individual or company. The above shift was both culturally and politically engrained. First, the government's notions of economic growth and social welfare were equivalent to imparting private property rights for tradable purposes. This was carried out to promote investment, stimulate trade and achieve the trickle down effect **(Lynch 2002)**. Second, as stipulated in Agrarian Law No 5/1960, Ministerial Decree No 5/1990 and the 1994-2020 National Environmental Management Strategy, in the interest of national integration and public welfare, decision making concerning access to,and allocation of natural resources liesin the hands of the (national) government.

Lynch (2002) noted that Law No 5/1979 on village governance had three important consequences which reverberated into the current post **Suharto** era. First, the diverse indigenous groups within Indonesia's archipelago were known and classified solely by social and economic indicators (e.g. race, occupation, income) as opposed to cultural and political indicators (e.g. identity, customs, sense making, power relations). Secondly, the enactment of Law No 5/1979 transformed Indonesia's villages into mere administration units whilst disregarding their cultural and political significance. Thirdly, the implementation of this Law did not provide community members with the right to manage the use,

allocation and distribution of natural resources at the local level. **Suharto's** patrimony led to the assumption that the state, government officials and business community held the key to facilitating new initiatives and developments within local communities **(Bebbington 2006)**. To community members, development activities were equivalent to holding meetings for developing infrastructure, promoting business investments, and ensuring that community aspirations were taken into account by the district and regency head for due implementation **(Bebbington 2006)**.

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 of 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 communities, indigenous uprisings and demand for regional independence through devolution, participation and social inclusion.

1.2 Governance issues in Indonesia

In this section we will discuss the issues which beset the governance of natural resources during the **Suharto** and **post-Suharto** era. The various governance mechanisms underlying Indonesia's natural resource management initiatives are described and their dimensions of issues briefly discussed. This section highlights issues which beset effort at facilitating participative engagement and social inclusion in particular. Actions taken by the GOI to alleviate emerging issues are also described here.

Challenges in Indonesia's natural resource governance

The **Suharto** regime was marked by the exclusion of community user groups through the implementation of corporate management of natural resources **(Fakih 1996)**. Corporate management operates under a form of private property allocation, where the government determines the initial ownership of

the shares, and the proprietors operate under governance rules typical to those of private corporations. In addition, owners of shares in the corporation are free to sell their rights or to lease to third parties any user rights attached to their shares (**Munasinghe 1995**). **Fakih** (1996) also noted that in order to facilitate economic growth and political stability, **Suharto** excluded community user groups by undermining their identity, culture and political significance in the sustainable governance of Indonesia's natural resources.

In the name of national growth, development and prosperity, the **Suharto** administration asserted its legitimacy in centrally administering the allocation, distribution and governance of natural resources, leaving a much reduced opportunity for indigenous groups to reap benefits from local natural resources. **Resosudarmo** (2006: 3) noted the following with regard to the notion of authority, equity and sustainable natural resource governance during the **Suharto** era:

> As the years went by, there was mounting criticism of the government for its failure to ensure that resource utilization benefited most of the population, for its failure to control the rate of exploitation of mineral reserves, and for its failure to protect the interests of future generations. Conflicts between local communities and large natural resource extraction companies increased and intensified as the perception strengthened that while it was local resources and local land that was being exploited; local communities were receiving little or no benefit from these activities.

In addition, towards the end of **Suharto's** administration there were significant social costs born by the centralization and privatization of natural resources as illustrated in the following excerpt by **Galdikas** (2001: 1):

> As the central government's authority faltered, village leaders and others aggressively began taking what they believe to be their birthright – the timber and minerals of the rainforests in their areas. These assets had previously been monopolized by the political elite – the cronies and families of former **President Suharto** himself...Soon the situation was far beyond the power of local national park and forestry department officials. Exploitations of Indonesian rainforests, coastal reserves and formerly protected areas and national parks were out of control and accelerating throughout Indonesia.

The adverse consequences which centralization and privatization had on social equityand the natural environment led the GOI to adopt the collectivegovernance of natural resources during the **post-Suharto** era (**Andrianto 2006**).

Resolving challenges and alleviating issues

Natural resource governance during the **Suharto** era was marked by a multitude of issues, each of which were equally pertinent in shaping the complexity behind natural resource use and governance. Nevertheless, issues were continually subverted and downplayed for the sake of national integration, political stability and economic growth (**Moniaga** 2000; **Titahelu** 2003). Issues which 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 (**Moniaga** 2000; **Galdikas** 2001).

During the **post-Suharto** era, the GOI adopted two policies with a profound impact on natural resource use, allocation and distribution: the policy for a decentralized public administration system (**Thorburn** 2001) and the policy for a collective and community based natural resource governance system (**USAID 2004**). A number of objectives underlie the above initiatives (**BAPPEDA-SULSEL** 1998). Firstly, there is the need to promote inclusive governance that is responsive to the needs and demands of community user groups. Secondly, during the **post-Suharto** era the national government's aim was to promote devolution and empower the regency government and local user community. Thirdly, there was an urgency to facilitate a more equitable allocation and distribution of Indonesia's natural resources for national stability purposes. Lastly, the national government perceived regional autonomy, decentralization and community based natural resource governance as the preferred trajectory to achieve national integration and sustainability. It is important to note that decen-

tralization also opens up new challenges and issues which require changes that extend beyond the use of institutionalization and regulatory measures and into the social and cultural dimensions of natural resource governance.

Post-Suharto:The public administration system

In 1999, **Suharto's** successor **Habibie**, introduced Law No 22/1999 on Regional Government and Law No 25/1999 on Fiscal Relations between the national, provincial and regency government, committing the GOI to a course of administrative and financial decentralization **(Savitri** 2006). Law No 22/1999 on decentralized governance replaced Law No 5/1979 on the execution of village level governance **(Savitri** 2006). In addition, Law No 22/1999 stipulated that the provincial and regency government has discretionary power in modifying national policies and programs according to their specific conditions. Also, the regency and provincial government was given the authority to formulate policies and programs that were consistent with national goals **(Savitri** 2006). The erasure of Law No 5/1979 marked the beginning of village elections, and village heads are thereforeelected by community members as opposed to being chosen by the ***bupati*** or regency head **(YTMI 2001)**. As well as this, Law No 22/1999 stipulated the need for nested development meetings within the village, district, regency and provincial levels for coordinating policies and programs, and ensuring that community aspirations are incorporated into the government's yearly agenda.

In spite of this, scholars havenoted that very few regional administrations are adequately prepared to implement decentralized arrangements **(Thorburn** 2001). **Thorburn** (2001: 7) noted the following:

> Under the decentralization scheme, central government allocations for regional governments are being greatly reduced, forcing provincial and regency governments to generate a larger portion of their own revenue. In the midst of the country's protracted financial crisis which began in 1997, governments at all levels are hard pressed to meet routine expenses, much less provide improved services and infrastructure and promote local development.

Thorburn (2001) also noted that the decentralized public administration system leads to a number of issues and challenges. Since the regency government assigned most of the responsibility for running government matters within the district and village level, the provincial governments responsible for coordinating the various regencies are often subverted by both the national and regency government. Morcover, regional autonomy and financial decentralization often lead to the regency obsession witha local revenue generation at long term social and environmental costs. In the light of regional autonomy, the regency head or *Bupati* possessed tremendous political power. This could encourage the misuse of power, leading to corruption, collusion and nepotism.As well as this, regional autonomy lead to the domination of local political power by hereditary elites who combined traditional indigenous authority with state power at the regency, district and village levels.Thorburn (2001: 10) further noted that "there are very few checks and balances on these sorts of political power [and] there is concern that decentralization could be encouraging the creation of authoritarian states within a state".

A major achievement during the **post-Suharto** era wasthe promulgation of Forestry Act No 41/1999 which recognized the contribution of indigenous groups and their territories **(Siswanto 2005)**. The 1999 Forestry Act was further supplemented with Ministerial Decree No 5/1999 which stipulated 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 cevelopment activities in a transparent and accountable manner" **(Siswanto 2005: 144)**. With regard to natural resource governance, the adoption of these laws reinforcedthe government's commitment to collective management at the regency and community level. Consequently, the regency government, acting as an autonomous entity, was given the authority to work with community members for the inclusive and sustainable governance of Indonesia's natural resources **(Munasinghe 1995)**.

Even though Indonesia's decentralization policy acknowledged indigenous groups in natural resource governance, the nation's newly decentralized public administration system intensified natural resource management issues as regency government lacks adaptive and socially attuned initiatives for promoting participative engagement and social inclusion **(Contreras-Hermosilla 2005)**. Hence, despite the national government's efforts to promote social inclusion, indigenous groups remained vulnerable to marginalization anddispossession **(Contreras-Hermosilla 2005)**. In addition, as the discussion of my fieldwork will show, the once restricted local community has a greater freedom to exploit natural resourcesformerly taken away for national development purposes during **Suharto's** administration **(Galdikas 2001)**.

Integration through joint decision making and inclusive governance

To promote equal opportunity, redistributive justice and the protection of Indonesia's natural resources, the reformation movement subsequent to **Suharto's** downfall advocated an inclusive policy in natural resource governance **(Satria 2002)**. In the spirit of decentralized governance and regional autonomy, the GOI encouraged joint decision making across the provincial, regency and village level for incorporating local user groups into decision making processes and ensuring political stability **(USAID April 1997 - March 1998)**. Through *MUSRENBANG* or development meetings, joint decision making was systematically organized across various levels of governancefor promoting participation, ensuring wide-ranging representation, and for reaching consensus through undistorted communication. Nevertheless, the local communities' role as agent of change has increasingly been questioned as government agencies and donor institutions have become goal oriented, institutionalized and detached from the voices of community members **(Andrianto 2006; Resosudarmo 2006)**. Furthermore, in the name of progress and development, officials who paid tribute to those sitting in government institutions at the regency, district and village levels had the tendency to detach themselves from the people they came to represent **(Savitri 2006)**.

Despite the adoption of consensus-focused initiatives, various researchers **(Fakih 1996; Barber 2002; Bebbington 2006)** noted that community user groups remained increasingly disempowered since issues which beset command economy and centralized planning - such as one party dictatorship and intolerance of dissent - reverberated through the regency, district and village administrations. These conditions of disempowerment were prevalent due to a number of reasons. At the outset, communication and policyplanning was not held in an egalitarian contextmarked by an atmosphere of democratic and convivial social exchange **(Nuijten 2005)**. Moreover, in joint decision making communicative distortions and enforced uniformity were unavoidable due to power disparity **(Lyotard 1979)**. In the light of devolution and regional autonomy, the ascendancy and prevalence of prominent individuals becameinevitable **(Bebbington 2006)**. Equally, issues of national disintegration, political instability and social dissonance remained widespread, and knowledge for promoting devolution, inclusion and social cohesion were required. Chapter Four addresses these issues through a careful discussion of the power relations underlying mangrove governance in South Sulawesi. Chapter Four also discusses the issues which emerge from the country's initiatives in facilitating inclusion, social cohesion and sustainability.

Community involvement

The unforeseen consequences which Indonesia's decentralized governance had on national integration and social cohesion lead to the reassertion of **Suharto** era power centers as agents of change **(Bebbington 2006)**. These centers included thegovernment, the house of representative, the law enforcement officials and the courts. Community members responded by adjusting their production system and overall livelihood strategy as opposed to pressuring the government to question its policies **(Umar 2003)**. In this context Indonesia was becoming a non-participating society with many of its population relying on government initiatives and foreign aid for stimulating change and development. The combination of growing unresponsiveness and non participation could seriously deter the emergence of social and environmental capability **(Andrianto 2006)**. Revealing community members' perspectives on poverty alleviation, **Andrianto** (2006: 5) noted:

> Many officials and citizens portrayed the government as a father who cares for his children, the citizenry. People have come to believe that poverty alleviation is mainly the responsibility of the government. Many also viewed poverty alleviation as meeting basic, immediate needs of the poor for housing, food or healthcare or village infrastructure. Few thought of poverty programs as enabling poor households to become empowered and self reliant through education, information, organization and increased social and economic opportunities.

Arguably, participatory natural resource governance required a level of social responsiveness and political engagement that was simultaneously capable of stimulating change and social cohesion. In Chapter Four this will be described and discussed further with regard to the case study in South Sulawesi.

Needless to say, as **Kasri** (2000: 2) noted, "the most serious problem for Indonesia is the fact that people do not care about the consequences of uncontrolled exploitation of the country's natural resources". Equally, devolution of authority to a local entitydoes not automatically promote ecological sensibility and social responsiveness for the collective protection of natural resources. Etzioni (2004: 172) noted that "if devolution merely shifts function and controls from the national level to large sub-entities, it is much more likely to feed separatist nationalism than if devolution reached into much smaller localunits". Etzioni's remark echoedthe 1999 - 2001 violent conflicts in Maluku, West Papua and Aceh in which local groups asserted themselves violently in order to renegotiate their terms of inclusion into the state. The common governance of Indonesia's natural resources requires redefiningdevolution to incorporate "a divided and layered sovereignty without loss of control and self determination for those who agree to delegate some of their decision making power...to a more encompassing level" **(Etzioni 2004: 172)**.

1.3 The Purpose of the Book

The book discusses the interface between government policies and on-ground practice of natural resource governance. Questions elaborated and discussed encompassed the following:

- How are the various practices of natural resource governance carried out?
- How does on-ground practice interact with government's policies and programs for sustainable governance?
- How do complex and dynamic social relations influence collective action for the sustainable governance of natural resources?
- How do local community user groups negotiate power in relation to the development of a local sustainability program?
- How can participative engagement and social inclusion be facilitated to promote sustainable natural resource governance?

Through description and analysis of South Sulawesi's coastal resource governance initiatives, the explorations and discussions in this book aims to provide a better understanding of government policies and programs for the sustainable governance of natural resources. In this investigation in-depth interview and in the participant observations used to obtain the data. The investigation employed the ethnomethodology method of inquiry. Ethnomethodology is a sociological method that is concerned with the way the social order is shaped through social interactions and discourse exchanges **(Bryman 2001)**. It examines ordinary social interaction in great detail to identify the rules underlying social construction and discerns how these rules are applied and transformed. It provides insight into the subjects' perspectives and everyday social practices. Ethnomethodology is an ethnographic investigation which stems from anthropological field work.

Assessmentof a case in Sinjai, South Sulawesi wasconducted through qualitative means to provide contribution to both theory and practice. The data was analyzed by examining the narratives and discourse provided by the respondents, as well as by conducting a thematic analysis. In the thematic analysis the data was classified, coded and compared to deduce the themes which emerge from the interviews and participant observations. The interconnections among the various themes were then discussed to analyze the complexity underlying sustainable natural resource governance initiatives.

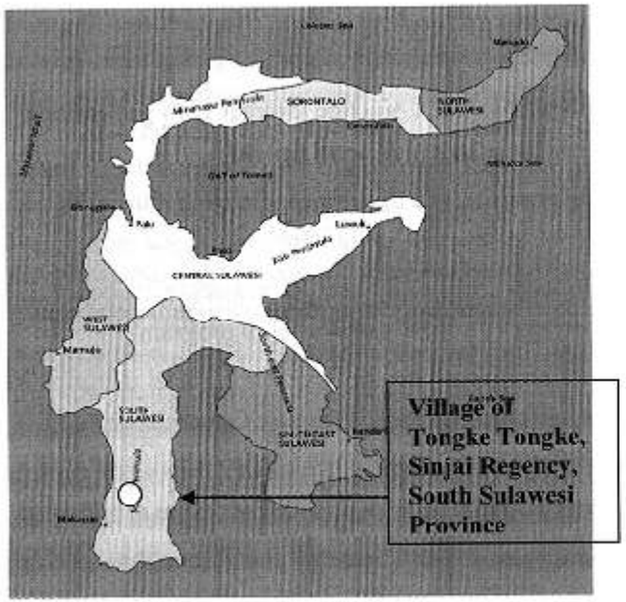

Figure 3 – The location of the case study site (USAID 2004)

1.4 Tongke Tongke's mangrove governance

Using a coastal site and with a particular focus on the Tongke Tongke's mangroves in Sinjai Regency as the case study, the intent was to provide a better understanding in promoting enduring sustainability. Based on their own initiatives, in the early 1980s community members planted Tongke Tongke's mangroves to create new land and protect the coast from wave encroachment. Initial failures to reforest the coast did not deter the enthusiasm for mangrove planting. Today the mangroves have become an asset of Tongke Tongke and the Regency's icon. In order to protect the mangroves, the cultivators formed a group called the *ACI* mangrove organization. *ACI* stands for *Aku Cinta Indonesia* or I love Indonesia. Members of the *ACI* organization are dedicated to nurturing and conserving the village mangroves.

The case of the mangroves is a cogent rebuttal of Hardin's *Tragedy of the Commons* (1968), an article depicting resource over utilization as the outcome when multiple resource users utilize scarce resources in common. The investigation, an inquiry of how resource users negotiated power in relation to a local mangrove conservation initiative, uncovered aspects of identity and social capital at play in collective natural resource governance. Theoretical directions posited by **Elinor Ostrom** and **Murray Bookchin** are incorporated into the report. The book argues that these theoretical directions, although having special powers when used in conjunction with one another, only come into their own as analytical tools when used with an ethnographic methodology. Using ethnographic record and cogent field examples from South Sulawesi, the bookdepicts where **Ostrom** and **Bookchin** were analytically powerful and where they were not.

This ethnographic work uncovers the ways in which real power relations in real natural resource management contexts can undermine **Ostrom** and **Bookchin's** vision of the possibility for democratic and equitable consensus making. **Etzioni's** work on power relations and **Agrawal's** work on identity were incorporated into this report to develop a better understanding of the nature of structural relationships that need to be developed for democracy, equity and sustainability to be surmounted. This work argues that complexity in real natural resource management contexts could undermine democracy and equitable consensus making. The book suggeststhat Indonesia's decentralization and devolution in natural resource governance is in name only and no new programs or support can overcome the history of how things are done without more attention being paid to the dynamics of identity, social capital and power relations that play across geographical scales. While it is not the focus of this work to provide answers to the hugely complex issues of natural resource governance in Indonesia, it is this kind of ethno-methodology research which is needed to guide decision making in the future.

1.5 How thisbook works

The book is divided into six chapters. This chapter discusses the background to the research. Chapter Two, the literature review, encompasses the literature on devolution, participation and inclusion in collective natural resource governance. Chapter Three discusses the method used in undertaking the research. Chapter Four provides a description of the case study in Sinjai, South Sulawesi and the discourse surrounding mangrove planting and cultivation. In

addition to depicting the various coastal resource management initiatives which influence local mangrove governance, Chapter Four also describes the organization and institutionalization of mangrove protection at various levels of governance. Theoretical discussions of the emerging issues related to collective natural resource governance are provided in Chapter Five. Chapter Five builds on the themes presented in Chapter Four and provides analysis of the paradigms and theories underlying Indonesia's multiple natural resource governance practices. In Chapter Five, the discussion chapter, the significance of the discourse surrounding Tongke Tongke's mangrove governance is revealed. As well as this, Chapter Five also discusses the trajectory to instilling bottom up initiatives and adaptive management capacity for enduring sustainability. The importance of the mangrove story in countering **Hardin's *Tragedy of the Commons*** (1968) is depicted and discussed in Chapter Five. The final chapter, Chapter Six, summarizes the analysis on discourse of power and inclusive governance. The concluding chapter also summarizes the contribution to knowledge and practice in natural resource governance.

II

Natural Resource Governance through Collective Action: Challenges and Opportunities

2.1 Intro

In the light of Indonesia's recent decentralization and regional autonomy, there was the need to inquire how devolution shaped the landscape for civic participation and inclusive natural resource governance. Engendering civic duty and facilitating active membership becamethe focal point of Indonesia's sustainable development agenda, whereas collective action andconsensus making became center stage in conservation and natural resource protection. Common pool resource theory and Bookchin's theory of eco-anarchism highlights the need for collective action through cooperation and collaboration.

Chapter Two discusses **Ostrom's** Common Pool Resource (CPR) Theory and **Bookchin's** Theory of Eco-Anarchism for governing natural resources.The objective of the chapter is to discuss their respective views on collective action and consider them with regard to sustainable natural resource governance. Another objective is to discuss critiques relating to CPR theory and **Bookchin's** Theory of Eco-Anarchism. Chapter Two provides the theoretical groundwork for the empirical discussion in Chapter Four. It also provides the theoretical underpinnings for the substantive and methodological discussion in Chapter Five.

Responding to the government's inability to protect natural resources, CPR theorists advocated a planned economy with community participation and

democratically controlled natural resource allocation through consensus and joint decision making. Collaboration across the various levels of governance was facilitated through nested institutions. Nested institutions are institutions within various levels of governance which acted as platforms for consensus making and coordination among various user groups. CPR theorists argued that nested institutions could promote participation and social inclusion. CPR theorists encouraged the adoption of 'design principle', allocation rules and adaptive management capacity in the form of negotiations and policy adjustments. These strategies were believed to engender commitment whilst encouraging devolution of responsibility and active membership for the collective protection of natural resources.

According to CPR theorists, the distribution and devolution of power leads to opportunity for user groups to make consequential decisions over the resources upon which they depend. User groups would then be very careful in managing their livelihoods, and in this context decisions would be socially viable and ecologically sustainable. A well known CPR theorist and expert in collective dilemmas, **Ostrom** (2003) believes that locally managed commons are the key to enduring sustainability. In this work, **Ostrom's** CPR theory is used to analyze initiativesfor facilitating locally managed commons and to understand the challenges and opportunities which emerge from a collective mangrove protection project.

As a significant scholar within the green and ecological movement, **Bookchin's** works (1994) examined the relations among local individuals living in closely knit decentralized community. His works (**Bookchin 1994**) also studied the potentials which these communities have in facilitating the ecologically benign culture.Responding to the government's inability to ensure collaboration for protecting local natural resources, **Bookchin** (1994) argued that the social edifice is the root of ecological problems. **Bookchin** (1994) further advocated a local government mandate in which small community user groups were given the rights to make decisions over the governance of local natural resources.

Furthermore, **Bookchin** (1994) argued that individuals within a small community were more closely dependent upon social reciprocity, thus stimulating a more ethical interaction among its members. This social reciprocity, when situated within a small and localized communitarian setting, would,

Bookchin(1994) believed, cradle a devolution marked by civic duty, active membership and social responsiveness. In small and localized communitarian settings, this social reciprocity is also believed to engender collaborative action for the protection of local natural resources since groups and individuals, according to **Bookchin** (1994), will feel obliged to make the right decision and protect their social and natural environment now that the ball is in their court and their lives depend on it. Hence, as members and collaborators of small and localized collectivities, groups and individuals are presumed to behave contrary to those who join the official collective and contrary to the capitalist imperative of growing and consuming in a cornucopian manner (**Bookchin** 1994). Bookchin's **Eco-Anarchism** (1994) explores devolution, power negotiation and willed actions. In relation to a local mangrove conservation project, **Bookchin's** theory is incorporated into the research to explore how various community user groups avow individual rights and evolve a behavior which is commensurate with their collective responsibility to protect natural resources.

The chapter opens with a discussion of **Hardin's** article entitled ***The Tragedy of the Commons*** (1968). Critiques surrounding **Hardin's** article are portrayed as understanding complex on-ground management practices and to inquire into problems and prospects in collective natural resource governance. Section 2.3, a critique of rational choice theory, sets the need for transcending collective dilemmas through the adoption of the humanist approach. **Ostrom** and **Bookchin's** works on collective participation and environmentalist consciousness were then discussed to inquire into possible trajectories for sustainable natural resource governance. The chapter ends with critiques of **Ostrom** and **Bookchin's** theories and with an inquiry over the nature of power relations and social dissonance in common governance.

2.2 The rationality of rational individuals

Hardin's article ***TheTragedyoftheCommons*** (1968) shaped our assumption of people's behavior when collaboration was required and many utilized scarce natural resources in common. According to **Steins** (1999), **Hardin's** article established the dominant framework within which social scientists, environmentalists and policy makers portrayed issues and approaches to natural

resource governance. **Hardin** envisioned a pasture "open to all" and "examines the structure of the situation from the perspective of a rationalherdsman" **(Ostrom 1990: 3)**. Each herdsman benefits from the pasture by allowing his or her cattle to graze within the pasture common to all. On the other hand, the herdsman may also suffer a cost due to land degradation when the herdsman and others overgraze **(Ostrom 1990)**. Nevertheless, the herdsman is compelled to add more and more of his own animals since he received the direct benefit from his own animals and bears only a share of the costs resulting from overgrazing **(Ostrom 1990)**.

Game theorists incorporated **Hardin'**sarticle into the prisoners' dilemma **(Ostrom 1990)**. **Steins(1999: 9)** illustrated the prisoners' dilemma as follows:

> Imagine two suspects who have committed a crime together and who are interrogated individually. They know that if they both stay silent, each will receive a light sentence. If one stays silent, while the other confesses, the first will receive a long sentence while the other goes free. If they both confess, each will receive a long sentence. Each suspect can only choose one and does not know the other's choice. This creates a dilemma: it is in their mutual interest to cooperate; that is, to stay silent. But the outcome is that they both defect and confess. Thus in the game, each player has a dominant strategy – to defect – since in that case he is always better off, no matter what the other player chooses.

According to **Hardin** (1968), this form of rationality would eventually lead to outcomes that are irrational for the collective. A form of irrational outcome depicted by **Hardin's** article is that of free riding.Free riding occurs when resource users shift the costs of resource use to others since they receive the full benefits of resource extraction and bear only a minute share of the costs(1968). Resource users prefer to free ride since the consequences do not directly affect themselves, but are widely dispersed to incrementally affect many across time and space(1968).

In **Hardin's** theory decision making is based on the rational choice approach. The rational choice approach also underliessolutions to issues involving the common use of natural resources **(Zey 1992)**. Rational choice theory portrays a rational individual as one who apprehends all possible states and beliefs of the world surrounding him, and thus, through internalized rules, employs data and knowledge to reflect optimal adaptation in experience **(Coleman 1990; Fararo 1992; Zey 1992)**. Consequently, human existence is marked by a rational individual affected by expected benefits and costs **(Steins 1999)**. **Habermas** (1987) portrayed the rational individual as a lonely subject compelled to survive in an objective world through clever effort at manipulation.In addition, according to **Habermas** (1997: 303), "social exchange and cooperation take place only to the degree that they fit with one's egocentric calculus of utility". According to **Steins** (1999), defining social relations in terms of the need to exchange and maximize utilities relegating the multi-dimensionality of decision making into a mono-dimensional stimuli-response precipitated by the motive of private profit. Contrary to **Hardin, Ostrom** (2000) noted that local communities are imbued with social and cultural institutions which govern access to natural resources and shape decision making over their use, allocation and distribution. According to **Ostrom** (2000), these social and cultural institutions induce complex natural resource governance practices and evoke multifaceted decision making approaches which cannot be relegated to the rational choice approach alone.In the light of complex decision making, this research examines how community user groups align with various natural resource governance initiatives whilst jettisoning others, and how these shape collaborative action for sustainable natural resource governance.

According to the rational choice approach, shared values and collective actions are guided by purposive rationality within a strategic conceptualization of action **(Rhoads 1985)**. Purposive rationality refers to a point of view from which actions could be more or less rationally planned and carried out, or could be judged by a third person to be more or less rational **(Habermas 1997)**. Inherent within purposive rationality are two different types of action, namely instrumental and strategic actions **(Steins 1999: 54)**:

> Instrumental action refers to non social actions that achieve sets of goals through the effective and efficient organization of certain means or standard techniques. Instrumental action fol-

lows a conditional logic…in strategic action the actor makes a decision between alternative courses of action to achieve the realization of an end. The actor's calculation of the most successful decision is guided by goal maximization and by the anticipation of the decisions made by other goal directed actors.

Based on the principles of economic thought, the main benefit of purposive rationality is to measure the outcomes of actions with regard to the maximization and minimization of utilities **(Coleman 1990)**.According to **Steins** (1999), the purposive rationality model was extended into the socio-cultural sphere from the realm of economics to anticipate the behavior of individuals in the face of collective dilemmas and opportunity costs.

According to critical theorists **(Elliot 1999)**, the expansion of purposive rationality into the social and cultural is problematic in a number of ways. Critical theorists such as **Horkheimer** and **Adorno** (Elliot 1999) saw that the overall trend in development was that of an expanding economic rationalization and an instrumental ordering of life in which there was a loss of moral meaning at the level of society, culture and personality. This loss of meaning was captured by the term "totally administered society" **(Adorno 1982: 94)**.According to **Horkheimer** (2002)and **Adorno** (1982), in liberal market society changes in interpersonal structure suggest that the family is no longer the principal agency of social repression. Instead, human subjects are increasingly brought under the sway of impersonal cultural symbols and technological forms, as evident in the rise of the culture industry and consumerism **(Adorno 1982; Horkheimer 2002)**. According to Adorno **(Calhoun 1995)**, the transition to a liberal market society encourages the self destructive character of reason, that is of a rationality that turns back upon itself and creates a new realm of universal domination through the destruction of personality and creative social experiences.

Moreover, according to **Lyotard** (1979), the pervasiveness and totality of purposive rationality within market liberal society leads to a preoccupation with efficiency, mechanization and uniformity.According to **Adorno** (1982) and **Horkheimer** (2002), a preoccupation with the instrumental ordering of life leads to the subjects' detachment from their sense of place, identity and experience, thus creating an unresponsive guidance system in which the population is progressively less and less the master of its own destiny. This in turn destroys the slightest hope for achieving a socially and ecologically responsible culture. Nevertheless, **Beilin**(2004) argued that disconnections are omnipresent, and that a preoccupation with the instrumental ordering of life by governing bodies may lead to a vacuum in governance whereby small initiatives triumph. Moreover, **Plumwood** (2002) also noted that willed actions, when contextualized within multi-dimensional and diverse social settings, can elude the seemingly pervasive nature of instrumental and purposive rationality. With regard to South Sulawesi's coastal resource management initiatives, this research examines the interface between policies for sustainable natural resource governanceand on-groundmanagement practices, taking into account how diversity, contentions and power struggles can lead to the creation of space for sustainable governance initiatives to emerge and triumph.

To achieve the socially responsible culture, **Friedmann** (1992) and **Schon** (1987) noted that a heightened learning capacity from empowered user communities isessential. Empowerment entails awareness and mobilization for enhancing the basis of social, political and economic power **(Friedmann 1992)**. According to **Friedmann** (1992), coupled with these power bases and a heightened learning capacity for protecting them, an individual's potential for promoting the socially responsible culture cannot be undermined. **Agrawal** (2008: viii) noted the emergence of environmental subjects, i.e. "people who have come to think and act in new ways in relation to the environment". According to **Agrawal** (2008: 219), "the environment constitutes for them a conceptual category organizing some of their thinking; it is also a domain in conscious relation to which they perform some of their actions". The significance of **Agrawal's** (2008: 270) concept lies in its ability to explain the shift from negligence to active membership, "state to community" and "bureaucracy to democracy". Thiswork explores the GOI's initiatives in promoting devolution and empowerment, and examines how these shape the user communities' perspectives of collective action for sustainable natural resource governance.

2.3 Individualsand the protection of natural resources

The rational choice approach can undermine the contribution which shared

values provide to social capital and the creation of social order. According to **Hacket** (2001: 143), the presence of law abiding citizens and social order entail a minimum level of social capital, namely "the wealth and benefits that exist because of social relationships among groups and individuals". In addition, according to **Hacket** (2001), this minimum level of social capital would have been absent altogether had instrumental and strategic rationality been the sole underlying basis for decision making. **Steins**(1999: 125)stated that "many rational choice theorists tend to place human behavior within a framework of calculated rationality rather than one of bounded rationality, and this does not do justice to the dynamics of people's actions in a changing environment". Bounded rationality recognizes the impossibility of absolute rationality in which information is readily available and all possible choices are known. Moreover, within the framework of bounded rationality individuals reason in a sequential way as opposed to reasoning synoptically or comprehensively **(Friedberg 1977)**. As noted by **Lacan** (1999), the individual, an active social agent who is influenced and simultaneously influences the landscape, cannot be made to succumb to the deterministic clockwork of a particularform of rationality.As echoed by **Turnbull** (2005), the individual's role in shaping the social and ecological landscape cannot be abstracted from its social intricacies.

Boxelaar (2004) noted that the social and ecological landscape is complex and heterogeneous, with groups and individuals converging and diverging in protecting common resources. Moreover, as noted by **Young** (1995), complex heterogeneity is closely associated with issues of scale. **Young** (1995: 31) stated that "the problem of scale revolves around the transferability of propositions and models from one level to another in the dimensions of time and space". This work explores the various perspectives which underlie decision making over the use and allocation of a local mangrove forest in South Sulawesi.This book also explores how the convergence and divergence of various perspectives across the scales can facilitate a management capacity marked by adaptive changes and social cohesion.

Moreover, much of the literature on natural resource governance **(Craine 1971; Sabatier 1981; Pinkerton 1989)** assumes that resources are subject to a single extractive use by a distinct user group.**Edward** (1999) noted that complex natural resource use entails the mixture of various property and user right regimes in its governance. Hence, in governing natural resource use common property rights may be attached, whereas public and private rights may also exist and open access may be assumed by some users **(Edwards 1999)**. This work explores the implications of multiple management regimes on participative engagement and social inclusion towards sustainable natural resource governance.

2.4 Institutions for surpassing collective problems

Common Pool Resource theorists **(Sabatier 1981; Pinkerton 1989; Ostrom 1990)** believe that the trajectory to community involvement, sustainable production and redistributive justice begins with a democratically planned natural resource governance in which community participation and consensus making lie as its core concepts. In **Ostrom's** CPR theory, community participation and consensus making across the various levels of governance are made possible through nested institutions. In ***Governing the Commons***, **Ostrom** (1990: 37) defined an institution as:

> The set of working rules and governance mechanisms that are used to determine who is eligible to make decisions in some area, what actions are allowed or constrained, what aggregation rules will be used, what procedures must be followed, what information must or must not be provided, and what payoffs will be assigned to individuals dependent on their actions.

According to CPR theorists, nested institutions are important for promoting coordination and collaboration across the various levels of governance. Moreover, common pool resource theorists see the need for building institutions to promote shared values, to shape credible commitments, and to direct the aggregation of benign individual decisions into collective action for protecting natural resources. Institutions are considered one of the mechanisms for transcending collective dilemmas since the outcomes of institutionalized decision making not only mirror individual preferences but also reflect joint preferences and shared co-management strategies **(Acheson 1994)**.

Common Pool Resource theory (CPR)

To prevent **Hardin's** tragedy associated with open access, Common Pool Resource theorists advocated the common management of natural resources through collective action.The common management of natural resources is marked by nested decision making arrangements withwide ranging representation across the different levels of governance. Inherent within **Ostrom's** decision making arrangements are nested regulations governing access to and control over the benefits produced by natural resources **(Ostrom 1990)**. These nested regulations are the products of consensus making across the various levels of governance **(Ostrom 1993: 31)**:

> Operational rules directly effect the day to day decisions made by appropriators concerning when, where and how to withdraw resource units, who should monitor the actions of others and how...what rewards and sanctions will be assigned... collective choice rules are the rules that are used by officials in making policies about how a natural resource should be managed...constitutional choice rules...determines the specific rules to be used in crafting the set of collective choice rules that in turn affect the set of operational rules.

Central to Common Pool Resource theory is the need to organize collective action.Collective action is defined in terms of an institutionalized set of procedures that are capable of guiding and regulating individual actions for the collective good (e.g. the protection of the natural environment) **(Ostrom 1990)**.

Ostrom's CPR theory (1990) focuses on normative models that are based on design principles. **Ostrom's** design principles (1990) outline the institutional constituents that are required for an effective and efficient operation of the overall natural resource governance system. **Ostrom's** design principles (1990) suggest the need for clearly defined boundaries, congruence between allocation rules and local conditions, the ability to modify rules through collective arrangements, monitoring and graduated sanctions, conflict resolution mechanisms and management rights that are not challenged by external agents. This book explores the structural relationships that need to be developed for collaborative action and social cohesion in natural resource governance to be surmounted **(Ostrom 2003)**. In relation to a local mangrove conservation project, this work also examines the social relationships that need to be developed for devolution, participative engagement and social inclusion to emerge in sustainable natural resource governance**(Ostrom 2003)**.

According to **Steins** (1999: 34), **CPRtheory** should be commended for developing a common vocabulary on common pool resources:

> Common pool resources are resources for which joint use involves subtractability; that is, use by one user will subtract benefits from another user's enjoyment of the resource system, and for which exclusion of individuals involves high transaction costs. The common pool resource as such is called a resource system...the process of resource withdrawal is called appropriation, and the individuals involved are the appropriators.

Likewise, **Steins** (1999) also noted that CPR theory deserves merit for acknowledging that a sole prominence on well established decision making arrangements does not necessarily guarantee collective action. **Steins** (1999) remarked that the common pool resource community developed an analytical frameworkessentialto the formulation of design principles underlying successful collective action. **Edwards** (1998) stated that the analytical framework developed by CPR theorists examines the outcomes of natural resource governance by exploring patterns of exchanges among the physical and technical characteristics of the natural resources, the institutional framework for governance, and the social features of the user groups. This book explores how various groups and individuals see their relationships with the social and ecological landscapes. The book also studies how various user groups attach themselves to the landscapes and create the barriers and enablers for sustainable natural resource governance.

Although CPR theorists have been applauded for their notable achievements, the theory has not eluded criticism.According to **Steins** (1999: 42), the design principles within CPR theory "still focuses solely on the internal dynamics of collective resource management" whilst setting "the variables link-

ing collective action to the external world".In addition, **Steins** (1999: 42) also mentioned that "collective action is still regarded as primarily strategic behavior aimed at utility maximization".Hence,theCPR theory is stillembedded within the rational choice approach. The problem lies in its use of institution as an instrument for accomplishingset goals and in its instrumental interest in nature and social relations. With regard to the local mangrove conservation project, this work explores alignments through identity and imagination, multiple - memberships and compound decision making which can link collective action across time and space.

Investigating CPR

According to **Steins** (1999), CPR theory is essentially positivistic and embedded within structuralism due to its preference for independent structure, rigid measures and input-output performance.Positivistic knowledge retains its usefulness in natural resource governance through its ability, in some instances, to predict and output performance and features of social reality **(Crotty 1998)**. Positivism informs methods of modern natural resource governance due to its perceived efficacy **(Crotty 1998)**. In reducing disturbance to goal attainment, positivists suggest that prescribed procedures be followed and possible confusing social and psychological factors carefully controlled **(Crotty 1998)**.This may lead to productivityorientation as opposed to process orientation and the prioritization ofcertain knowledge over others. Implanted within positivism is a method of analysis called structuralism. In structuralism social systems and their elements are easily observed by the logicallyimpartial observers. In addition, according to the doctrines of structuralism every constituent can be objectively pinned down and categorized in terms of its role within the given system **(Van Loon 2001).** According to **Steins** (1999), akin to structuralism, CPR theorists also assume the independence and objectivity of theirdesign principles by delineating them from social practice and according them merit through their theorization.

Theoretical abstractions would always require a compulsory grounding in the context from where they were abstracted **(Baba 1994)**, and would be in need of a thick description of the complexity surrounding their abstraction **(Geertz 1973)**. Hence, the commitment to theorizing is that of locating theory within practice **(Baba 1994)**. Although CPR theorists recognizedifferent social realities exist, "outcomes of collective action processes are foreseeable should, pre-conditions for successful collective action,be incorporated" **(Steins 1999: 173)**. In relation to the fluidity of the social landscape, **Law** noted that social reality is indefinite andtransient(2004). Moreover, **Law** (2003) also noted that the social and ecological landscape is marked by the continuous process of multiple social ordering. This book explores how knowledge and dialogue are put together by the various resource users and examines how governance structure and willed action equally influence one another in shaping the landscape for collective natural resource governance.

Turnbull (2005) noted that intricacy is marked by the complexity of fragmented perspectives and stands in contrast with the view that scientific knowledge has its own objectivity and logical subtleties. Hence, acknowledging complexity surmises the need to understand the intertwined importance of the various perspectives within the social and ecological landscape. The resource users' perspectives are shaped by their sense making and framing.Sense makingrefers to "the process of creating situation awareness in situations of uncertainty" **(Weick 1995: 12)**. Contributing to existing literature and discussion on framing, **Gray**defined framing as "the process of constructing and representing one's interpretation of the world" **(Gray 2003: 38)**. **Gray** noted that "we construct frames by sorting and categorizing our experience and by weighing new information against our previous interpretations" **(Gray 2003: 38)**. It is through framing that a person "is capable of focusing attention on an issue, imparting meaning and significance to elements within the frame, and setting elements within the frame apart from those that are outside the frame" **(Gray 2003: 39)**. Concepts such as sense making and framing are combined into the research to examine variedviewpoints and explore the drivers behind the preference for certain knowledge and discourse over others.

As well, the notion of non linearity is central to the concept of social complexity **(Gershenson 2005)**. A system is linear if the effects or outputs are proportional to their causes or inputs. Non linearity is understood as the effects or outputs of a causal loop which are redirected back into the causes or inputs within such processes **(Gershenson 2005)**. In the face of non linearity and chaos,

the notion of deterministic and autonomous social interdependencies are absent altogether since the flow of the causal loops would inevitably result in novel social landscapes that are contingently restructured. Through a contextualized ethnographic methodology, this research takes into account the multiple ways in which reality is socially constructed by the various resource users and examines the roles which historical events and individual experiences play in shaping complex engagements in natural resource governance.

The state, civil society and authority

With regard to the institutionalization of natural resource governance, the political effectiveness of institutions can neither be restrained nor undermined. As well, this political potency extends beyond effort at ensuring procedural democracy alone. **Eckersley** (1992: 164) noted that "institutions are often imposed rather than chosen, and being backed by the power of the state, institutions provide means whereby agents can extract involuntary transfer of resources". The commencement and preservationof institutionalized decision making arrangements, to a large extent, isdependent upon state interventions. The state's requirements enable institutions to be elevated and incorporated into political agendas. The state, from which ideological, political and monetary resources are derived and dispensed, acts as a place for political mobilizations and actions **(Rourke 1986)**. Nevertheless, the state's authority to solve social dilemmas through democratically governed institutions and non market solutions may also result in unequal power relations and in some individuals' benefiting at the expense of others **(Eckersley 1992)**. This may lead to the decline of the communal processes for protecting common resources. This work explores how structural decision making power, traditional and commercial elites and complex power struggles shape the resource users' perceptions of collective action in sustainable natural resource governance.The book also examines how institutionalization processes can encourage or deter the majority of natural resource users to gain access to either strategic or structural decision making power.

According to **Gramsci**, in industrial society dominion is exercised not only through righteous ideas which rule the masses, but is also exercised by the structure of the decision making processes which govern productive forces

(Kiros 1985).Gramsci(Holub 1992: 206) noted that "hegemony stems from the threat of overpowering force". Hegemony results when "a set of ideas are diffused into the public as a means by which the public is subtly taught to think and behave in certain ways"**(Holub 1992: 206)**. Also according to **Gramsci**, hegemony results from the ability of the ruling class to reproduce their authority and the current condition through the diffusion of ideology and the reproduction of social practice **(Meszaros 1989)**. In **Gramsci's** view, hegemony has two moments, namely the moment of consent and the moment of violence **(Kiros 1985)**. The moment of consent is the type that is dominant in the current twenty first century, while the moment of violence is always present for use during times of desperation. The moment of violence, as a means of suppression, is resorted to when the civilian society dissents, revolts and refuses to be governed. Although CPR theory deserves merit for acknowledging conflicting individual preferences, CPR theory does not take into account the complexity of power relations in natural resource governance. This investigation explores complex power struggles within a mangrove conservation project whilst highlighting the consequences which both compliance and resistance have in promoting ecological sensibility and shaping the landscape for collective natural resource governance.

To Gramsci **(Kiros 1985)**, the social project lies in stimulating individuals to critically question, examine and break free from the intellectual hegemony of the dominant ideology.Hence, for **Gramsci (Holub 1992)** there is the need to elevate the claim making capacity of the people, to empower them in such a way that they can effectively press their demand and eventually reach the point where they are able to pull down the services to themselves instead of acting as passive receptors.**Gramsci** stronglyadvocates struggles in the production of competing ideology if falsifications and misrepresentations are to be replaced by effort at incorporation and social justice **(Kiros 1985)**. Struggles, according to **Gramsci**, can never be achieved in the absence of education, reflection and a heightened learning capacity **(Kiros 1985)**. This book explores how struggles and adaptations shape the emergence of space for critical reflection and a heightened learning capacity towards social awareness and ecological sensibility.

With regard to struggles and the commitment to protect common objectives, **Etzioni** (1968: 139), noted that "strong mobilizations have occurred, yet

there is seldom an unambiguous commitment to common objectives and strategies that result in all around benefit". Besides, most of the time the scope of rebellion is limited and numerous movements for independence have ended up in the installation of new dictatorships **(Etzioni 2004)**. This new dictatorship can undermine joint processes for protecting common resources. In addition, elevating one's claim making capacity can result in illegitimate demands by civil society and the various user groups as opposed to resulting in active membership for protecting common resources **(Thompson 1994)**. This work explores how devolution and resistance can enable or deter ecological sensibility and the commitment to protect local natural resources.

2.5 Devolution of authority

The rise of anarchism as a philosophical movement occurred in the late 18th century, with freedom being based on political and economic self rule. In the liberal market state the neo-liberal use of self governance is associated with that of the capitalist force with its private rights and instrumental ordering. **Bookchin's** eco-anarchism was a response to the rise of the nation state, the emergence of large scale industrial capitalism,and the corruption that came with its successes **(Light 1998)**. Eco-anarchists see the need to bypass the nation state, venture into the boundaries, and confer maximum political and economic self-rule on decentralized community groupsto defend grassroots and extra parliamentary activities of both social and green movements. Eco-anarchists are those who believe that all people are infused with the common sense to detach themselves from the official collective and come together in agreement to form a peaceful and functional existence within the earth's carrying capacity **(Light 1998)**. According to the eco-anarchists, "we do not need politics that is environmentally oriented, what we need is a social and ecological sensibility that's meant to yield a political orientation" **(Eckersley 1992: 174)**. This work explores devolution, complex power relations and willed action for protecting the social and ecological landscape.

Murray Bookchin's theory of eco-anarchism

The eco-anarchism movement gained momentum in the last decade due to the widespread consequences which capitalism generated in the form of resource allocation inconsistency and natural resource over utilization.Eco-anarchism opposes hierarchical power exercised through the state and the unregulated free market economy.Eco-anarchism advocates naturalism and is supportive of self-government through local communes **(Light 1998)**. Through its argument for decentralized egalitarianism and altruism, eco-anarchism opposes gigantism, centralization and egoism **(Bookchin 1994)**. In eco-anarchism, **Bookchin'shumanism** (1994)reflects attitudes and ways of life that are centered around human interests and values, and stresses individual dignity and capacity for self-realization through reason. It is this capacity for self realization and for behaving differently from those in the official collective that is referred to as anarchism. The fundamental political task for eco-anarchist is the elimination of forms of domination that hinder greater freedom and self realization and the creation of new social forms that are most conducive to such ends. Eco-anarchism is incorporated into this research to study the social relations and human interests and values which can promote individual dignity and ecological sensibility.

In relation to **Bookchin's** political concepts, **Light** commented that "Bookchin describes politics in the larger, classical sense of a political ethics, but leaves open the question of which politics in the narrower sense of determinate social practice best serves such a political vision" **(Light 1998: 328)**. In addition, **Eckersley** (1992) noted **Bookchin's** tendency to simplify and romanticize local community groups to the demands of altruism, voluntarism and mutual aid.Hence, it is unclear what specific politics were to follow from this inspiration **(Light 1998)**. Through an ethnographic methodology, thisinvestigation aims to provide a richer picture of natural resource governance in South Sulawesi and explore the determinate social practices which can best serve **Bookchin's** vision of social and ecological sensibility.

The importance of **Bookchin's** contribution to ecological, communitarian and democratic theory should not be overlooked **(Light 1998)**. Firstly, **Bookchin** provides a more sustained case for the desirability of grass-root de-

mocracy compared to any other contemporary political theorists **(Light 1998)**. Secondly, **Bookchin** introduced new concepts by emphasizing self-realization and voluntarism through egalitarianism. Lastly, **Bookchin** investigated "the issues that must be resolved if the libertarian potential of certain aspects of his thought is to be freed from sectarian dogma" **(Light 1998: 104)**. **Bookchin** is relevant to this research because he focuses on what happens when power is devolved to smaller communal units and has a lot to say about how these units may come to see the environment in which they live as a communal resource that needs to be governed for the benefit of all. Also, **Bookchin's** works, which provide a sustained and uncompromising case for self realization and self voluntarism, are integrated into the research to explore the complex relationship between individuals and the collective in achieving civic partnership through individual acts.

Control and Order

In**Bookchin's** view (1994), spiritual and intellectual sensitivities can be achieved through a variety of measures.One measure takes the form of civic control over public affairs such as the implementation of direct face to face citizen assemblies for determining the utilization, allocation and distribution of natural resources.A second measure involves fostering the interdependence of municipalities and their economies on a regional basis through confederations. A third measure involves thestep-by-step formation of civic networks that can challenge the growing power of the nation state. Moreover, eco-anarchists believe that private ownership of the planet by the elite strata must be replaced by collective rights **(Bookchin 1994)**.

According to **Bookchin**(1994), the root of environmental degradation can be found in irrational and anti-ecological society whose basic problems are irredeemable by single issue reforms. "These problems originate in a hierarchical, class and competitive capitalist system that nourishes a view of the natural world as a mere agglomeration of resources for human production and consumption" **(Bookchin 1994: 32)**.In order to eradicate hierarchy and class and their resulting consequences in the form of domination and marginalization, **Bookchin** (1994)explored the formation of a society in which non hierarchical sensibilities and practices of egalitarian culture can be relevant to the development of ecological politics. **Bookchin** (1994) alsostipulated for a commitment to legal rights to own and enjoy profits of another's property as opposed to the establishment of private property. Likewise, **Bookchin** (1994) advocated for the advancement of reciprocity as opposed to the morality of command and obedience. This, according to **Bookchin** (1994), is capable of redesigning the social system to promote humanity's integration with the non human world.This exploration explores how hierarchy and class within social and governance structures shape the perceptions underlying competition and collaboration in natural resource use. This exploration also examines the relationships between various user groups across the hierarchy and notes how this influences the development of the ecologically benign culture.

Additionally, **Bookchin's** eco-anarchism (1994) emphasizes that the survival of living beings lies not in competitiveness and the commodification of nature and the social world, but rather in their ability to be supportive of one another in the absence of hierarchy and domination. **Bookchin** (1994) believes that the potential for achieving consciousness does exist as ahuman survival capacity and includes the potential to evolve along social lines. In this investigative work, a case study of South Sulawesi's mangrove conservation project is conducted to understand the social edifice and governance structure required for promoting collaborative natural resource protection amidst social disparity and local contests.

Risks and threats investigated

Bookchin's idealistic evocations stand in contrast with a reality in which risks and threats are all-encompassing and compel individuals to respond to conflicts, struggles and landscape dynamics. Risks and threats are ubiquitous and require that policy makers and extension agents incorporate them into promoting participative engagement and social inclusion. According to **Beck** (2000), the presence of risks and threats serves a dual purpose. He noted that while risks and threats can stimulate contentions and struggles, they can also promote solidarity and a collaborative mentality to protect a common future. **Beck** (2000: 342) stated that due to risks "people will experience the common character of

destiny". Hence, "risks and threats arouse a multicultural everyday consciousness which can surpassborders among men and between man and nature" **(Beck 2000: 343)**. The elements which make up social, political and cultural drives are no longer catalyzed by deliberate actions based on instrumental rationality alone; these drivers are brought about by social, psychological and political relations among individuals within the contingency of real world situations. Moreover, these drivers "come about conflictingly and mysteriously through unintended, denied or repressed threats, as well as behind people's backs" **(Beck 2000: 344)**. The concept of risk and threat is merged into the research to examine how events relating to natural resource governance unfold and to add to the complexity of collective action in protecting natural resources.

Acknowledging diversity and change in natural resource governance means embracing risks and threats. **Beck's** concept of risk society **(Beck 1999)** suggests how the results of social activities powerfully and unpredictably move through time and space. The concept of risk society is based on the importance of negative consequences that flow within and across various territories and are not confined within the borders of a single society **(Beck 1999)**. Accordingly, the allocation and distribution of goods and services are not the sole determinants of human lives and welfare; rather, major aspects of human lives and welfare stem from movement and potential impact of human induced risk **(Beck 1999)**. In the face of risk and threat there is a need to ground ecological agenda within the social and physical environment from where such risks jump and evolve. Furthermore, the concept of risk changed the nature of science **(Beck 1999: 362)**:

> When, in the past science, was spatially and temporally confined to the laboratory, currently the whole earth is the laboratory whereby 'the monster' has escaped and risk now flows in, through, over and under national and international borders.

Through the use of ethnography and the case study approach, this research examines how risk and threat move through time and space and create room for social capability and ecological sensibility to emerge. The book also explores how risk and threat influence the social and governing structures underlying effort at sustainable natural resource governance.

2.6 A summary of the problem

To promote devolution and social inclusion in natural resource governance the GOI encouraged the common management of natural resources through self governed local communes. The government also argued for consensual decision making over the use, allocation and distribution of natural resources. This, when coupled with the commercialization of Indonesia's natural resources, is believed to encourage ecological responsiveness, collaborative participation and sustainable management.

Nevertheless, the governance of Indonesia's natural resources is marked by limitations. In the previous section critics highlighted the dynamic and complex issues associated with the institutionalization processes, consensus making and the formation of self governing local communities. These social, political and cultural issues mark Indonesia's natural resource governance landscapes and mirror the need for further inquiries. Combined with the knowledge of the different means underlying natural resource governance and their associated complexity, we shall question whether the country's various coastal resource governance practices and use their power to aide participate, include and endure sustainability. As well, the investigation aims to contribute to CPR Theory and **Bookchin's** Theory of eco-anarchism by inquiring into the intricacies of coastal resource management practices and providing a more compound understanding of the theories.

III

The Journey to Acquiring Knowledge of the Commons

3.1 Introduction

Chapter Three describes the methods and practices used in underlying the investigative exploration. The idea behind this Chapter is to discuss the fundamental tools and models used to inquire into decision making and the practice of natural resource governance. This chapter also discusses the tools and models used in inquiring about the miracles which unfold at the field sites. The significance of this Chapter lies in its discussion of the ethnographic or anthropologic methods used and its importance for recognizing complex scenes, putting into context theory in practice, and understanding how questioned areas within the idea play out. ChapterThree is divided into seven sections. Section 3.1 illustrates the primary research methods. Section 3.2 describes the use of ethno-methodology. Section 3.3 explains the data collection and data analysis methods, whereas section 3.4 explains the adoption of the case study approach. The subsequent section, section 3.5, recordstheefforts in approaching and establishing relations at the field sites. Section 3.6 explains the changes from post positivism to critical practicality, and the final section 3.7, summarizes the methods used and their importance to the investigation and exploration. The organization of Chapter Three illustrates how the alteration is important for expanding our horizons, appreciating the dynamics of social investigation and understanding theory in practice.

3.2 The majorinvestigative method

Using ethnography and qualitative inquiry as generally described by **Denzin** (1998), the researchis a social inquiry of coastal resource governance programs in South Sulawesi, Indonesia. Ethnography "is an approach to field research that emphasizes, providing a very detailed description of a different culture from the viewpoint of an insider in that culture in order to permit a greater understanding of it" **(Neuwman 2003: 534)**. The unique nature of ethnography lies in its ability to provide detailed accounts of social interactions within small scale settings and its ability to reveal the rules people use to construct, maintain and transform their everyday social reality. In this exploration the appropriateness of the ethnographic method lies in its ability to disclose the social and political constructions of the ecological landscape and the natural resources found within the case study sites. The importance of ethnography also lies in its ability to disclose the social practices which create, maintain and transform power relations associated with natural resource governance. As the exploration examines the "rules" for constructing social reality and common sense within the field settings, including how these rules are applied, maintained and transformed in the face of power relations, the use of ethnography is important.

Qualitative inquiry is adopted to enrich knowledge of the field settings 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 live experiences of research subjects are examined to gain a better understanding of social actions and decision making processes. 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)**.

The exploration holds a number of interpretive assumptions **(Harmon 1986; Lee 1998)**. The investigative exploration assumes the absence of a single perspective and the presence of multiple and incomplete subjectively derived realities which coexist. As well, the exploration assumes complex interactions and interdependence between the researcher and the subjects and phenomena being studied. In addition, there isan association between the subjects' standpoints and the vibrant patterns of interchange and power relations found within the social and ecological landscape. Lastly, the exploration assumes that through reflection and a heightened learning, capacity groups and individuals have social and political opportunities for protecting common resources.

The program scrutinized and discussed within the province of South Sulawesi is the community initiated mangrove and coastal resource sustainability program within the village of **TongkeTongke** in Sinjai Regency. In the case of South Sulawesi, the various projects held in **TongkeTongke** for promoting the sustainable management of local natural resources are under the dominion and authority of the various regency government departments as opposed to being centrally administered by a coordinating agency through the adoption of a protection program. Programs and projects directly related to the sustainable governance of local coastal resources include mangrove cultivation and conservation, the enactment of tax and levy for fishing, fish farming and trading activities, and the materialization of a village institution for ensuring sustainable mangrove and coastal supply removal (e.g. **the *ACI* mangrove organization**). Projects tuned to local economic development and indirectly related to the maintainable governance of local coastal resources include, knowledge distribution for improved fish farming and fishing techniques, and the provision of soft loans for capital gain among fishermen and fish farmers **(YTMI 2003)**. These projects are described and analyzed further in Chapter Four, due to their contribution in shaping the investigative subjects' opinions of taking part in communal natural resource governance.

The case study approach is incorporated into the work because of a number of reasons. The book aims to acquire in-depth, detailed and multifaceted understanding of people in their natural setting; aconsequentcase study is relevant to the research. In addition, due to its ability to place contextualized social scrutiny within a lively and complex setting, case study can also provide a comprehensive picture of the varied social, cultural and political elements which establish the social and environmental landscape. Case study also provides detailed perceptions of the investigative subjects and their environment, funding our understanding of complex natural resource governance.

A number of reasons explainwhy the village of **TongkeTongke**, in South Sulawesi, was selected.At first sight, **TongkeTongke** suggests government and local community support in the governance of local natural resources. The field

site in South Sulawesi was chosen due to the presence of community initiated mangrove reforestation and conservation scheme. Investigations and discussions on **TongkeTongke** were shown to understand the subtleties and complexities associated with community based mangrove governance. A more detailed discussion of the site and the basis behind the selection of the site is provided in section 3.4. Initial information relating to the site was obtained through colleagues at **the National Planning Board** and **Ahmad Dahlan University, Indonesia**.

Informants were selected through effective sampling. In purposive sampling the issues and arguments which arose at the field site were used to determine the subjects that were invited for interviews. Prior to selecting the informants, we observed the various natural resource management practices within the field site and noted the issues and concerns. Afterwards we noted the scope and extent of the issues and identified the individuals that were to be the research informants. Taking into account the need for triangulation, we invited individuals from various groups and backgrounds for in-depth interviews. The categories of the informants invited to participate in the interview, the number of informants in each of the categories, and the reasons essential tothe choices are further discussed in section 3.4.

3.3 The use of ethnography

Ethnography is a sociological investigative approach which is concerned with the way in which social order is accomplished through discourse and interactions **(Bryman 2001)**. Discourse refers to utterance or talk which "emphasizes the ways in which versions of reality are accomplished through language" **(Bryman 2001: 502)**. The ethnographic approach assumes that social meaning is fragile and fluid, as opposed to being fixed, stable and solid **(Neuwman 2003)**. Meaning is constantly being created and re-created in an ongoing process, and the role of social inquiry within the ethnographic approach is to understand the construction of meaning and recognize the roles which dynamic and inferred social 'rules' play in shaping and transforming the construction of meaning **(Neuwman 2003: 151)**:

> People achieve a common sense of understanding by using embedded social rules, and social interaction is a process of reality construction. People interpret everyday events by using cultural knowledge and clues from the social context. Ethnography examines how ordinary people in everyday settings relateimplied rules to make sense of social life.

To understand ordinary social interactions in greater detail and to gain knowledge of how social rules are applied and transformed, weprovided detailed chronicles of the events and discourses which emergedand of our reflections over these chronicles. The use of ethnography grows from the need to disclose the habits, attitudes and beliefs of the research subjects, the need to generate an inclusive picture of complex landscapes, and the need to contextualize data associated with natural resource governance.

3.4 Data collection and analysis

Data collection was conducted through participant observations, in-depth and biographical interviews, and the compilation of secondary data in relation to government policies, programs and projects in South Sulawesi, Indonesia. In participant observation "the researcher immerses him or herself in the social locality for an extended period of time whilst observing behavior, asking questions, and listening to conversations both between others and with participants" **(Bryman 2001: 506)**. In conducting in-depth interviewswe used un-structured but thematically focused interviews to understand how social phenomena and their meaning are constructed and observed by the diverse social actors.In biographical interviews the data collected is in the form of storiesand events surrounding the subjects' lives **(Bryman 2001)**.The biographical approach advocates pluralism, relativism and subjectivity **(Lieblich 1998)**. **Sarbin** (1986: 3) noted biographical accounts as narratives or " symbolized accounts of human actions which have temporal dimensions" and are "held together by recognizable patterns of events called plots". **Sarbin** (1986) also noted that central to the plot structure are elements of human predicaments. **Rappaport** (1994: 8) categorized narratives into personal story narrative and community narrative:

Personal story refers to personal accounts of one's own life or observations. Community narratives are descriptive and historical accounts of life in a particular community, which are accessible to community members. Community narratives are identified through consistent themes present in the personal stories expressed by individual community members. The presence of community narratives is thought to be indicative of shared experiences and shared community identity.

In addition to the above data collection methods, we also wrote and compiled daily accounts of observations and experiences in a diary format. Primary data was collected through the use of participant observations, in-depth interviews and auto-biographical interviews. 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.

A pilot study in South Sulawesi was conducted from August 2004 until October 2004 to acquire networks and connections within the field site and obtain rudimentary data involving site geography and natural resource management programs held within the site. Data collection in South Sulawesi was conducted in a period of six months from March 2005 until August 2005. Due to limited time and funding we could not return to the field site subsequent to the year 2005.

Interviews with government officials from South Sulawesi were conducted in South Sulawesi's capital Makassar and in **Sinja** city. Community members were interviewed in the village of **TongkeTongke**. Interviews with community leaders were conducted at their home in the absence of others, whereas interviews with non community leaders were conducted at their home and/or outdoor in the presence of one to three other persons who were relatives or neighbors of the research informants. We approached these interviews differently since community leaders preferred to be interviewed individually in their private homes. After regular visits and routine communication exchanges, research informants began to open up and state their opinions on local participation for the collective management of natural resources. Government officials and community members noted that the investigation was not a program evaluation and/or a project appraisal. They were informed that the research was academic which aimed to understand the dynamics and complexities associated with the collective governance of Indonesia's natural resources. After acquiring primary data from in-depth interviews, the data were then transcribed at the field sites. The data was 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 the data. Time limitation led us to associate with and interview those who contributed significantly to the program's complexities and dynamics; nevertheless, triangulation was conducted to ensure the incorporation of various perspectives and decision making in governing local natural resources. Another issue which hampered ethnographic research was that of fostering and maintaining trust; in order to promote trust we engaged the research subjects in communication and exchange on a daily basis and assured them of the confidentiality of the raw data. A third issue involved language and cultural barriers since we are Javanese and the informants are **Bugis**. Prior to fieldwork we read books and took courses relating to the **Bugis** language and culture for approximately three months.To a certain extent this was successful and we were able to understand their jokes and the comments they made about us when research informants were conversing with each other. Besides, we were able to impress some of the community members, through our elementary **Bugis** language achievements.

In relation to secondary data, secondary data accounts for data whose collection processes did not involve the researcher, and data in which the purpose behind their collection "may not have been envisaged by those responsible for the collection" **(Bryman 2001: 507)**. The secondary data gathered can be classified into a number of categories. One category involves descriptions of policies, programs and projects implemented in **TongkeTongke**, South Sulawesi. Another category involves analyses and assessments of Indonesian policies, programs and projects conducted by government consultants, donor agencies, NGOs, critics and academics. In the last category are the notes taken by government departments, NGOs and donor agencies of presentations, meetings and extension practices held with community members and other user groups.

Secondary data was obtained from government departments, donor agen-

cies, NGOs, government consultants and academics both directly through private meetings and indirectly through internet publications and university and private libraries. A number of reasons won out 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 the planning and implementation of natural resource governance policies, programs and projects. In addition, the research required comparing and contrasting the findings and the subjects' accounts of the initial objectives of policies and programs. Lastly, the investigation required venturing 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 contrast and comparison of secondary and primary data. These primary data took the form of interview transcripts, participant observations and thoughts and accounts within the field diaries and/or field journals.

This qualitative research utilized the **N-Vivo** program for data storage and organization purposes. The following investigative 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 daily notes taken by the researcher were coded. The coding process involved the categorizing of texts into key ideas to explain what happens within them. The text below, stated by an official from Sinjai's Forestry Department, could be classified into categories such as policy, expected outcomes, economic empowerment, social-ecological awareness and natural resource protection, e.g. "the people in the village are poor, thus to facilitate the villagers' awareness of the need to protect the coastal resources we will have to devise policies which simultaneously improve their livelihood and promote the protection of these resources through mechanisms, such as mangrove conservation and eco-tourism" .

Next, wecompared data and contexts across the interviews to emphasize and explain the specifics and uniqueness. This was necessary for analyzing the divergence and convergence in perspectives and social practices. The example below compares data and contexts across interviews internal to the case study site in **TongkeTongke**, South Sulawesi. The example concerned the *ACI* mangrove organization and its former and present head. In this example the heads' responses to ***ACI*'s** popularity were compared. The present head of ***ACI***, Mr. ZNDN, a contender to the organization's former head, Mr. TYB, stated the following of the organization: "Now, during my leadership, the good name of the organization and the village actually stands out and community members are eager to work together and protect the mangroves, whereas in the past, only Mr. TYB's name stood out since he, as the former head, dominated the scene and corrupted the organization". On the other hand, the former head of ***ACI***, Mr. TYB, stated the following with regard to the organization: "During my leadership,***ACI*'s** name stood out everywhere and the organization was very popular because back then the organization held many activities. Now during Mr. ZNDN's leadership the organization has stalled and is unpopular and rife with contentions since Mr. ZNDN doesn't do anything for ***ACI*** and the members are saying that Mr. ZNDN is using the organization for his personal interests only". The divergence was related to the constructions underlying the mangrove organization, and was coded under the various social constructions and significance surrounding the organization.

The illustrative method was then applied to determine the core categories and their sub-dimensions, and to integrate ideas into theories between core categories. With regard to the above examples, one of the categories is the government's perspective of resource users' relationship with nature that is defined in terms of nature's instrumental values. A second category points to our field notes in which resource users' relationships with nature are defined in terms of the political, cultural and symbolic elements which emanated from nature's social constructions. A suggestion stemming from the above included the discrepancy between policy objectives and the proceeding of events surrounding the implementation of those policies.

Afterwards, through repeated reiterationswemoved from vague ideas and concrete details in the data to complex and comprehensive analyses of the issues. Examples of concrete details included 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. Moreover, these solid details were also used to acquire new insights on facilitating social responsiveness, deliberative participation and inclusive governance towards the sustainable governance of Indonesia's coastal resources.

Last of all, whilst contextualizing data within the complexity and dynamics of its environment, we attempted to separate thoughts and/or behavior patterns by comparing, contrasting and sorting the various categories which emerged from the data. An example of this was when, using the core category on community engagement and the analyses on collective action, we analyzed and discussed the dynamic patterns of domination, reflection and mobilization.

3.5 The case study and the investigation

Case study is a research design which entails the detailed analysis of investigative subjects and social phenomena that are being investigated and studied **(Bryman 2001: 47)**. Case study is concerned with the complexity and the particular nature of research subjects and social phenomena in their real life contexts. The significance of the case study approach is that "it allowed an investigation to retain the universal and meaningful characteristics of real life events" **(Yin 1984: 14)**. In investigations associated with natural resource governance, the case study approach is adopted to make sense of local perceptions and practices relating to the sustainable management of local natural resources. It is the grounding of subjects and social phenomena within their particularities that is capable of informing multiple sources of evidence. Additionally, it is the grounding of subjects and social phenomena within their particularities that the unique findings and innovative approaches to natural resource governance emerge. The power of the case study approach lies in the direct interactions with the subjects. This leads to an increased capacity for grasping the social, psychological and political nuances which emanate from the sites. In addition, the power of the case study approach lies in its capacity to incorporate pluralism, to give a voice to the investigative subjects, and to engage the variousscial actors within the exploration **(Fetterman 1989; Crotty 1998)**.

The case study described and discussed in Chapter Four is that of South Sulawesi's mangrove and coastal resource governance programs. The selection of **TongkeTongke's** mangroves stemmed from the need to understand community based mangrove cultivation in the light of government interventions. The enactment of taxes and levies with regard to fishing, fish farming and trading activities in Sinjai was also selected for discussion to gain insights into the implications of nation wide macro-economic interventions. Also, projects associated with the dissemination of aquacultural techniques and the provisioning of soft loans were incorporated into the study due to their popularity among government departments and their implications on coastal resource use.

The informants invited to participate in the investigation were those involved in the development and implementation of policies, programs and projects within the village of **TongkeTongke**. In addition, community members and officials targeted by government policies, programs and projects were also invited to participate. The implications of government induced initiatives can resonate 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. The categories of the informants who were invited to participate in South Sulawesi, along with their numbers in each of the categories, are depicted in Table 3.1.

Research informants	Number of informants interviewed	Research informants	Number of informants interviewed
NGO representatives	2	Mangrove cultivators	15
Village officials	3	In-land fishermen (boat owners)	5
Members of the house of representatives in Sinjai	2	Loggers	2
The provincial planning board	2	Bat poacher	1
The provincial marine and fishery resource department	1	Aquaculture farmers	5
The provincial environmental impact mitigation board	1	Farm laborers	2
The regency planning board	1	Farmers	2
The regency marine and fishery resource department	2	Migrant fishermen and migrant farm laborers	5
The regency forestry department	2	Community leaders from religious and youth groups	5
The regency spatial planning board	1	Housewives and women fish traders	7
The regency environmental impact mitigation board	1	Landowner, fish merchant and capital lender	1
District head	1	Laboring Fishermen	5
Project consultants, researchers and academicians from Hasanuddin University	2	Youths and the elderly	4

Table 3.1 Categories of research informants in South Sulawesi

In general, the selection of informants is based on the extent of environmental issues which emerged within the locality, the extent of the research subjects' involvements in coastal resource governance, the implications which policies, programs and projects have within the field site, and lastly on the need to triangulate so as to ensure adequate representation of community user groups. Reasons for inviting the above informants are depicted in table 3.2.

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

Table 3.2Reasons for inviting the research informants in South Sulawesi

The first month of our stay in the village of **TongkeTongke** and **the Regency of Sinjai** was intended to observe diverse community user groups and to understand their perspectives and interests with regard to local coastal resource governance. During the first month of our stay we acquired a lot of information about village life and local governance in the village and the regency level. The information we acquired included the livelihoods of local community members, the power structure within the village and the government bureaucracy, the contentions and contenders in coastal resource use and governance, and the environmental issues and corresponding interventions adopted by regency government officials and community members. Through this information we were able to determine the various user groups involved in coastal resource use and governance. Equally, through successive observation and engagement with diverse community user groups we came to know the depth and extent of their involvement in the use and governance of local coastal resources. After having observed and engaged assorted community user groups on a deeper level, we began interviewing them informally during the second month of our stay in the village and the regency. Through these informal interviews the informants indirectly disclosed those they would like us to interview and those they considered 'undeserving'. This led us to expand our exploration focus for incorporating emerging discourse and interviewing increasingly diverse user groups based on the need for 'triangulation'.

3.6 The field site

The research teamdiscovered the village of **TongkeTongke** through colleagues at the National Planning Board in Jakarta and colleagues at **Ahmad Dahlan University**, Yogyakarta. Our endeavor to establish the necessary network for data collection in South Sulawesi began with a colleague who taught in South Sulawesi's **Hassanudin** University,as an academic at the University's School of Marine and Fishery Resources and a coastal resourcemanagement consultant, the colleagueprovided links to the officials within the Regency Planning Board in **Sinjai** where **TongkeTongke** was located.The officials within the Regency Planning Board then introduced usto the officials working at **Sinjai's** Department of Marine and Fishery Resources and **Sinjai's** Forestry Department. These departments are the lead agencies in planning, implementing and evaluating the coastal resource governance projects held in the village of **TongkeTongke**.The officials then provided uswith the necessary permit for conducting investigation within the district of **Samataring** and the village of **TongkeTongke**.The permit provided passage not only to the district and village heads, but also an introduction to the officials within the village planning board, the community leaders, and the vice head and members of **TongkeTongke's** ***ACI*** mangrove organization. Again, after approximately four weeks, a network for the fieldwork was established.

The very firstcourse for approaching the research site and research informants was institutionalized, hierarchical and top down. We began collecting data from the top or the provincial and regency levels of governance, and proceeded to the bottom or the district and village levels of governance.This approach was coupled with the need to obtain multiple permits starting from the top of the hierarchical chain at the national and provincial levels then moving down to the regency, district and village levels. Experience suggested that informants at the bottom of the hierarchical chain would be reluctant to participate in the research had we failed to obtain permits from the top officials and community leaders. Similarly, in the early stages of data collection we relied upon government officials to guide and lead the discussion on issues which arose within the regencies, districts and villages. After encountering and experiencing the complexity associated with data collection and interviewing, we became intrigued by the discrepancies within the stories told by the diverse research informants. This was the turning point when we became convinced that a non-linear and multi-dimensional ethnographic exploration of reality constructions should be adopted. This was also the turning point when we became convinced that emerging properties should be recognized and acclaimed as opposed to being subverted and marginalized.

In addition, during the early stages of data collection we were preoccupied with the need to incorporate structure, boundaries and guidelines into the data collection and interview proceedings. These boundaries and guidelines took the form of semi-structured interview questions with framed perspectives, interests and issues predetermined by the researchers. During the initial phase of the investigation we expected officials and community members to provide an expla-

nation on the perspectives and issues which we had framed. However, officials and community members were not interested in describing and discussing them from the investigator's perspective; rather, they were interested in telling their life stories and roles in the governance of local natural resources. Furthermore, some informants were particularly keen on describing their contributions in the light of local conflicts. It was at this point that we became aware of the need to change the research design into that of an etano-methodological research emphasizing the use of participant observation and unstructured and open ended interview proceedings. This resulted in an increased capacity for integrating the informants, projecting their voices, and understanding the issues and arguments which arose within the locality from their perspectives.

3.7 The change to critical realism

In the early stages of the investigation we adopted the structuralist's approach to seeing and understanding the world. The social world was perceived to consist of an objective and an orderly system component that was easily visible in the presence of a rationally objective observer. Furthermore, in the early stages of the exploration we assumed the apolitical nature of the informants' comprehension and recall. Nevertheless, data collection experiences within the sites yielded insights and knowledge of the social world that was distinctively different from those initially perceived. The discrepancies found within our initial assumptions and the subsequent findings are briefly illustrated below. In-depth and thorough discussions of the findings, along with the concrete examples which support them, are provided in Chapters Four and Five rather than being provided below.

First, during data collection wefound that the comprehension, recall and summarizing of stories by informants focused on the perceptive structuring of information, knowledge and meaning **(Cortazzi 1993)**. Recall is thus construction rather than reproduction **(Cortazzi 1993)**.Furthermore, we found that the processing and structuring of information, knowledge and meaning were alsc non-recurring and contingent upon contextualized settings.Recall of actions and events need not reflect their actual occurrences, and recall was dynamically distorted to suit the particular interests and predicaments of the research informants.Besides, the data collection experience showed that no recall made by a particular person, when the inquiry was performed twice, would yield the same exact reply.Consequently, it was impossible to understand the responses without taking into account the surrounding environment and the sense making, framing and intentions of the research informants **(Baba 1994: 23)**.This was the turning point which led us to fine-tune and sharpen both eyes and ears as opposed to simply relying on the use of the oral device to acquire information, insights and knowledge.

Second, social engagements and the social constructions of realities are "exclusively private affairs" **(Lynch 1993: 14)**. "Private affairs" meaning that the social world is marked by multi-layered and multi-dimensional reality constructions which we may not have access to. Moreover, the informants' world was marked by an ongoing "struggle over meaning" **(Mumby 1993: 5)**.In **TongkcTongke** complex and multi-faceted strugglesresulted inmobilization and unstructured power transformations for improved participation and inclusion in natural resource governance. Consequently, the belief that stories and narratives functioned to create and reflect a stable and structured social order were unfounded since narratives and the social order seemed precarious and open to negotiation in various ways.Discoursestruggles among the research informants suggested that power struggles were ever-present. Furthermore, social engagements and reality constructions are private affairs and are not easily disclosed even to those who participated competently in the community's social practice **(Lynch 1993: 14)**. This was the turning point which led to the discarding of our predetermined hypotheses and semi-structured interviews, and our adopting of ethnography and critical realism to underpin the fieldwork process.

Third, ourexperience of observing the informantssuggested that identities, like theatrical roles, are cued **(Ashforth 1998)**. **Ashforth**(1998: 216) noted that "one acts in character when a given identity is rendered salient by the settings". Moreover, **Ashforth**(1998: 216) also noted that "part of the power of organizational and social settings is that they tacitly tell us who to be, and thereby what to do, think and even feel". Participant observation suggests that identity performance is evaluated by audiences, and identification partly depends on audience 'applause' and social validation.Upon understanding and appreciating the above,it seemed important to assess the subjects within their contexts and

initially construct mechanical guidelines for explaining and predicting the motivations and actions of the diverse research subjects. Ourinitial assumption of identity formation was that identity and other forms of attachments were fairly motionless and determined by the fixed attributes dictated by organizations and institutions **(Sabatier 1981)**.What this denied was that identity is a perpetual work in progress **(Ashforth 1998)**.Likewise, participant observation suggested that individuals experimented with their identities **(Ashforth 1998)**, and this resulted in actions and engagements which could not be identified and predicted beforehand. At this point it became apparent that patience, open mindedness and a constant engagement with the research subjects contributed to the quality of the data and findings.

There was also an initial underlying assumption that research subjects, when carrying out orderly social activities, adapted themselves to the sense of one another's activities and contributed to the linear development of those activities. The data collection experience suggested that temporal development of activities was not progressively linear, purposively oriented and coherently ordered. It was at this point that the desire for oriented-ness and orderliness was replaced by the need to incorporate unevenness and subtleties into the investigative process.

3.8 Summary: towards a qualitative inquiry

Encompassed within Indonesia's decentralization policy is the devolution of natural resource governance to regency government departments and local user communities. Indonesia's devolution policy also stresses the importance of co-management, joint decision making and consensus in the allocation and distribution of the country's natural resources. These, according to government officials, are capable of promoting a more equitable and sustainable governance of Indonesia's natural resources. Hence, devolution, common property and collective action became the focus of Indonesia's natural resource governance during the post-Suharto decentralized era.

In light of this, there was a need to inquire how Indonesian policies of devolution created ideas about participative and inclusive governance: how dynamic social relations influenced collective processes for achieving the sustainable governance of Indonesia's natural resources. Concepts within **Ostrom's Common Pool Resource** (CPR) theory and **Bookchin's** theory of eco-anarchism have been discussed to provide a better understanding of devolution processes and the social dynamics they entail.

Through a case study of South Sulawesi's coastal resource governance and an inquiry of **TongkeTongke's** mangroves in particular, the research aims to support government in promoting participation, inclusion and enduring sustainability. The adoption of ethnography and the case study approach stems from the need to observe natural resource governance in its dynamic contexts and contextualize the inquiry within its source of knowledge. Participant observation, open-ended interviews and biographical inquiries were used to obtain the primary data. The primary data was analyzed through coding, categorization, comparison, conceptualization and/or thematization, and a comprehensive analysis of the themes which emerged. Secondary data was utilized and studied to gain a better understanding of the research informants' perspectives. The findings were illustrated through the stories and narratives found in Chapters Four and Five. Analysis and discussion of the findings were narrated in Chapter Six. The exploration aims to contribute to theory and practice through in-depth and contextual inquiry of Indonesia's complex natural resource governance.

IV

Collective coastal resource governance in Sinjai, Sulawesi

4.1 Introduction

Chapter Four provides a detailed description of the village of **TongkeTongke** in Sinjai Regency, South Sulawesi. This chapter highlights the themes which emerge from the interviews and participant observations conducted during fieldwork. It opens with a description of the village in which mangrove and coastal resource governance is contextualized and illustrates the governments' initiatives in facilitating sustainable and equitable natural resource management. Based on the fieldwork, the chapter discusses events and discourse relating to the governance of mangroves and coastal resources at the village, district and regency levels. The chapter also highlights government officials' perceptions of collective action and social inclusion in community based natural resource governance. These discussions and highlights show the evolving multi-dimensionality and complexity associated with natural resource governance.

Additionally, in this chapter the connections and contradictions between central policy expectations and the reality of natural resource governance in the village are shown and discussed. The principal themes which emerge from the fieldwork include the difficult position of government agencies caught between working for government outcomes and the reality of village happenings; the class and structural elitism among government workers when working alongside community user groups; community members taking the bits and pieces

of policies that work for them and jettisoning others; and the dynamic social constructions underlying **TongkeTongke's** mangroves and coastal resources.

The story about mangrove planting and conservation is illustrated through the interface between government officials and community user groups. As well, mangrove protection and governance has implications for social unity and collaboration as membership lines, family affiliations and local structures re-align in response to individual and group relations around the protected area. In this chapter we will introduce the narratives which explain and contextualize emerging issues within the field site. Therefore, while this chapter is largely the ethnographic detail of **TongkeTongke's** mangroves and coastal resources, inevitably there is also the social fabric of life in the village that sets the stage for further analysis in Chapter Five.

4.2 The village of Tongke Tongke

Tongke-Tongke is located more or less five kilometers from the capital of Sinjai and has good access to trading centers, health facilities and the regency's government departments. The village has five hamlets, namely Maroanging, Baccara, Bentenge, Cempae and Babana. The topography of the village consists of the mainland, the coast and the estuary,with a total area of about 415 hectares. On the mainland are hillsides where community members planted trees for agroforestry, whereason the plains are grazing areas for cows and goats and land for planting crops such as bananas, coconuts and mangoes. In addition, certain areas on the mainland are also used as rice fields. On the coastal lowland located in the hamlets of **Maroanging** and **Bentenge** are fish farm ponds which utilize ditch-like canals for transporting water from the sea. The mangroves are found within the lowland basin close to the fish farm ponds.

TongkeTongke's social landscape comprises of approximately 1, 890 inhabitants, with a total of 700 households **(YTMI 2003)**. A large number of the inhabitants are Moslem, and most work as farmers, field laborers, fishermen and / or merchants. Somevillagers work as civil servants in government departments and others as teachers in the local primary and secondary schools. The farmers mostly live in **Baccara** and **Bentenge**, whereas fishermen generally live in **Babana** and **Cempae**. Middle aged fishermen whose extended family own land and aquaculture ponds alternate between fishing and farming, with farming being the main source of income during the rainy season and fishing during the dry season. **TongkeTongke's** fishermen fish for mackerel and tuna in Bali and LombokStraits, with each trip lasting one to two months. Catches are organized by local land *ponggawas* who are middlemen and landowners, and these are exported via export companies in Java and Bali. Some fishermen go as far as Central and West Java whilst marketing their catchto land *ponggawas* in Surabaya, Semarang and Jakarta. Sinjai's Bone Bay is solely utilized for harvesting seaweed and catching small fish which are then sold in the local market five kilometers from **TongkeTongke**. The trading of Bone Bay's resources is organized by fishermen and local intermediaries who own stalls at the local market. Fishing is the occupation of 95 % of **TongkeTongke's** population, whereas farming is the occupation of 4.2% of the population, and aquacultural farming the occupation of 2.8% of the population **(Prioharyono 2002)**. Approximately 550 households are involved directly in fishing activities, while the number of households owning boats amount to about 220 **(YTMI 2003)**. Although fishermen from South Sulawesi are known for their voyages across the ocean, fishermen from other parts of the country fish locally and are much more confined to their regions. Only fishermen catching small fish, crabs, mollusks and sea weed operate in the Bay, whereas the majority, they fish in the Lombok, Bali and Java Straits where fish is available in quantity and quality.

Some of the villagers work in the salty water ponds for their main source of income. These villagers manage their privately owned or rented fishponds. These ponds use the intercropping system of three main products, which include milkfish, prawns and seaweed. Seaweed counts as the most profitable commodity and requires the least capital. Meanwhile, more expensive and prone to diseases, milkfish and shrimps are mainly raised for local and household consumption. Fish farming activities and the intercropping system of milkfish, prawns and seaweed are common in coastal communities across Indonesia.

The fishing equipment used by these fishermen include *pancing*or fishing rods with multiple hooks; *rompon*, a floating device attached to coconut leaves and fish baits to attract fish in deep water; *bubu*, a device made from woven bamboo strips to catch fish in shallow water; and *bagan*, a device comprised of bamboos, nets and ropes planted in the ground in shallow water. *Pancing*and

*rompon*are used to fish in deep water in Lombok, Bali and Java Straits. *Bubu* and *bagan* are used to fish in shallow water in the Bone bay.

A single boat crew comprises a sea *ponggawa* or captain and up to seven *sawis* or laborers. The sea *ponggawas*are boat owners who venture to sea to fish, whereas the land *ponggawas* are 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 *ponggawa*. In most cases the land *ponggawa* loan money to fishermen to acquire boats and/or motors. The loan serves as a contract between the *ponggawa* and the fishermen, payable in installments within unspecified time frames as long as the fishermen remain the *ponggawas*' clients. Hence, decisions over the budget, equipment and fishing locations are largely dependent upon the *ponggawas* and/or thenavigator.Nevertheless, sales are conducted by *ponggawas* in the *sawi's* absence, and often the *sawis*areneither aware of the market price nor the money received from the sale. In **TongkeTongke** there are more independent - small scale fishermen than those working as *sawis* since independent fishermen receive more income when compared to that of the *sawis*. The relations between *poggawas* and *sawis*, marked by relations of power and hierarchy, benefit both parties and are common in coastal communities across Indonesia.

As an alternative to acquiring loans from the *ponggawas*, loans are obtainable from the local state bank or *Bank Rakyat Indonesia* three kilometers away. Those interested in obtaining credit are required to provide collaterals in the form of a land certificate. Only after requirements are met can credit be disbursed, amounting to a maximum of IDR Rp 3 million (AUD $ 400.00). A loan is to be paid off in one to two years with an additional 2% monthly interest. Nonetheless, *sawi* fishermen prefer the *ponggawas* to the bank since the banks' requirements are difficult to meet and *sawi* fishermen have neither land nor boat. In addition, the flexibility offered by the *ponggawas* suit the fishermen's unpredictable and dynamic circumstances. Therefore, *ponggawas* are expected to think beyond their own interests. Consequently, relations with the *sawi* fishermen are to be maintained.

Village level institutions include organizations focusing on governance, religion and natural resource sustainability, as well as organizations for acquiring loans, stimulating trade and promoting economic empowerment. The formation of the latter tends to be for accessing funding from government departments, with the various organizations gradually dissipating in the absence of funding and loans from government departments. An example of this was when the *ponggawas* and *sawis* formed the fishermens' association for acquiring loans from the Regency's Marine and Fishery Resource Department. Another example of this was when the women of **TongkeTongke** formed womens' group for processing and marketing local fish produce (e.g. processing and marketing fish crackers). To access funding and loans from government departments, officials require community members to form local groups and associations based either on gender or occupation. The formation of these groups and associations do not necessarily lead to longer term institutions even though at the outset they serve as a clear purpose.

The village of **TongkeTongke** faces a number of ecological problems. Activities in the coastal watershed involving land clearing, farming and settlement development has led to soil erosion in the upland. In turn, soil erosion causes the sediment to settle and accumulate on the bottom of **TongkeTongke's** estuarine basin. The marshes have become the victim of land reclamation for community dwellings and fish farming. Moreover, the relatively calm water of the marsh has become a suitable location for the development of housing. In addition, the case of **TongkeTongke** suggests that mangroves and other coastal wetlands are sometimes used as solid waste disposal sites, causing pathogens and toxic substances to permeate into the land and groundwater.Also Bat hunting has been severe in **TongkeTongke**, leading to the over-utilization and commercialization of local bat resources.

4.3 Coastal policies in South Sulawesi

Coastal oriented policies and programs broadcasted at the regency level are as follows: Local Regulation No 09/1999on the sustainable use of Sinjai's mangrove forests (1999), Regency Head's Decision No 660/2003for the protection of coral reefs and marine biota (2003), and Sinjai's Forestry Department Letter No 203/2002on the sustainable governance of marine biota found within the mangroves(2002).

Local Regulation No 09/1999 (1999) stipulates that the land 100 meters

from the highest tide to the bay is designated for conservation areas. No activity other than the conservation and reforestation of mangroves is allowed. Local Regulation No 09/1999 (1999) also stipulates that 50 meters inland from the coast selective cutting is allowed with special permission from Sinjai's Forestry Department.A breach of the above regulation can result in three month's detention and/or a fee of Rp 50,000,- or AUD $ 10.00 whereas the daily wage is more or less Rp 13,000,- or AUD $ 1.50 and the minimum monthly income as stipulated by the provincial government is Rp 400,000.00 or AUD $ 50.00.

Regency Head's Decision No 660/2003 (2003) stipulates the conservation of coral reefs by prohibiting destructive fishing and coral destruction. If found guilty, violators are required to serve a maximum of ten years in prison, and/or pay a maximum fine of Rp 500.000.000,- or AUD $ 70,000.00. In protecting conservation values, these laws are arduous in nature; when found guilty of misdemeanor, community members and fishermen often provide law enforcement officials with bribes in exchange for the erasure of sanctions.

Letter No 203/2002 (2002) by Sinjai's Forestry Departmentstipulates for the sustainable hunting of bats found within Sinjai's mangroves. The letter stipulates the need to observe the region's bat hunting seasons and the need to acquire permission from the village head and the Regency's Forestry Department for bat hunting. The implementations of these policies, along with their implications on sustainable coastal resource governance in **TongkeTongke**, are described in sections 4.5 and 4.6.

4.4 Coastalprograms at the national level

Sector specific programs aimed at protecting Indonesia's coasts include multi-agency programs involving ministries at the national level and the provincial and regency government departments. Originally, these were sector specific programs which had a single narrow objective, such as coastal resource conservation or economic development program.In responding to broader issues and problems of the coastal areas, these programs were widened to accommodate other objectives. These objectives may have included the conservation of coastal resources and the socio-economic empowerment of local coastal communities **(Niartinisngsih 1996; Kusumastanto 2004)**.

One noteworthy program was mangrove conservation and reforestation. The importance of mangrove forests as nursery grounds and buffer to wind and tidal waves are well understood among policy makers, ecologists and coastal communities in Indonesia**(USAID 2004)**. Policies and programs for conserving mangrove forests and reforesting coastal land were initiated by the Ministry of Forestry. Considering the importance of mangrove forests for long term development purposes, in the year 2000 the Forestry Department introduced the National Land and Forest Rehabilitation Program or ***GNRHL***(*Gerakan Nasional Rehabilitasi Hutan dan Lahan*) (2001). Mangrove conservation and reforestation in coastal areas become one of the program's objectives.The program aims to conserve and restore mangrove forests as well as promote land care through a number of means.One is through institutional strengthening at the village, district and regency levels for promoting participation, joint decision making and conflict resolution in relation to mangrove governance.Another is through coordinated monitoring and enforcement of selective cutting.A third is through the implementation of adaptive technologies geared towards conservation and sustainable use. An example of this involves the development of mangrove-enclosed fish farm ponds.

A second noteworthy program is aquacultural production within coastal areas.In order to increase aquacultural production for export, the national government launched the National Shrimp Program or *Program Udang Nasional*(**Tobey 2002**).The program started in 1983 and continues to the present.During the Suharto era, the program was under the direct supervision of the president whereas the Directorate General of Fisheries within the Ministry of Agriculture then became the lead agency in managing the program.Subsequent to the reformation movement, the programcame under the authority and jurisdiction of the Department of Marine and Fishery Resourceswith the regency office responsible for its implementation.The main objective of the program was to increase the national shrimp and aquaculture production for export through the involvement of the private sectors and coastal communities.Through partnerships with government departments, the program was also aimed at redistributing the benefits generated from the increased nationalization and commercialization of aquacultural activities **(Tobey 2002)**. The implementations of these programs,

along with their implications on sustainable coastal resource governance in **TongkeTongke**, are described in sections 4.5 and 4.6.

4.5 Changes in Tongke Tongke's mangrove governance

This section highlights events and discourse relating to the governance of **TongkeTongke's** mangroves.It shows the complexity underlying local mangrove governance and portrays the dynamic social relations which influence collective action processes. This section also shows how on-ground practice interacts with government policies and programs for sustainablemangrove governance.

Tongke Tongke's mangrove organization

The village of **Tongke-Tongke** is known for its lush mangrove forest whose development and resilience is due to community effort. Initial planting effort in the mid 1980s was marked by trial and error, with repeated planting success and failure sweeping across effort at reforesting the coast, rebuilding the terrain and reclaiming the land from tidal waves.

Today Tongke Tongke's mangroves amount to 550 hectares and are owned by 117 plot owners belonging to a village organization dedicated to protecting the mangroves. This organization is called the *ACI* mangrove organization **(YTMI 2003)**. *ACI* stands for ***Aku Cinta Indonesia***or I Love Indonesia. The *ACI* organization is initiated and maintained by the villagers who cultivated the mangroves. The organization is equipped with a head, adeputy head and a treasurer. It is also equipped with unwritten rules over its use, allocation and governance. These rules also stipulate that the extraction of the flora and fauna within the mangrove forest requires consent fromthe mangrove owners and the head of *ACI*.Moreover, *ACI*'s senior members claimed that 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 dead tree trunks permitted for cutting, and by whom, and the sanctions accruing to trespassers and violators. Sanctions for cutting the mangroves include having to plant and nurture the same number of trees until reaching maturity.

Nevertheless, these rules are neither formulated through joint decision making nor are they formalized in meetings and village regulations. These rules are self-motivated to suit the mangrove owners' interests, needs and stakes.The 117 mangrove plot owners regard themselves as members of the *ACI*organization and the rightful people to provide consent over their utilization, allocation and governance.In **TongkeTongke** the *ACI* members who cultivatethe mangroves are aquacultural farmers who own boats and/or landowners who work the land and convert them to gardens, ponds and rice plantations.A majority of the *ACI*members are directly or indirectly related to the ruling family within the village. In **TongkeTongke** kinship ties are affirmed through intermarriages, working relations and land and capital ownership.

TongkeTongke's mangroves are neither communally owned by the 117 *ACI* members nor are they publicly owned by the state. **TongkeTongke's** mangroves are plotted and privately owned by the 117 *ACI* members who cultivate and nurture the various plots.Despite its private ownership, the commodification and commercialization of the village mangrove is absent. This is because the mangroves have become a source of symbolic and authoritative power for the *ACI* members. The mangroves have also become a source of material capital for non *ACI*members within the village. This is because the mangroves' popularity encourages the influx of aid, funding and projects into the village.This is illustrated by the remark made by *Haji* MSTMN, asea *ponggawa*and landowner:

> Initially I planted the mangroves in order to create land and to make aquaculture ponds, but now I cannot cut them, no I cannot. The roots are deeply anchored to the ground and they grow on top of each other so it's just so difficult to cut them if I want to convert them to ponds. Moreover, the people in this village need the mangrove to protect them, and it is because of the mangroves that people all over the world know who we are. Around here I am the second largest owner of the mangrove plots after *Haji* A the *land ponggawa,* so if I decide to cut my mangroves, what will happen to this village then?

Hence, the planting and privatization of **TongkeTongke's**mangroves did not result in the owners' liberty to use the commodity as might be expected in

the private profit system.Rather, the village's mangroves resulted in their protection and conservation for safeguarding the collective needs of both the ruling family and the community members.

ACI was formed because of its members' inclination to protect the fruit of their labor, the mangrove population and its associated rewards.Despite different stories surrounding the founding and founder of *ACI*, its deputy head, its former head and its former discontented members,all stated the importance of forming an alliance to protect their labor. The deputy head of *ACI* claimed that it was he who initially united the different mangrove cultivators under the name *ACI*. Mr. TYB, *ACI*'s former head who was deposed by the other members, stated 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,claimed that they were responsible for initiating the mangrove cultivation scheme and the alliance with government officials.Moreover, according to these cultivators there is no need to maintain the corrupt *ACI* organization of the present since the older generationsare very well known and respected by others without having to resort to the *ACI*organization. In 1995 **TongkeTongke** received the *Kalpataru* Environmental Award from Indonesia'spresident. The regency government also received attention, funding and projects as a result of **TongkeTongke's** mangroves. Due to its importance, in 1999 the local government issued a ruling declaring the mangroves a national park. Hence, the maintenance and conservation of **TongkeTongke's** mangroves became very important for *ACI* members, villagers and regency government departments alike.

At the outset there was the need to plant mangroves to defend against wave encroachment, property damage and material loss.The social construction underlying the initial planting changed when an increasing number of villagers joined to replicate the cultivation. It was at this stage that mangrove planting became a way for acquiring mangrove trees andforming new land for private ownership. It was also at this stage when cultivators began organizing the mangroves into plots for private property. The un-written rules suggest that theprivatization of **TongkeTongke's** mangroves isnecessary for protecting private interests, safeguarding the resource from external parties and reasserting family ties to the land and the coastal water.According to *ACI*'s vice head, Mr. ZNDN, immigrants from the outer islands began settling the village when community members started cultivating the mangroves; hence, cultivators saw the need to privatize the mangroves for protecting individual property and maintaining ancestral ties to the land and the coastal water.

In addition, the mangroves were initially planted to create new land and space. This newly derived land is regarded as private property and can be sold, rented or converted to ponds in times of needs and hardships. Over time, community members were inclined to plant as many trees as possible to retain the land from immigrants and outsiders. In an informal discussion with the village head's neighbor, Ms. DHL, the need for attachment to local landscapes surfaced:

> The villagers were competing to plant mangroves in the coastal areas in the 1980s because they wanted to create new land and make the land theirs, to belong to their families and to have something to hold on to, so before the mangroves were there, big people here were very much interested in planting mangroves. When I was little my neighbors moved their collapsible bamboo houses from the coasts to the inland areas in order for them to plant mangroves there.

Despite being privatized, the discourse underlying the governance of **TongkeTongke's** mangroves points to the need for collective management and resource conservation. *ACI*'s deputy head stated:

> Honestly, in the beginning when community members started to plant mangroves they did it because they wanted to acquire land and build aquaculture ponds, but since they've now seen that the mangroves can protect their village and promote the name of the village all over the world; they do not want to cut down the mangroves anymore.

This is an example of the villagers' conserving the resource for humane reasons. Furthermore, the comment also suggests that private interests and collective needs need not be contradictory. Although the mangroves are privatized, they are still managed and governed collectively.

With regard to *ACI*, the organization was formed to affirm and protect the mangroves whilst restricting access to thecultivators.The *ACI* organization is rife with contention among its members, arising from a perceived unfair advantage of some members over others. Nevertheless, the contentions within*ACI* lead to a strong sense of attachment to the mangroves.With the passing of time, government officials consider*ACI*an organization whose collective performance contribute greatly in protecting Sinjai's coasts.In addition, the regency government also plays a significant role in promoting the organization's name and spreading the success story behind **TongkeTongke's** mangroves. Local officials are keen on spreading the word as they enjoy having their people's achievements praised, their region recognized and their project funding secured. At this stage an unwritten rule emerged within the village and the regency, namely that the mangroves are to be managed collectively and that all community members and government officials are endowed with the responsibility to protect and conserve the mangroves. This reinforced the cultivators' attachment to the mangroves and provided them with a sense of identity, recognition and differentiation.

Due to the fame and prestige of the *ACI*organization, its members are highly revered by villagers and government officials. A senior member of *ACI*, *Haji* BAKR, promoted his ownership with this anecdote:

> Two years ago there was a PhD student from Japan named ANDMR who conductec research on the growth of the mangroves. He went into the mangroves and just started measuring and taking things without even asking our permission first. We're not invisible here, he should know who we are and respect us for what we are, everybody here respects us and he can't just go in there just like that. Luckily, you didn't do that: because if you did, the senior members would then have to get together to decide what to do about that.

Through rising popularity the *ACI* members are set apart from ordinary villagers and immigrants in the village. Mangrove cultivators who were ordinary villagers in the past have been given a new identity, namely that of heroic leaders and innovators who helped in saving the village from wave encroachment. Villagers also perceivedthe mangrove cultivators as pioneers who can attract aid and funding from government and donor agencies.

On one occasion I spoke to the villagers who do not own mangrove plots. These villagers joked and pretended they were the cultivators and rightful owners of the mangroves.These villagers also joked about pretending to havesaved the village from wave encroachment and helped in acquiring aid from benefactors. Mr. AGN, alaborer who neither owned land nor mangrovesremarked: "oh yes, I do have mangroves, lots and lots of them, hectares of them, and I'm going to turn them into aquaculture ponds to make me rich, but how will the people here live without my mangroves?". Hence, the sense of reverence displayed by local villagers is a source of symbolic and authoritative power for the mangrove cultivators.The mangrove cultivators are set apart from others due to their material, symbolic and political significance.

The cultivators' responsibility for protecting **TongkeTongke's** mangroves takes precedence over private rights towards its utilization and commodification. A sea *ponggawa*who owns the second largest mangrove plot in **TongkeTongke**, *Haji*MSTMN, remarked that in the past the mangrove cultivators planted the mangroves and saved their money in order to convert the land and mangroves into aquaculture ponds. He mentioned that it took him quite sometime before he could save enough money to build aquaculture ponds. Nevertheless, after having saved enough money and planted enough mangroves to be converted into aquaculture ponds, *Haji*MSTMN decided to build two small aquaculture ponds whilst conserving large plots of his mangroves for protecting the village. In an interview, *Haji*MSTMN remarked:

> The people in the village need my land and my mangroves; my mangroves are so abundant and they grow on top of one another that it's just so hard to cut through them, the roots are so thick and they are so difficult to cut. The people in the village come to me and say that I have so many mangroves, so many mangroves that I do not even know how many plots or hectares I have anymore. The mangroves just keep growing without me having to do anything. I do not even know how many hectares I

have anymore. But I definitely won't cut the mangroves because if sea water goes up and enters the village again, the waves are big around here, and the waves can drown us all.

Villagers who are non *ACI* members recognize and respect the status of the *ACI*members.Non members acknowledge that they did not cultivate and nurture the mangroves; thus it is the members who are entitled to the tree, the land, the organization and the credit.In addition, non members are dependent on the mangroves for protection against wave encroachment.Furthermore, non members rely on the organization and its members for material capital and social contact.

At the outset, the function of the mangroves was to protect the coast and the village from wave encroachment. This was transformed to that of the mangroves as a source of individual and group recognition. Moreover, as time passes the mangroves have become a symbol of collaboration and stewardship whilst reconnecting local villagers to the social and ecological landscapes. In an informal discussion, Mrs. SWRN, the widow of a *sawi* or laboring fishermen said:

> *ACI* is a well known and respected organization because people all over the world know *ACI*and they come here just to meet the people in *ACI*. **TongkeTongke** is the only village in Sinjai and Sulawesi who has mangroves and a mangrove organization. The people in the *ACI* organization have done much for us, including protecting our village, making us well known everywhere, getting important people like the minister, governor and regency head to come here and help build the village. The *ACI* members have helped build the village as well.

Hence, the symbolic and authoritative resources acquired by the *ACI*members are perceived to be legitimate by non-members within the village. Thus conservation values are safe since the mangroves provide property and power for the cultivators and the mangroves become a source of pride and recognition for the community members in **TongkeTongke**.

Nevertheless, the *ACI* mangrove organization is also rife with conflicts due to a perceived unfair advantage of some members over others. Mr. TPD, a middle aged *bubu* fisherman who refuses to remain in *ACI* stated:

> When *ACI*'s deputy head, Mr. ZNDN, works with government officials from Sinjai and sells the mangrove seeds, he never informs or involves us in the seed trade. He just involves those people closest to him and they keep the opportunity and money to themselves. I don't want to join *ACI*anymore, I don't need *ACI*. People here already know who really planted these mangroves.

Interestingly, these disputes strengthen their attachment to the land and the local mangroves. This strong attachment alsoleads to increased motivation for protecting the resource. In an informal exchange, Mr. TPD also remarked:

> Along with Mr. BMBNG and the late *Haji* BDRDN, I started the mangrove planting, I planted them, I managed them, they are my mangroves, my hard work and no one can tell me what to do with them I used to be in *ACI*, but then Mr. T became the head and corrupted everything, and now Mr. ZNDN is the deputy head and he is corrupting everything too, just like Mr. T. When government officials held mangrove cultivation projects and paid villagers to plant the mangroves, Mr. ZNDN would order us to plant this and that but never gave the money to us for the labor. I do not need *ACI* or anything like that anymore, no, no way, I'm out. They're my mangroves and I don't need anyone or anything to tell me that I own the mangroves and the land.

When asked if he would ever convert his mangroves into aquaculture ponds he became defensive and stated "nobody can tell me what to do with my mangroves; if I want to cut it, I'll cut it myself". Nonetheless, when the other villagers who were sitting next to him stated that the mangroves were important for preventing wave encroachment and beach erosion, the same man said:

> The mangroves should not be cut, they can't be cut, in the past the water reached the house where I'm standing now and the water got as high as my knee 'cause there were no mangroves, but now because of the mangroves the water has receded and it even saved us from the effects of an earthquakes which originated kilometers away in the sea.

Hence, both cultivators and community members value the conservation of the mangroves, whereas harvest within the forest is limited to the extraction of mud crabs and dead tree trunks. Mr. TPD also stated that mangrove cutting is only allowed when there is a need to provide spacing between the mangroves. This is done to allow them to grow well.

According to another villager who still regards himself as an *ACI* member, Mr. ABDRF, the land and the trees belong to him and his family:

> We plant the trees, we take care of the land, the government only wants to take the credit when the work is done... moreover, if the government takes the land from us, they will not take proper care of the land...the land belongs to the people around here.

According to Mr. ABDRF, with permission from the mangrove owners, the local villagers are allowed to enter and take the dead trees, crabs and hermit crabs from within the mangroves. 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. ABDRF.

Hence, the cultivators planted and nurtured the mangroves prior to establishing the organization, whereas the organization does not represent all of the mangrove cultivators in **TongkeTongke**. Nevertheless, both cultivators and community members are grateful to the *ACI* organization for putting **TongkeTongke** on the world map. The villagers all take pride in the fact that **TongkeTongke** is known nationally and even internationally for its mangroves. In relation to the regency government's effort at converting **TongkeTongke's** mangroves into a park, all of the *ACI* members whom I interviewed stated that government officials are keen on taking the credit and turning *ACI's* mangroves into the regency's park. Interestingly, despite their resentment, cultivators and community members are proud of the attention they receive from government officials, and villagers and government officials all want the same outcome, namely to conserve **TongkeTongke's** mangroves.

Identity validation and social recognition have a number of implications on devolution of responsibility and collective action for sustainable coastal resource governance. The case of **TongkeTongke** suggests that identity validation and group and individual recognition are important for promoting social responsiveness, ecological sensibility and the collaborative mentality. An example of this was when Mr. AHMD, a mangrove owner who worked as a laborer in Indonesia's capital city Jakarta, stated:

> When I was in Jakarta, I met people from South Sulawesi and they know that I have mangroves here, and they told me that the mangroves are good for the environment and the village, and so I told my family who are in **TongkeTongke** to just keep planting and nurturing the mangroves because even people in Jakarta know about the mangroves and about us. And the more we care about our mangroves the more we are helping the village and the more others know us too.

This sense of validation and recognition in turn triggers a reflective capacity, a sense of potency, and a need to encourage obligation among cultivators and community members. This also precipitates active participation for protecting the local mangroves.An example of this was when Mr. ZNDN, the deputy head of *ACI*, stated:

> The people of **TongkeTongke** are proud of their mangroves, initially they want to turn their mangroves into aquaculture ponds, but when they see that the mangroves can protect the village and bring fame to the village they started thinking and realizing how important the mangroves are for themselves and others. This also makes the cultivators feel good because

they can do something for others and contribute to the development of the village. Because of this they are motivated of their own free will to protect the mangroves. We also realize the need to respect each others' contribution and conserve each others' mangroves because we need to work together to protect the village.

Hence, although the cultivators' attachment to the mangroves can be altered by external interventions such as policy and institutional measures, for these to have profound impacts they would have to be negotiated with historical contexts, local practice and dynamic circumstances.

The *ACI* members recognize and acknowledge the roles which villagers and government officials play in providing them with identity, recognition and authority, hence when Sinjai's Forestry Department decided to transform the community's mangroves into a national park, albeit resenting the encroachment by government officials, the *ACI* members were proud of their park and happily aided in conserving the mangroves.

Both *ACI* and community members are very protective of the local mangroves and will not allow others to undermine their collective effort in protecting them. An example of this was when the *ACI* members mobilized, deposed and socially sanctioned its former head, Mr. TYB. *Haji* BAKR stated that Mr. TYB was deposed because he was "dominating the liaisons with government officials and corrupting the donations which flow into the organization". Another example was when the anti-*ACI* cultivators advocated the villagers to protect the mangroves and provide them with identity and recognition. Despite differences in interests, this acts as a platform for resource protection and enhances the conservation value of **TongkeTongke's** mangroves.

Along with identity construction, the case of **TongkeTongke** also suggests process of imagination building.The idea of imagination building comes from **Wenger's** *Community of Practice: Learning, Meaning and Identity* (1998), and is a reminder that constructions of identity and imagination are shaped by social practice and patterns of engagement. The imaginative force here is the recognition of the collective good that is largely unseen by locals but appreciated by outsiders. An example of this imaginative force was when Mr. MSTMN, a

mangrove cultivator who sees himself as protector of the village, stated "the village needs me and my mangroves, what will the villagers do without my mangroves?" These discussions on the *ACI* mangrove organization suggest that local practices are multi-dimensional and not exclusively controlled by external interventions.

The multiple constructions and associations underlying **TongkeTongke's** mangroves suggest multiple management regimes beyond utilitarianism and commodification alone. In **TongkeTongke** social institutions in the form of kinship ties, mutual recognition and identity validation are present, and these motivate individuals to protect the local mangroves in the absence of monetary and utilitarian incentives. In the case of **TongkeTongke**, this becomes the fabric for the collective governance of its mangroves.

Joining forces

In 1989 the Regency's Forestry Department began to take interest in the mangrove forest and organization due to its perceived community based nature. In 1989, Mr. TYB, the former head of the *ACI* organization, acted as the intermediary between the villagers and government officials. Mr. TYB played a dominant role in the organization's administration matters.It was in the late 1980s and early 1990s that the Regency's Forestry Department began promoting **TongkeTongke's** mangroves to other forestry officials within the nation, as well as to NGOs and donor agencies. Due to the success of **TongkeTongke's** mangrove, comparative studies (i.e. *studi banding*) began to take place within the regency and the village. In these comparative studies officials from other parts of the country come to **TongkeTongke** to compare their experience with **TongkeTongke's** experience in promoting community based natural resource management. Foreigners also started to enter the village and development assistance began to pour into the region. The government of Sinjai, especially Sinjai's Forestry and Marine – Fishery Resource Department, enjoy showing their prize winning trophy (i.e. the village and its mangroves) to others by conducting comparative studies and seminars within the regency and the village. A typical comparative study involves a welcome speech from the head of Sinjai's Forestry Department, the former head of *ACI's* speech on the history of **TongkeTongke's** mangroves,

the vice head of *ACI's* speech on working together to conserve the mangroves, and the guests' taking a boat ride around **TongkeTongke's** mangrove forest. After the boat ride, as a groupthe guests donate money of more or less Rp 2 – 3 million or AUD $ 500 to the *ACI* members to support their effort in protecting the environment. It is customary for guests to donate money to the villagers after visiting **TongkeTongke**.

In these seminars and comparative studies Mr. TYB, the deposed former head of the *ACI* mangrove organization, also becomes 'the face' of the village mangrove story. During these events conflicts among the *ACI* members, as well as Mr. TYB's forced abdication, are never mentioned. The function of these seminars and comparative studies on community based mangrove governance is to show**TongkeTongke's** achievement as opposed to shedding light on the dynamics of coastal resource use and allocation at the village level.

One week before comparative studies are held, extension officers from Sinjai's Forestry Department visit the home of the village head and instruct the village head to round up *ACI's* senior members, to set up the villagers' boats, and to equip the *baruga*(i.e. meeting place) with chairs and coconut drinks for the regency head,the guests and the government officials from other parts of the country. The day before comparative studies are held government officials parade through the village with guests from other parts of the country. The aim is to stage bureaucratic pomp and propaganda. Government officials from the regency also put up brightly colored flags and signs along the roads leading to the village which bears the writing "Community Based Mangrove Ecotourism, This Way".Although villagers feel that officials are taking most of the largely undeserved credit, villagers also welcome the officials' visits since these officials provide the community members with acknowledgement and recognition. Moreover, individuals from all over Indonesia take notice of the people in **TongkeTongke**. The seeming shallowness of these government events does not deter the enthusiasm of the locals for participating and being recognized as mangrove protectors.

On the other hand, theseseminars and comparative studies held in **TongkeTongke** also fuel jealousy and contention among some *ACI*members. Some self-proclaimed former members said they were never invited by the head and deputy head of *ACI* to these comparative studies. "Comparative studies, seminars, donations, etc have been conducted in the village, and the only people involved in them are the head, deputy head and village officials. People like me are never informed, but I don't care and I will not beg them or ask for money" stated Mr. MHMD, a former member who refused to remain in the organization. Nevertheless, these comparative studies also reinforce the social bonds among the *ACI* members and between them and government officials, serving as a basis for collective action in sustainablemangrove governance.The seminars and comparative studies in **TongkeTongke** provide both villagers and government officials with a mutual purpose and a point of connection in protecting the mangroves.

With regard to the *ACI* leaders, in 1990 Mr. TYB was spontaneously hailed as the leader of the organization by regency government officials due to his participation in *ACI* and his close relation with government officials.Mr. TYB wasforced to abdicate in 2000 by the other members due to perceived corruption and domination of the *ACI* organization. Mr. ZNDN, the present deputy head of *ACI*, claimed that Mr. TYB was not elected by the *ACI* members, he was simply chosen by government officials because of the officials' conviction of his effort and dedication to *ACI*.Furthermore, according to Mr. ZNDN, Mr. TYB did not plantthe mangroves in the past during the 1980s; Mr. TYB started planting a minute portion of **TongkeTongke's** mangroves only after the village had been awarded the *Kalpataru* environmental award."If now Mr. TYB has a small plot of mangrove forest it is because he was given a bit by *Haji* Badarudin's family in the past" stated Mr. ZNDN.However, when I spoke to Mr. TYB, he claimed that he not only cultivated and nurtured the mangroves, but also motivated others to plant mangroves as well.Mr.AKBR and *Haji* BAKR bothstated that Mr. TYBearned a living from collecting crabs and hermit crabs before the late *Haji* Badarudin endowed him with a small plot of mangroves and aquaculture pond. Moreover, Mr. AKBR and *Haji* BAKR also stated that Mr. TYB planted a small mangrove plot subsequent to receiving the *Kalpataru* award.

It was in the early 1990s that Mr. TYB began traveling around Indonesia representing **TongkeTongke** at the government level, publicizing information about **TongkeTongke's** community based mangrove cultivation scheme.In 1991 the Forestry Minister came to **TongkeTongke** to pay the village a visit.In 1995 **TongkeTongke** received the ***Kalpataru*** or the National Environmental Award

from the president of Indonesia, with Mr. TYB acting as the representative to meet the president.In 1996 the Minister for the Environment came to the village to pay **TongkeTongke's** mangroves a visit. Mr. TYB's role as **TongkeTongke's** representative fueled jealousy among *ACI* members, leading to protests, his dismissal from position as head, and the cancellation of Mr. TYB's scheduled appearance in Japan in the year 2000. The mangrove cultivators stated that when Mr. TYB was about to leave for Japan, the mangrove cultivators staged a protest in front of the regency head's office demanding that Mr. TYB be replaced. No representative from **TongkeTongke** went to Japan, and Mr. TYB stepped down and was replaced by the land *ponggawa* Mr. ALMDN and the organization's deputy head Mr. ZNDN through election by the *ACI* members.

Subsequent to receiving the ***Kalpataru*** award, funding and infrastructure development projects from government and donor agencies began to pour into the village.In 1996 mangrove seed trade with the other provinces began to flourish, with government officials acting as the intermediary. Mr. ZNDN, the present deputy head, stated that 1996 was the year of the boat incident.In 1996 the Department of Marine and Fishery Resources within the regency and provincial level gave the *ACI* organization a state of the art fishing boat. Although the boat was recorded within *ACI*'s inventory list, Mr. ZNDN claimed that it was solely used and monopolized by Mr. TYB and his relatives. The boat story indicates how Mr. TYB is said to abuse the villagers' trust and undermine his own credibility as a leader. Moreover, the boat story also indicates how Mr. TYB is believed to undermine the members' collective effort for protecting the mangroves and its organization.

ACI members, among others *Haji* BAKR, Mr. AKBR and Mr. AHMD,stated that Sinjai's Marine and Fishery Resource Department once gave the village a large boat for communal use by the *ACI* members.Moreover,*Haji* BAKR also remarked:

> At that time in 1997 there was no fancy boat in the village, and Mr. TYB never even mentioned the boat to other *ACI* members, nevertheless all of a sudden we saw Mr. TYB's son going out to sea with this newly painted boat, and when we met an official from Sinjai's Marine and Fishery Resource Department, he stated that the village was awarded a boat through Mr. TYB.

Without my asking, Mr. TYB stated that the boat was rented by his son at a discounted rate from the Regency's Marine and Fishery Resource Department since the department was being generous to the *ACI* organization and was interested in empowering the fishermen in **TongkeTongke**. Executives and staffs from the Regency's Marine and Fishery Resource Departmentdetailedtheir lack of knowledge of the boat's origin. They stated that it was the initiative of the ProvincialMarine and Fishery Resource Department as opposed to the regency's initiative. When queried, anemployee from the Provincial Marine and Fishery Resource Department indicated his lack of knowledge of the matter. The staff stated that the boat incident occurred a long time ago and that he was not affiliated with the department when the incident occurred. Despite his very visible role as the *ACI* mangrove leader, this issue was dealt with by demoting Mr. TYB from his position as head. The villagers' ability to do this and his acceptance of their demand to abdicate 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. The story involving Mr. TYB shows that in **TongkeTongke** social institutions and social capital are present to ensure that collective efforts at protecting the mangroves and the organization are not undermined. The issue of trust as a component of social capital will be discussed further in Chapter Five.

Despite the presence of social institutions and social capital for promoting cohesion at the village level, the interface with government departments and donor agencies can also lead to suspicions, contentions and mistrusts among the *ACI* members. From 1997 to 1999 the *ACI* members became even more suspicious of Mr. TYB and one another.However, those that did not belong to *ACI* remained outside the circle and were pretty much indifferent.*ACI* members claimed that Mr. TYB seized the *Kalpataru* prize money of Rp 15 million or AUD 2,500.00 for his own private use after the Forestry Department transferred the money to his bank account.Mr. ZNDN, the present vice head of *ACI* stated:

> We heard from the Forestry Department that there was a *Kalpataru* prize money of Rp 15 million given to *ACI* through Mr. TYB, but when we asked Mr. T, he stated that he did not know anything about the money and that he never received any-

thing in his bank account from the Forestry Department. The money was transferred to Mr TYB's private bank account on behalf of *ACI*, and Mr. TYB's son in law used *ACI*'s name and used the money for developing his fishing and aquaculture business.

With regard to the money, Mr. TYB claimed that an insurance company transferred a certain amount of money to his son's bank account for his granddaughter's operation fee. He claimed that a sponsor was willing to pay the insurance premium for his granddaughter's operation. Mr. TYB also stated that he did not know anything of the *Kalpataru* money and that he never received it.Nevertheless, other *ACI*members such as *Haji*BAKR and *Haji* BD stated their disappointment with Mr. TYB due to his dominating the organization's decision making and his lack of transparency with project money. These projects, as stated by *Haji* BAKR and *Haji* BD, include the construction of government funded aquaculture ponds, the sale from the mangrove seed trade, the boat donated for communal use, and the payments for labor in the government funded mangrove rehabilitation program.

During Mr. TYB's leadership in 1993 the Provincial Marine and Fishery Resource Department collaboratedwith CIDA and the local university to promote the construction of mangrove enclosed aquaculture ponds. The project was held to simultaneously preserve the forest and promote aquaculture farming. *ACI* members claimed that those who were involved were solely the elites in *ACI*, namely Mr. TYB and his close relatives and friends.The other members also claimed that they weren't even notified. In 1997the *ACI* members refused the idea of mangrove enclosed ponds since members felt Mr. TYB was monopolizing the networks and opportunities which emerged. Moreover, suspicions arose that Mr. TYB was about to lease or even sell the mangroves to the Forestry Department and the Department of Marine and Fishery Resources for the government owned-community managed aquaculture farming program. An *ACI* member, Mr. AHMD, stated:

> Mr. T just went on to strike a deal with government officials and donor agencies to convert the mangroves into aquaculture ponds since all of a sudden I saw officials measuring the mangroves and coming into the organization to tell us that they were going to convert it into ponds. All of the members refused blatantly because how dare Mr. TYB just go ahead and strike a deal with other people over someone else's mangroves. You just can't do that to people.

Villagers again refused to accept what they saw as bad judgment that could undermine their collective management of the mangroves. I will return to this story in Chapter Five.

In 2000 JICA and the regency government were about to send Mr. TYB to Japan to tell the story of his village people and the mangroves. Nevertheless, the other *ACI* members protested. Mr. ZNDN, the present vice head, stated:

> When Mr. TYB was about to go to Japan I got the other *ACI* members to sign a petition, and I and *Haji* BAKR rounded up the other *ACI*members who were also frustrated with Mr. TYB, and we walked down to the People's Representative Council and met the *Bupati*, and asked the *Bupati* that Mr. TYB be ousted from his chair. The *Bupati* kindly received us, and stated that he would speak to the people in the Forestry Department and the YTMI NGO to facilitate change. Then we held a demonstration in front of the Council's building, and I even got an orator from Hasanudin University to speak with me in front of the crowd and the local TV station to cover the event since I am an activist and I have close relations with individuals from NGOs, the local press and the television. If Mr. TYB does not leave *ACI* and goes to Japan, we will cut down all the mangroves.

This is a good example of the power of the mangroves. His threat points to how angry the villagers are at Mr. TYB's betrayal as a poor representative. I asked Mr. ZNDN if he would have cut his mangroves should Mr. TYB had gone, and he said "we need the mangroves and we have to preserve the mangroves because without it we will be swamped with salt water". Hence, the protest over Mr. TYB's corruption did not result in the villagers' cutting down the mangroves. Despite the regency government's reluctance to act, the govern-

ment understood how serious the threat was at a symbolic and a political level. With regard to the perceived need for government intervention when deposing Mr. TYB, Mr. MSTMN, an *ACI* member, stated:

> It was the government who elected Mr. TYB, so it is the government who can tell him to step down, moreover Mr. TYB will refuse to step down if it is only us who tells him to step down, what he needs are the important people to tell him to step down.

Towards the end of the year 2000, a provincial NGO called YTMI, along with government officials, expedited the abdication of Mr. TYB. YTMI alsoassistedefforts for reconciliation. The result was an election of a new head in which **TongkeTongke's** land *ponggawa*, *Haji* ALMDN, was elected as the new head of *ACI*. Initially *Haji* ALMDN refused; even so he was installed as *ACI*'s new leader by a majority of the members. However, since *Haji* ALMDN refused to take up administration and organizational matters, *ACI* is run by its deputy head, Mr. ZNDN.

When inquired why the *ACI* members elected *Haji* ALMDN as their new leader, a range of answers surfaced. One response was "because he has the largest mangrove plots, although he did not plant them himself and bought them from others". Another response was "because he's rich, thus he won't be corrupt like Mr. TYB". Still yet another response was "because he's influential and he's close to politicians and businessmen, so he will be able to facilitate network for people in the village and Mr. TYB will not dare monopolize things anymore".

Mr. TYB admitted to forming a rival organization made up of his family members and relatives called *kerukunan tiga nenek*. Mr. TYB claimed that *kerukunan tiga nenek*" is at present the only organization that is true to the objectives of protecting the mangroves and continuing the legacy of mangrove planting and conservation". Removed from his former role, he needed to find a way of continuing his connection and status as his identity had been so closely tied to the mangrove project. He is on a crusade to renew mangrove activities as his work again. Mr. TYB also claimed that under Mr. ZNDN's leadership, mangrove planting stalled since no activity had been conducted since his official abdication in 2000. "Now *ACI* does not hold any activity anymore, nothing, but when I was the leader I achieved so much" stated Mr. TYB.

Our observations of the present *ACI* organization is that Mr. TYB is correct about the lack of work and initiative from *ACI*. This is because the head of *ACI*, land *ponggawa Haji* ALMDN, is a fish merchant who prefers to continue and improve **TongkeTongke's** fish trade than to be involved in **TongkeTongke's** mangrove organization. In addition, *ACI*'s deputy head, Mr. ZNDN, as well as being a fish merchant is also very much occupied with his work as a human rights activist in Makassar. The case of **TongkeTongke** suggests that collective action for sustainable mangrove governance is not about enforced consensus and uniformity, but rather about individuals who collaborate and resist in achieving the collective good through self organization.

In 2001 when visiting the village of **TongkeTongke**, the Minister for the Environment, Mr. Sony Kieraf, gave *ACI* Rp 25 million (AUD $ 3,500.00) for improving and promoting the organization. The present deputy head, Mr. ZNDN, stated the following in relation to the allocation of the money:

> We used Rp12,500,000,- (AUD $ 1,600.00) of the money to buy wedding chairs which we then rent to villagers. Non-*ACI* members have to rent the wedding chairs, whereas members can use them for free. We then used the remainder to construct the bridge which provides access for visitors to venture into the mangroves. The leftover money was then split among the 117 *ACI* members. When the members tried to decide what to do with the money I even told the local police to come and make sure that no riots ever broke out with regard to this.

Mr. AGS and Mr. MRD, both *ACI* members, stated that the wedding chairs caused disputes at a later stage since some *ACI* members' relatives felt the right to borrow the chairs without having to rent them, whereas the *ACI* leaders and senior members insistedthat the chairs be rented. This in turn caused further suspicion and mistrust among the *ACI* members. This story suggests that the governance of **TongkeTongke's** mangroves has to be grounded within locally emerging complexities and dynamics.

Subsequent to the year 1997, the regency government protects **Tongke'Tongke's**mangroves through legal measures.An example of this is the implementation of regulations for the use, allocation and governance of **TongkeTongke's** mangroves.In 1997 Sinjai's Forestry Department enacted Regulation No 23/1997(1997).This regulation stipulates that logging and destruction of the forest cover area will be met with a fine of Rp 500 million (AUD $ 75,000.00) or a maximum of 10 years in prison. The above law is contradictory to Local Regulation No 09/1999(1999). Local Regulation No 09/1999 stipulates that 50 meters inland from the coast (i.e. from the reach of the highest tide) selective cutting of the mangroves is permitted provided that users receive permit from the head of the region or the extension officer from Sinjai's Forestry Department. A breach results in three month's detention and/ or a fee of Rp 50,000.00 or AUD $ 10.00. The extreme contradiction suggested by these laws causes the villagers to perceive them as trivial and non-binding, as completely unenforceable.

While *ACI* members and villagers consider these conservation statutes authoritarian and domineeringly top down, they also welcome them. Hence, the *ACI*members simultaneously detest and respect the statutes promulgated by government officials. On one hand, the *ACI*members stated that government officials are encroaching on their mangroves and taking the credit for the members' cultivation initiatives.On the other hand, the government is also validating these members' identity and labor whilst protecting their material and symbolic interests and providing them with a place to differentiate themselves from others. An*ACI* and community member named Mr. AGS stated:

> We are honored that the government is actually attempting to protect our mangroves through laws and regulations. We've worked hard planting the mangroves and it's good that the government is doing that. We need the mangroves and the protection it deserves because the mangroves bring many things to us like fame, name, aid, guests, important people, etc. But, what I don't like is that the government only collaborates with certain people in *ACI*, namely the leaders, just the leaders. And then these leaders and the government act as if it is them who should get the credit without sharing the credit with all of us.

These stories are examples of the interactions between the leaders and the grassroots. They demonstrate the tensions within the various interfaces and show the layers of intrigue which represent management decisions. The roles which the 'leaders' play in promoting sustainable mangrove governance are dependent on the complexity of events within localized settings.

In 2004 Sinjai's Forestry Department also intervened through its land and forest rehabilitation or *GNRHL* program.Encompassed within this program were efforts at conserving and reforesting Indonesia's coasts through the cultivation of the mangroves. In the case of **TongkeTongke**, the land and forest rehabilitation program boiled down to money distribution to *ACI*members for planting new mangroves and to that of demonstrating novel techniques for selective cutting to community members.In its implementation, *ACI's*deputy leader was the person responsible for recruiting the laborers who planted the mangroves. Moreover, *ACI's* deputy leader was also the person responsible for distributing the wages to these laborers.The deputy head of *ACI*, Mr. ZNDN, remarked the following in relation to the *GNRHL* program:

> In *GNRHL* it is the government officials who decided technical matters such as how much and which of the land should be rehabilitated and how this rehabilitation should proceed. There was never a clear message concerning the direction of the program, the structure of the program, the funding for the program, and of course we can never participate in the decision making.

According to Mr. ZNDN there was little grass-root decision making in the *GNRHL* program. Moreover, Mr. ZNDN also stated 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 **TongkeTongke**.

To a certain extent the *GNRHL* program led to disputes and division 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 laborer 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 who refuses to remain in *ACI*. In addition, Mr. TPD, who in the past planted the mangroves for the *GNRHL* program, stated that he was never informed much by Mr. ZNDN:

> If Mr. ZNDN, his close friends and the government officials held programs to plant mangroves we're never really informed of the actual amount of money which we should receive as laborers, when we should receive it, or how much money the leaders of *ACI* are actually receiving from the government. Moreover, we get a much lesser amount of money from that which we're supposed to receive from Mr. ZNDN 'cause when we asked the official from the Forestry Department he said we were supposed to receive this much, but in fact we only received that much. Nothing is ever clear and transparent so we're now sick of working with the present deputy head Mr. ZNDN. We don't want to be involved anymore if it's Mr. ZNDN that's handling things, no, no more, he'll just corrupt everything like Mr. T did in the past.

When enquiries were made concerning the role of government officials in alleviating local conflicts and contentions, Mr. AGS, an *ACI* and community member, remarked:

> The extension officer from the Department of Forestry usually comes here but doesn't do anything when disputes and conflicts occur, nothing, he only comes here to provide the people with information on how to select trees and logs that are old and dying, how to provide spacing between the mangroves, how to manage the fertility of the soil,to monitor the condition of the mangroves and to remind us of the statutes and mandates for mangrove conservation. That's all.

Mr. AGS also stated the following with regard to the working relation between extension officers and the *ACI* members:

> The *ACI* members do not have much contact and communication with the government officials who usually come here. It is the leaders and elites of *ACI* who do that... They do not do anything with us except give us knowledge on technical matters on how to plant and conserve the mangroves.

Mr. UKS, an extension officer from Sinjai's Forestry Department, stated the following ofhis tasks when in **TongkeTongke**:

> When I come around here to the village, I tell the people how to plant the mangroves, what to do with the seeds, how to make sure the seed lives to grow. Nowadays there are new findings with regard to these matters. We in the department know of these new findings, but the people in the village don't. Therefore it is our job to tell to the people the latest findings and methods.

The next day we decided to follow Mr. UKS around Sinjai from 8 am to 1 pm to observe him whilst on duty.His tasks can be categorized into the following groups.The first was to give letters and instructions from the Forestry Department to the villagers. This letter concerns site visits from the government, comparative studies held in **TongkeTongke**, and the land and forest rehabilitation or *GNRHL* program.The second was to broadcast information on how to nurture and conserve the mangroves (e.g. how to remove dead stumps and logs, how to differentiate between living and dying stumps, how to acquire the right mixture of sand and soil for a good soil composition, etc).The third was to lecture *ACI*'s elites on their duty to settle disputes convivially without having to resort to litigation measures and external interventions. The fourth (occurring outside the village of **TongkeTongke**) was to tally incoming boats with logs from Kalimantan and to ensure that these boats obtain the permits and taxes required by the Forestry Department and the tax office. Government officials and extension officers were reluctant to immerse themselves in conflict mediation and group reconciliation and/or in the internal affairs of *ACI* due to the unpopular response which such interventions may engender.

In summary, *ACI*members feel that they are not being represented in gov-

ernment programs and projects despite their membership in *ACI* and their prominent status.Those involved are the elites, namely the village officials, community leaders and deputy head of *ACI*. The government's *GNRHL* project for the collective management of **TongkeTongke's** mangroves 'fell short' of its aim since the mangrove cultivators already had power, property and influence prior to the regency government's interventions. Moreover, the mangrove cultivators are highly aware of the need to conserve and nurture the plots due to the rewards which flow from the mangroves. Hence, conservation values are safe since the cultivators, community members and government officials consider the mangroves a source of symbolic and material resources, and the various user groups all have a common objective, to protect and conserve the local mangroves. Although villagers and government officials interact in formal ways and the commitment to protect the mangroves is marked by regulatory measures, there are hidden and informal negotiations which play a great role in governing the local mangroves.

Bat hunting

With regard to the mangroves, multiple social constructions and multiple attachments to the mangroves underlie **TongkeTongke's** conservation efforts. These attachments go beyond utilitarianism and resource commoditization. Space can be created for multiple attachments to flourish; however, this space can also be deterred, undermined and curtailed due to power imbalance and complexity within the social and ecological landscapes. The example relating to **TongkeTongke's** battrade suggests how space can be curtailed due to the complexity of local bat commercialization practice involving merchants, bat hunters, local police officers and government officials from the village and regency's forestry department.

In the year 2001 bats were starting to thrive among the mangroves, and villagers were hunting them down by the thousands and selling them to North Sulawesi as food commodity through intermediaries. As the local people are Moslems, they cannot eat the bat themselves but can sell them to the North Sulawesi Christians. Bat intermediaries included merchants from the regency and the province, as well as extension officers from Sinjai's Forestry Department and law enforcement officials such as the local land and water police. In 2002 the bat incident occurred.Intermediaries all over Sinjai and South Sulawesi came to collect the bats that had been hunted in large numbers by villagers in **TongkeTongke**. There were disagreements and disputes among*ACI* members, villagers and government officials argued over the terms and conditions for bat hunting, over the Forestry Department's roles in protecting the interests of the members and the villagers, and over profit sharing from the sale of the bats.

The Regency's Forestry Department provided the *ACI* members with some consolation by issuing a statute declaring that the bats can only be hunted in certain months of the year with permits from the Regency's Forestry Department and the village head.Moreover, the Department also limited the number of intermediaries who were given the permit to sell **TongkeTongke's** bats.According to the village head and *ACI*'s deputy head, the Forestry Department ultimately granted everyone who sought permission a hunting permit regardless of season or origin. The village head and *ACI*'s deputy head also stated that everyone who sought permission to be an intermediary was granted a permit regardless of season or origin.As well, the village head and *ACI*'s deputy head also noted that the intermediaries had to pay a certain amount of money to the officials to acquire the permit and to share the profit with officials from Sinjai's Forestry Department to have continuous access to the bat trade.The bats were then hunted incessantly and they eventually disappeared. Villagers claimed that the bats migrated elsewhere to avoid being hunted.

According to officials from Sinjai's Forestry Department, the department had made an effort to minimize the number of legitimate hunters, poachers and intermediaries coming into the village. Nonetheless, increasing number of hunters and intermediaries came to the village and failed to heed the department's mandates. In addition, government officials also claimed that village officials and the *ACI*leaders refused to take action andto stopissuing hunting permits despite the government's resentment.In an interview with Mr. NWR, a government official from Sinjai's Forestry Department, he argued that the government was limiting access to the hunting ground, however, the village officials continued to issue permits and were incapable of handling the conflicts. According to the village officials it was the government officials who did not want to collaborate in resolving the over utilization of **TongkeTongke's** bats. In the midst of these

suspicions and mistrusts, the bat hunting permits became synonymous with efforts at profit accumulation and group monopolization. The permit and profit sharing systemrequired by the regency and village officials, when compounded over time and across the landscapes, plotted to destroy any opportunity for bat conservation. As well, this compounded the opportunity for resource commodification and commercialization.

By requiring permits and profit sharing from the bat trade, government and village officials encouraged a utilitarian attachment to the bats.Furthermore, by providing permits to hunters, officials prevented the wider community from engaging and identifying with the bats whilst simultaneously distancing them from the resource base.As a result hunters converged and aligned with the social construction promoted by the government and village officials. Moreover, as a result hunters also perceived the government and village officials as the primary agent with the power to decide over the use, governance and social construction of **TongkeTongke's** bats.

In an interview with the Samataring District head, Mr. ADNR, he stated that the need for bat hunting permit became so important to the point that there was no discretion over the welfare or long term management of the bat as a resource base. Mr. ADNR also mentioned the presence of a 'cultural crisis' (*krisis kepercayaan*) in Indonesia; this refers to the lack of trust from villagers towards the government. In our interviews there were no voices that spoke out for bat conservation and people were reluctant to revisit this event. Bat hunters became poachers depending on whom they bought the permit from and whether the permit acquired is considered legitimate. The bat hunters, who were mostly non *ACI* members, caused the *ACI* members to face an enigma. They both wanted the money from selling the bats, yetat the same time the *ACI* members also renounced the bat hunters who acquired permits from government agencies. In our interviews, the *ACI* leaders took authority by excluding some and allowing others, depending on the circumstances these leaders seen as proper to their personal interests.

The story above exposes the mistrust between all those engaged. The permit system overrode common sense and disconnected local management from the conservation of the bat itself. Other 'inhabitants' of the mangroves such as crabs and mollusks can easily be hunted but are only notably consumed within the village and the district. The bats were of much higher monetary value and not eaten by the locals. Yet, even though contentions and suspicions were rampant among the *ACI* members and the bat hunters, the motivation to protect and conserve the mangroves remained intact and was even solidified by the events which took place in the village.

The villagers' interests in **TongkeTongke's** coastal resources are wide-ranging and dynamic. Their interests are related as to how they perceive and socially construct the coastal resources at different moments in time. In the case of the mangroves, it was when symbolic and authoritative resources began flowing from the mangroves and its social constructions that the majority of the resource users were 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. Hence, on ground coastal resource governance practice suggests that boundaries exist, and as suggested by **Bourdieu**(1991: 91), "these boundaries are themselves stakes and would only cease being a stake should they be meaningless and functionless to other stakeholders".

4.6 Government approaches

Section 4.5is based on interviews conducted on eleven different occasions over a period of ten months. This section discusses the regency officials' response to questions relating to community development and sustainable coastal resource governance. The interviews suggested that concepts such as community empowerment, participative engagement, social inclusion and collective action shaped the policies, programs and projects promulgated by government departments. As well, these concepts also shaped the practice underlying sustainable natural resource governance.

Empoweringthe community's response

Officials perceive community members as identical and impoverished. According to officials, it is this nature which makes community members reluctant to participate in local governance and sustainable resource management.

Mr. MSYKR, an official from Sinjai's Marine and Fishery Resource Department, stated that "the people in the village are poor and they don't have enough to eat; if community members are hungry, they will think about getting money and food to fill their stomach and will not participate in local governance and sustainable management initiatives". According to officials, encouragg active participation in sustainable governance also requires economic empowerment and improved social welfare. The same official claimed that "introducing sustainable resource use to community members is extremely challenging due to their inability to fulfill basic funding needs". Mr. BDMN, another official from Sinjai's Marine and Fishery Resource Department stated that "unless we fulfill the community's basic needs and improve their welfare first, we cannot keep them interested in participating in sustainable development". A member of staff from Sinjai's Forestry Department, Mr. NWR, also noted:

> The people in the coastal communities are poor, and they will need to receive an ample amount of income and opportunities from local natural resources to improve their welfare, if we are going to get them interested in natural resource sustainability and conservation: what we want from the department is how to integrate the concept of sustainability and resource conservation with the concept of economic development and empowerment in the sense that the resources can also bring the most in terms of opportunities and income to the people in the village.

Hence, in order to attract local user communities to participate in sustainable governance initiatives, government officials perceive the need to stimulate income and improve social welfare through the commodification and commercialization of local coastal resources.

The interview questionson community empowerment (see Appendix Five) resulted in the themes discussed below. To stimulate income and improve social welfare, executives and officials stated the need to increasecommercial activities through innovative technologies. These commercial activities include aquaculture export and fishery production. The head of Sinjai's Marine and Fishery Resource Department, Mr. BDMN,stated the following with regard to the programs held by the department thus far:

> Concerning the programs implemented in **TongkeTongke**, the first was increasing the production and productivity of activities associated with fisheries. **TongkeTongke** is one of the villages which have aquaculture ponds, a coastal area which has a coast, and inhabited by a number of fishermen, thus the fishery program in **TongkeTongke** involved how to increase the production of fishery, whether it be the commercialization of aquaculture produce or the commercialization of fishery resources caught from the ocean through the cooperatives which operated there. Second, in the year 2004, we provided the village with a program involving the empowerment of coastal communities in the form of funding and loans for entrepreneurship. That is how the fishermen can buy the boats and equipment needed for fishing and also increase and improve the production of the fishing business there.

As Mr. BDMN indicated, the programs from Sinjai's Marine and Fishery Resource Department are predominantly geared towards the increased production of fishery commodities. The head of Sinjai's Marine and Fishery Resource Department further remarked:

> We're also trying to improve and increase the number of fishery exports in the village. A number of fishery commodities which have export quality is also expected to be cultivated and developed in **TongkeTongke**, including shrimp commodities and coral fish which have high economic value in the event empowering the coastal community. I think that the village receives a program from the regency and the province each year, and even the national fishery department has given the village a number of pieces of equipment such as the equipment for preparing smoked fish, with as much as 20 units for last year alone.

Hence, Sinjai's Marine and Fishery Resource Department is very much preoccupied with improving fishery technologies and increasing export commodities that government officials are constantly under pressure to demonstrate

successes from technological advancements and local empowerment initiatives.

As well, extension practice in the field of forestry has a dominant focus on technical knowledge transfer and the application of plant sciences. An official from Sinjai's Forestry Department, Mr. UKS, stated:

> Sinjai's Forestry Department has the latest information and technology on how to breed and cultivate mangroves, and it is very important that I teach this to the villagers since the villagers do not know these techniques and they need to be taught these techniques quickly enough so they can take good care of their mangroves.

We inquired about the knowledge and technology taught to local community members and the official above stated:

> Those, those techniques for plant breeding, on how to cut the stem, how to plant the stems, how to space the mangroves from one another, the soil required for planting, how to mix the soil, etc.

When asked, a sea *ponggawa* named Mr. MSTF,he stated that government officials came to the village to teach aquaculture farmers how to build dikes and canals for their ponds. Additionally, government officials also taught fishermen how to store their fish properly and improve hygiene in the storage and transportation processes. Another community member, Mr. AHMD, also mentioned that officials come to **TongkeTongke** on a regular basis to circulate information with regard to mangrove cultivation and conservation. Nevertheless, Mr. MSTF and Mr. AHMD also stated that in the past government officials only liaised with certain villagers and not others, thus fueling suspicions and mistrust among aquaculture farmers, fishermen and mangrove cultivators.

Some officials connectedempowerment with the disbursement of funds for community members. An officer from Sinjai's Department of Marine and Fishery Resources, Mr. MSYKR, stated that "in every village a number of fisherman groups are entitled to receive soft loans from government departments for

expanding their fishing and commercial activities". The head of the Regency's Marine and Fishery Resource Department, Mr. BDMN, stated:

> Our program functions to empower all of the population in **TongkeTongke**. The villagers are aided by the department through loans and funding for buying machines for boats, and they feel that they are experiencing improvement in their business, and they over there are actually providing services to the demands and needs of the community over there, and you can see just how many job opportunities have been opened.

When asked, a sea *ponggawa* named Mr. MSTMN remarked that although the loan was useful for purchasing fishing equipment, the loan did not provide the fishermen the flexibility to cope with nature's unpredictability. An example of this is when the *rompons* or fish house - which each costs Rp16, 000,000 or AUD $ 2,000.00 to make - was swept away by winds and waves after having only been used once, leaving the fishermen with debts and no equipment. Mr. MSTMN also remarked that government departments stopped providing loans to fishermen in **TongkeTongke** since installments by fishermen often came to a halt.

A *sawi* or laboring fishermen named Mr. RHMN stated that these loans were intended for the *ponggawas*. The *sawis* in **TongkeTongke**received installments from the *ponggawas*to support their livelihoods and even purchase their own boats. Mr. RHMN added that he is grateful to the *ponggawas* in **TongkeTongke** for aiding the *sawi* fishermen during harsh times. This shows that social institutions are present for protecting livelihoods and ensuring mutual benefit among community members. Hence, although class distinctions are present, there are also interactions and mutual reciprocity among the different classes.

When asked, community members stated that empowerment and development occur in the presence of grants, funding and loans from benefactors and external agents. Likewise, community members also stated that they occur through improved trade facilities (e.g. roads, electricity, market place, auction sites, ports, gasoline stations, etc) and increased opportunities for marketing local produce. When we were living in the villageourencounters with the mothers

and young women of **TongkeTongke** most often ended with requests to provide funding and capital for initiating commercial activities, jobs and incomes. Middle age and young fishermen explained the importance of loans, aid and funding in expanding their commercial activities. The village head and village officials (e.g. the head of the village planning board, the village secretary and the head of the village development unit) explained the importance of bringing business networks, market opportunities and jobs to the village. In addition, village officials stated the need for bringing aid into the village to construc-troads, ports, auction sites, fish markets, tourist facilities and gas stations in **TongkeTongke**. So intense is the apparent need for funding that village officials impose tax on community members for a range of activities and ownerships, including wedding celebrations and the ownership of small boats and non permanent bamboo houses.

The perceived need for benefactors was summed up by the Samataring district head, Mr. ADNR:

> The problem is that not only one, but many villagers believe that loans are gifts and that donations are the rightful property of their families. They feel that they do not have to repay these loans. Moreover, they feel that they deserve to have the loans without the repayments and installments since they consider themselves as the less fortunate who need to be aided by the more fortunate and they see the government as somebody who is supposed to be providing for them and protecting them. The loans are supposed to be used for improving their equipment for their commercial activities, but they are used to buy oil, chickens and goats instead.

This suggests that perception of developments adopted by external institutions resulted in inconsistent outcomes due to differences in sense making and reality constructions. Both government officials and community members required the projects and the funding, and retaining them within the locality (i.e. within the village and the regency) became a priority. Hence, although motives underlying the need for projects and funding were different, the practice of pursuing them between both government officials and community members was compounded and reinforced by common needs. The dependency between government officials and community members was therefore a two way street, and this can lead to the villagers aligning with the government's discourse for the need to promote empowerment through funding acquisition, infrastructure development projects and the commercialization of local coastal resources.

As well, to encourage empowerment and improve social welfare executives see the need to open business opportunities. Business opportunitiesare made possible through investments and technical education. Technical education is perceived important for promoting marketable skills and empowering local user communities. The head of the Regency's Marine and Fishery Resource department, Mr. BDMN, noted:

> We teach fishermen how to store the fish, how to transport the fish, how to increase their aquaculture yield and more importantly, how and where to market their product in Sinjai. In addition we also teach women how to make and market smoked fish and fish crackers. There are those who smoke fish, sell fish, collect fish, and they all make a living through that chain. The department is not involved in environmental matters directly, but involved in sustainable business opportunities there.

Due to the perceived urgency for promoting local economic development and improved social welfare, a large portion of the department's institutional resources are allocated for activities relating to fishery production, technological advancements and infrastructure development. A minute portion of the department's budget and institutional resources is allocated for environmental protection and natural resource conservation.The head of Sinjai's Marine and Fishery Resource Department, Mr. BDMN, stated:

> To empower community members we need to provide them with skills. They can use these skills to get a job or to open and manage their own business; whether it be managing small entrepreneurial activities or making fish crackers and smoked fish for women and preserving and marketing them for man.

According to officials, the approaches above, when aligned with current policies and programs for the sustainable governance of local coastal resources, would motivate resource users to conserve and sustainably manage these resources.Despite efforts at promoting grass root and bottom up intervention approaches, these approaches were nonetheless top down.

With regard to the smoked fish and fish cracker program, a housewife named Mrs. SD stated that their production stalled due to a lack of market within the locality, the monopolization of funding, capital and production by village elites, and a lack of motivation to sustain the effort. A fisherman, Mr. RHMN, stated that although officials from the Marine and Fishery Resource Department came to **TongkeTongke** to teach them how to store their fish and improve their aquaculture yield, fishermen have always marketed their catch through the local *ponggawas*. Furthermore, Mr. RHMN also stated that knowledge of how and where to market the fish is gained through experience and/or acquired through the local *ponggawas*, whereas government officials have not aided in marketing their catch and aquaculture produce.

This suggests that local social and political contexts are relegated to the background. Although the Indonesian civil service is made up of diverse individuals and some are aware of the plurality and complexity within community user groups, government officials seem to follow a culture of elitism and political correctness as that evident in the nation's official policies and culture. In addition, government officials are tied down by many factors such as the regional laws and mandates and the hierarchy and seniority within the bureaucracy.

Due to affiliations with the official's culture of elitism, some government officials perceive community members as passive and reactive. Hence, community empowerment and development is thus equated with the need to define targets, priorities and strategies for community members. When asked the roles of community members in coastal resource governance, the head of Sinjai's Marine and Fishery Resource Department stated that in today's bottom up era the community members' role is to voice their aspirations to executives and staffs within government departments, whereas the role of government officials is to incorporate the community's aspirations and synchronize them with regional policies and available budgets.

Collective governance and the community's response

Some officials believe consumer demand for coastal resources willlead to their depletion and degradation. Hence, government officials see the need for protecting 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. Consensus making is conducted by government and community representatives across the various levels of governance. According to Mr. BDMN, the head of Sinjai's Marine and Fishery Resource Department, government officials hold annual meetings with community members to incorporate local aspirations, promote participation and encourage sustainable development through collective action. These meetings are called *MUSRENBANG* or *Musyawarah Rencana Pembangunan*.

Mr. ADNR, the Samataring District head in Sinjai, stated that "in the case of **TongkeTongke's** bats, with no agreed upon regulations and with the villagers' knowing that they could sell them to North Sulawesi, they took all the bats, sold them, and now there's no bat left in **TongkeTongke**". Executives from Sinjai, including the head of the Regency's Planning Board, noted the need to enforce the regency'sagreed upon statuteswhich prohibit the logging of**TongkeTongke's** mangroves. In the absence of these statutes, some executives believe consumer demand for wood and aquaculture produce may stimulate the destruction of the mangroves. The vice head of Sinjai's Forestry Department, Mr. SRJDN, remarked:

> **TongkeTongke** has such beautiful mangroves which villagers planted on their own; it is necessary for community members and government officials to enforce the agreed upon statutes which prohibit the cutting of mangroves. Community members are poor and the minute there is a demand for aquaculture produce or wood they will cut their mangroves and convert it to ponds. It's a pity if that happens and we cannot allow that to happen.

In reality, even when there are demands for aquaculture produce and wood community members refuse to cut and clear their mangroves. The vice head of **TongkeTongke's** *ACI* mangrove organization, Mr. ZNDN, stated:

> When the Department of Marine and Fishery Resources held a program to build aquaculture ponds among the mangroves outside the green belt areas, many of the mangrove owners refused to collaborate because they fear the department and the former head of *ACI* were collaborating to take over and sell our mangroves. We do not want to sell or convert our mangroves to ponds. These are our mangroves and we want to keep them as a mangrove forest for our protection, safety and pride.

Hence, the good name of the village and the mangroves' function as buffer to tidal waves motivate community members to align with the collective good and protect the local mangroves.

The vice head of Sinjai's Forestry Department, Mr. SRJDN, correlated the sustainable governance of coastal resources with a number of indicators. The first is the conservation of coral reefs, mangroves and the coastal land through collective efforts. The second is the community members' observance of statutes and regulations that are collectively drafted by government departments, the house of representative and community members. The third is the presence of village institutions for creating and enforcing agreed upon statutes towards the sustainable use of local coastal resources. The vice head of Sinjai's Forestry Department, Mr. SRJDN, noted:

> What we are interested in achieving is that of sustaining an environmental group like that of the *ACI* mangrove organization in **TongkeTongke**. This is important for integrating the various groups and for creating agreed upon statutes for sustainable coastal resource management. Just like the mangrove statutes, if along with us the villagers make the rules and regulations of what is allowed and not allowed and how these rules should be monitored and enforced among themselves, they will then follow the rules and see that the rules are being carried out fairly among all of the community members. There has to be an integration of the various people involved, and together these people will have to formulate and enforce regulations for the sustainable use of the regency's coastal resources.

Mr. RSMN, the director of the Indonesian Self Growth Foundation, remarked:

> Government officials like making new statutes and laws while anticipating and incorporating things into them; if the villagers should revolt, government officials can easily state to them look it's in the law, we can't do anything about it, and thus the law functions to alleviate the government officials' burden of having to deal with these dissenters. To a certain extent, this protects government officials from having to expose themselves to risks and danger.

Various government departments in Sinjai (e.g. the Forestry Department, the Department of Marine and Fishery Resources and the Regency Planning Board) show great pride in **TongkeTongke's** mangroves and the statutes that are drafted to protect the mangroves. Government officials print and distribute brochures of the mangroves and their statutes to show their achievements to others abroad.

With regard to community members' participation in government policies, a community member named Mr. AHMD stated:

> Not all mangrove planters participated in making government regulations and programs for mangrove conservation. Usually only the village officials and those well known in the mangrove organization participate. We also have a lot of work to do here and we don't go to things like that. A lot of the times we don't even know that there are government officials who come here, to make new statutes or to socialize new programs relating to the mangroves and fishery resources.

Hence, when participating in government policies and programs villagers give support to the bits and pieces which pertain to their needs and interests whilst discarding others. Moreover, not all user groups can participate due to power imbalance and information gap.

Ecological awareness

According to the head of Sinjai's Regency Planning Board, Mr. SYMSQMR, awareness for protecting local coastal resources can arise through their commodification and commercialization.The commercialization of local coastal resources can take many forms, including promoting eco-tourism, processing and marketing local fish products, and selling locally made handicrafts. Hence, according to some officials, stimulating ecological awareness for protecting local coastal resources is grounded within the need to commodify and commercialize local coastal resources for improving social welfare. According to the head of Sinjai's Regency Planning Board, Mr. SYMSQMR, the mangroves' ability to attract funding from the international community stimulates awareness and motivation for their protection. The Samataring district head, Mr. ADNR, remarked:

Why do we, in the regency of Sinjai, just let our chance and our money pass us by? Why not manage the mangroves as an ecotourism destination, because Sinjai is included within South Sulawesi's most buddingtourism site. 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 eco-tourism site, so the mangroves can provide the villagers with income.

An official from the Regency's Forestry Department, Mr. SN, stated the need to transform **TongkeTongke's** mangroves into a bank from which villagers can obtain financial security:

> The important thing is how the government can motivate community members to terminate over utilization problems, to maintain the mangroves and to ensure that the villagers have a bank for their financial needs from the mangrove forest.

In promoting ecological awareness, the perceived need for attaching commercialized valueis evident through policies and programs which combine sustainable development initiatives and natural resource commodification efforts. The following remark made by the head of Sinjai's Marine and Fishery Resource Department, Mr. BDMN, demonstrates the above:

> The land which is permitted for selective cutting is 500 meter from the coast, and that was opened in 1993. That was a project involving our department and the forestry department and the community over there to encourage both mangrove conservation and economic development. The composition is 60% mangrove and 40% ponds. These ponds are expected to produce fish commodities which can be sold, actually the mangroves can also be used for economic purposes, the wood and sticks can be used as seeds which have a value and a price. The leaves also have values for feeding goats and livestock.

With sympathetic intentions, government officials strive 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.

The Samataring District head also acknowledged that commercializing local coastal resources can discourage ecological awareness and aggravate natural resource over-utilization. According to the Samataring District Head, Mr. ADNR, when coupled withaobsession for private profit, the presence of investors, commercial values and potential market demand for local coastal resources can discourage environmental sensibility and encourage resource over-utilization.According to the district head improved technology can also worsen coastal resource over-utilization. The district head stated that with better boats and fishing equipment Sinjai's fishermen can go further and catch more fish in less time. The district head also acknowledged that third parties can stimulate conflicts, destructive competition and resource over utilization.The following remark was made by the Samataring District head when asked to provide examples:

> For example, bats, the Department of Forestry has set quotas and guidelines for the capture of bats in the mangroves, and the bat is actually finished now, all dead, all gone. That's because there's a market for it already. It will also be like that with the mangroves, if somebody agrees to buy it, I think it will be like that. It will not be managed or cared for in a good way anymore, moreover if there is a demand for it to be in a certain way, they will produce it and turn it into a production process, moreover if

the technology is available they can do it very easily…we have to anticipate the intrusion of the market, because around here if we hear that there is a party who wants to come as an investor to buy this and to do that, usually third parties would quickly enter the scene and act to provoke the community whilst initiating conflicts and promoting the overuse of Sinjai's resources.

To ensure sustainable development, the Samataring District head suggested that the Regency needs "to have a set of bottom up, coherent and coordinated statutes that are supported by an effective enforcement scheme and a transparent legal process which treats all violators equally and puts no individual above the law".Hence, the head wants to regulate the various user groups, which may not be the best way to deal with constantly changing market forces and unknowns such as social and political instabilities.

As well, in simplifying ecological awareness the district head suggested that government departments provide funding for promoting the mangroves and developing the infrastructure within **TongkeTongke**. This, he argued, can provide income and better living conditions for the villagers:

There is the need to allocate budget and funding to the mangrove owners, the mangrove organization and the villagers in order to develop and promote their mangroves and receive income. There's also the need to allocate funding to develop local infrastructure, attract investors and encourage income earning activities through developing activities such as eco-tourism and the mangrove enclosed aquaculture ponds. This is done in order to anticipate if in the future there arises a market for the natural resources in the village, and this can influence the community and change their perceptions towards selling these resources. If given the funding and encouragement perhaps the community will think to themselves 'why would I want to sell these natural resources?', 'the government has provided me with subsidies to work these resources and use it to my advantage and well being'. Perhaps later on if an entrepreneur sees that in **TongkeTongke** there are lots of mangroves perhaps they will think that it is good for construction or production materials. And then there will be big fights blowing up over that if things like this happen. Therefore we need to avoid such struggles from happening by giving villagers the funding to develop and care for their mangroves.

This contradictory remark suggests that some officials are aware of the need to venture beyond utilitarianism in facilitating ecological awareness, delegation of responsibility and social unity. However, many officials seem to have trouble stepping out of the officially induced rationality and the seeming need for funding. The presence of funding does not necessarily prevent the emergence of social and ecological sensibilities. Contrary to being passive and powerless, both community members and government officials are weighing up the implications of government policies and programs in the face of complexity and change.

According to an official from Sinjai's Forestry Department, Mr. UKS, experiencing the implications of environmental destructions can stimulate the emergence of ecological awareness among community user groups. An example of this was the destructive fishing practice in **TongkeTongke's** Bone Bay which led to the loss of income and livelihood for inland fishermen surrounding the Bone Bay area.

Agovernment official from Sinjai's Forestry Department, Mr. NWR, encouraged the need to explore and support community members' potential as opposed to simply providing them with funds:

Nowadays, we know that the community is already intelligent and what we have to do is capture their potential, don't give out too much money, moreover if the money is not for the large part of the population. So we must explain that to the people. If in a meeting, we say sir, madam we cannot yet do such things because the limitations are this, and if we go ahead and do this, this is what will happen, if we do not do that, that is what will happen, there are things which we can do, but because of limitations, we will have to delay it first, thus we postponed it. We cannot have them thinking that everything is possible and that money is the answer to the whole thing.

Hence, government officials are diverse and aware of the need to introduce participative engagement through community perspectives and local cultural practices. To capture the community members' potential, there is a need to redefine the concept of sustainability and simplify the emergence of local social institutions. These social institutions can take many forms, including that of mutual engagement and social exchange, neighborly ties and mutual validation, and collective achievement and group identification. It is these institutions within the community which can enable initiatives for the sustainable and governance of local coastal resources. In Chapter Five we will revisit how sustainability is defined by the various user communities. We will also discuss the implications which these perceptions have in encouraging the ecologically benign culture.

Social inclusion

Social inclusion is considered vital in achieving sustainable development goals. Government officials suggest promoting socialinclusion by aligning and accumulating diverse needs and interests. Appendices Three and Four show how interests are collected in policy and program planning. With good will and benevolent intentions to facilitate social inclusion, the head of Sinjai's Marine and Fishery Resource Department, Mr. BDMN, stated the need to encourage *tudang sipulung* or consensus making:

> *Tudang sipulung* is one of the terms we adopt and uphold, *tudang* meaning sitting and *sipulung* means to come as one, thus *tudang sipulung* is coming together for a discussion and to talk about what the needs and ambitions are, what sorts of development are needed in a village and in a region, for example in **TongkeTongke**, the community in **TongkeTongke** discuss what is needed in order to build **TongkeTongke** together and to make the village a sustainable place to live in.

With regard to policy making, the head of Sinjai's Marine and Fishery Resource Department stated:

> Statutes and regulations are made by government officials and community members together in *tudang sipulung*, and the community members follow the regulations, of course they follow the regulations because these regulations are made together with the community. The community is actually aware that the mangroves have such an important function in environmental protection in the coastal areas. That is actually useful, because even if it was not prohibited, they are aware that they cannot carry out logging. However, the government did issue a mandate to anticipate things and the government put it in the form of a regional statute to promote commitment and a similar understanding that the mangroves should really be managed and protected within statutes and regulations.

An official from Sinjai's Forestry Department, Mr. NWR, stated "there is a need to develop a common vision and mission with community members when promoting participation and inclusion in government policies and programs". An executive from Sinjai's Forestry Department, Mr. SRJDN, remarked:

> Every year through technical coaching and consultation meetings we communicate our vision and mission, and we say that these are the limitations, like this and that. Thus these activities are the ones we prioritize, these activities we can't prioritize. This is done, so we can get agreements of vision on policies and programs. This is also done to gather aims from the bottom and to clarify the programs which will be held by the department in the upcoming year.

Hence, according to government officials social inclusion can be facilitated through the alignment and convergence of various perspectives. The social and ecological landscape is marked by multiple management regimes, whereas the complexity of local contexts cannot be made compliant to a certain form of natural resource governance.

With regard to the mangrove statute, the deputy head of **TongkeTongke's** *ACI* mangrove organization, Mr ZNDN, stated that the statute was circulated without prior consultation with the villagers. Moreover, Mr. ZNDN also stated

that the villagers cultivated and cared for the mangroves without external aid and support. Still according to Mr. ZNDN, after the mangroves had reached maturity and multiplied to a total of 500 ha, government officials converted them into a park without prior notice or consent from the villagers.

The government's compassionate intention to encourage social inclusion is summed up by the head of Sinjai's Marine and Fishery Resource Department, Mr. BDMN:

> In *tudang sipulung* we do things together,visibly and with a community presence. We do things together in order to assess the policies and programs being proposed are those that are really needed by the community. The function is to make the policies and programs that we formulate reflect the needs of the community. The government also conducts activities that are in accordance with the needs of the society, there is no more top-down, now there's the bottom up, or both top down and bottom up approaches. There is actually a planning from the bottom, and we synchronize them with the activities from the top, because the funding is from the top.

As suggested by Mr. BDMN's remark, in publicizing policies and facilitating social inclusion the various user groups are expected to assume certain roles and conduct certain tasks. Community leaders and representatives are expected to give input to government executives; the People's Representative Council, the regency head and the various government departments are expected to circulate statutes and allocate funding; the extension officers, the district heads and the law enforcement officials are expected to ensure social consistency in policy and program implementation; whereas community members are expected to adapt these policies and programs to local circumstances.Not only can this reinforce a single-dimensional perspective, this can also strengthen a top down and one way flow of governance from the 'governor' to the 'governed'. These perceptions underlie Indonesia's policy and official culture. I will discuss this further in Chapter Five.

Government officials circulated a number of statutes for the sustainable governance of local coastal resources. During the post-**Suharto** regional autonomy era these statutes were also drafted to generate income for local governments at the regency level. These statutes include Ministerial Decree No 44/2004(2004), Law No 31/2004(2004), Government Regulation No 58/2002(2002), and Government Regulation No 62/2002. Ministerial Decree No 44/2004 (2004)stipulates that all fishermen and aquaculture farmers are required to obtain fishing and trading permits from the Regency's Marine and Fishery Resource Department. Law No 31/2004 (2004)stipulates that fishing and trawling activities require licenses or *SIUPP*. Government Regulation No 58/2002(2002) stipulates the taxes and levies the Regency's Marine and Fishery Resource Department is entitled to receive from the sale of marine commodities, port utilization and land lease, whereas Government Regulation No 62/2002 (2002)stipulates the taxes and levies the department is entitled to receive from boats, vessels and fishing equipment that are in operation within the regencies. The following comment was made by Mr. ZNDN, the deputy head of **Tongke Tongke's***ACI*mangrove organization in relation to the statutes:

> There are big problems after statutes have been issued. In this case there is usually a diversion and a discrepancy between that of the policy makers' statute and the people's desires. When the government makes and issues regency level statutes, the problem is that a lot of the times the statute is not known or wanted by the community. There are levies that are drafted and required by the related institutions that are not desired or even discussed with the community members beforehand. An example is with the *SIUP* orthe letter of permit required for catching fish and for running a commercial fishery activity and the tariffs to government agencies over fishermen's catch. That is actually not coordinated with the society's readiness. Because, generally, as I see it, the regulation has to *be conducted* this way, but we must also realize how far the abilities of the individuals are, between this person and that person.

Mr. ZNDN's remark suggests the supposed presence of taxation without representation. This also suggests that officials prefer to cut to the chase and adopt the use of standards, statutes and tariffs when working with community user groups. Some officials perceive and define community members through

government policies, programs and statutes. This tendency is overwhelming due to the need for structure and tangible outcomes when working with the bureaucratic culture.

Nevertheless, government officials are also aware of the gaps which can emerge due to the complexities within the landscape, and follow up actions are often encouraged to prevent contentions and mistrusts. To some officials, including the executives from Sinjai's Forestry Department, social inclusion depends on the capacity to organize *ad hoc* meetings between officials and community members to resolve issues, promote solidarity, facilitate collaboration and reach consensus. Mr. ADNR, the Samataring district head in Sinjai, remarked that "if there is conflict, there will be a directive from the top, and the head of the district, the head of the village and the head of the hamlets will be called upon". This implies that some government officials are aware of the gap between policy and practice due to the complex nature of coastal resource use and allocation. Consequently, the government is comprised of many levels of practice, and many cultures operate under its banner.

As well, government officials are also aware that the good name of the village and the popularity of the mangroves can act as platforms for alignment and convergence among local officials and community user groups. 'Seminars' and 'comparative studies' (i.e. *studi banding*) are held in **TongkeTongke** as part of the development of tourism events conducted by Sinjai's officials. The purpose of these seminars and comparative studies are, among others, to show **TongkeTongke's** achievements to those from other parts of the country. These events are alleged important for encouraging social inclusion and political integration. The events, proceedings and information presented in these events are 'stage managed', whereby the function is more for displaying community achievements as opposed to that of exchanging knowledge. To Mr. AMRLH, the founder of Sinjai's local NGO, these seminars and comparative studies provide community members with a sense of pride and are "facilitated by Sinjai's government departments to show the region and the officials' achievements". Chambers refers to these kinds of shows as rural development tourism **(Thompson 1994)**.

In the eyes of government officials, inclusive governance requires the collective ownership of natural resources as opposed to their privatization. This collectivization encompasses many aspects of Indonesian policy. Government officials are promoting it as part of an amendment from **Soeharto's** centralized governance to the locally ingrained decision making during the post **Soeharto** era. Decentralization and collective ownership are adopted to promote inclusive governance and political integration. An official from the Regency's Forestry Department, Mr. NWR,noted:

There is the need to develop a sense of communal ownership among the villagers because we cannot have them see these resources as their private property in which they can do whatever they want with it, these resources are owned by all and therefore they will have to be managed by all equally.

Yet, at the same time the regency's rural department was encouraging land privatization and the acquisition of ownership certificates. Moreover, some extension officers from Sinjai's Local Economic Development Program (i.e. *PEMP - Program Pengembangan Ekonomi Masyarakat Pesisir*) advocated the importance of private management by stressing the need for boat and land ownership.

Promoting devolution

To encourage devolution of responsibility in natural resource governance government officials suggested initiating village level institutions. Moreover,government officials also encouraged wide-ranging representation in consensus making and policy planning. With regard to forming village level bodies, the vice head of Sinjai's Forestry Department, Mr. SRJDN,stated:

> The government's role is to guide the environmental conservation organizations within the village and the representatives within these organizations. Although we often aim such guidance at individuals with whom we come in contact, in meetings, a more effective way is through the group representatives and the leaders because these groups have been chosen, made and legitimized by the villagers themselves. We need to give the villagers their full rights to manage and promote the natural

resources so the natural resources can bring them opportunities and income while still retaining its conservation function. Only then, will the villagers abide by the rules, because it's they themselves who make these rules. The government should allow enough funding to help set up these organizations.

Mr. SRJDN's remark suggests a focus on bureaucratic institutions and formal decision making at the village level. Nonetheless, village level institutions are limited in scope and dimensions, and decisions by government officials at the regency level also have profound impacts on community lives within the village. Additionally, the social and ecological landscape is marked by contentions and struggles. Glamorizing village life and village institutions can undermine shifting alliances and the complexity of local politics.

As well, representation, whether by community leaders or government officials, may be tense due to process issues and mechanistic reasons. 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. **TongkeTongke's** community leaders, including *sea ponggawas* Mr. MSTMN, Mr. BMBNG and Mr. MSTF, mentioned that community participation in policy and program planning in sustainable coastal resource governance is very much limited. In addition, community leaders also mentioned that policy and program planning is marked by a top down and one way flow of information from representatives to the represented. These can deny community members the voice, the identity and the support. The deputy head of **TongkeTongke's** *ACI* mangrove organization, Mr. ZNDN, stated:

> It is too official for the community if we hold a meeting and say that it is a meeting. Often the community does not want to come if they are invited to a meeting. So, the point is how could the community be interested in coming and giving their ideas and hopes, and in order that the community understands what is expected by the government…that is why the community is half hearted in accepting the statutes, because there should be a meeting in their language with their thinking pattern. The language which is used in meetings with the community should be the local language, the language used and owned by the people.

Mr. ZNDN also stated that meetings with government officials are usually conducted in processions filled with protocol, obscure language and reverence towards the hierarchy within the bureaucracy. Community members prefer to refrain from these meetings because they feel dislocated from themselves and their everyday surroundings when attending them. Villagers avoid associating with the pomp and ceremony surrounding these meetings. As well, villagers in **TongkeTongke** speak a local dialect known as *Bugis Pesisiran*, whereas in meetings with government officials, communication is conducted using the nation's Indonesian language.

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 un-problematical 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 of this concerns the notice of property and commodity tax by **TongkeTongke's** village officials. Village officials tax community members for owning properties such as boats, bamboo huts, aquaculture ponds and livestock. Moreover, village officials also impose tax on community members for capturing and marketing local coastal commodities such as bats, fish, crabs and other marine organisms.During our stay in the village we were fortunate enough to attend **TongkeTongke's** biannual budget allocation meeting which comprised of village officials and community leaders. During the meeting, officials from the village planning board noted that community members choose to avoid paying taxes stipulated by the village government. They claimed that it was due to a lack of effort in informing people about the taxes. In the meeting village officials asserted the need to employ debt collectors for telling about and ensuring tax payments.

To encourage participation, inclusion and devolution of responsibility, the deputy head of **TongkeTongke's***ACI* mangrove organization, Mr. ZNDN, suggested the following:

> In this case, those that have a lot of emotional ties between departments are the executives. The executives should accumulate all the hopes, all the twists and turns first in order for it to be discussed together. Moreover, there should be a representative from the community to assess the plans and statutes that are made, and only after that are the plans and statutes allowed to be given to the *People's Representative Council* (*PRC*). Usually, afterwards the *PRC* also does not conduct assessments with the community. The problem is that the departments give the plans to the *PRC* with little or no knowledge from the community. While we know that the policies and programs are for the community. Therefore I now say that the *PRC* should answer to the people if they feel that they are representatives of the people.

Moreover, representatives from the PRC are perceived to affiliate with political parties and factions as opposed to associating with the people whom they came to represent. The representatives, according to Mr. ZNDN, are using their power base to maintain factional interests as opposed to representing the people.

During the mid 1980s the provincial government intimidated community members to relinquish their land for the construction of Sinjai's Kalamizu dam. Land reclamation was done with little or no compensation to local villagers. During the 1980s when **Suharto** was in power, little room was available for protests, and the construction of Kalamizu dam continued despite some member resentments. Subsequent to **Suharto's** downfall, protests against its construction resurfaced in East Sinjai, this time with local NGOs and the media demanding that provincial and regency government devolve community land to their rightful owners and provide community members with compensations. Mr. AMRLH, the founder of a local NGO in Sinjai, confirms the disappointments surrounding the dam:

> The *Kalamizu* dam is of no use to the villagers because the dam has always been broken and the villagers depend on the rainy season for watering their rice paddies. During the rainy season the broken dam leaks water all over, causing its surrounding areas to be inundated and causing flood downstream, whereas during the dry season farmers upstream divert the water from what's left within the dam to their fields thus causing conflicts with farmers downstream who do not receive water from the dam. Moreover, in the past government officials used force to take land away from the villagers to construct the dam and until now the government has not compensated the villagers.

In relation to the *Kalamizu* dam, the Samataring district head, Mr. ADNR, remarked:

> In the past the villagers gave the government the land for building the *Kalamizu* dam of their own free will because they understood and accepted the common need to have a dam, without compensation. The community does not have a problem with releasing the land for the dam construction, but nowadays you see NGOs, the press and all these people who want to cause havoc saying that the community has been deprived of compensation, etc, and when chaos sets in they blame it on the government, and these NGOs and press, after causing havoc, just go away if they see there's nothing else there for them.

The remarks above show the diverse perspectives found within the locality. The dam story indicates the tensions in local politics, and these tensions are historical, ongoing and always require negotiation. Local narratives are constructed within amultifaceted history, and these influence the actions and decisions of the various user groups.

4.7 Collective coastal resourcegovernance in summary

Based on their initiatives, community members **in TongkeTongke** successfully cultivated and conserved the village's mangroves, which today amounts to approximately 600 Ha. Unlike that of the bats, the success of **TongkeTongke's** mangrove governance lies in its capacity to engage user groups with the mangroves on an individual basis, thus facilitating an attachment to the mangroves

beyond commodification and commercialization. This attachment, when translated into practice, takes the form of kinship and neighborly ties, historical affiliations, community memberships, identity convergence and alignment of the imagination. This stimulates social mutual benefit and validation among the various groups in **TongkeTongke**. Villagers in **TongkeTongke** are highly aware of the need for recognizing which groups and individuals are entitled to receive for cultivating, managing and conserving the mangroves. This in turn leads to a web of complex interdependence among the various resource users. Subsequently, should community user groups be interested in retaining the material, symbolic and authoritative resources which stem from the mangroves, there is the need for groups and individuals to align with mangrove conservation interests. Government policies and programs for sustainable governance are marked by fragmentations and disconnections, and this can encourage local community initiatives to triumph.

In the discussion chapter field results are discussed with regard to **Hardin's***Tragedy of the Commons*. They are also used to analyze **Ostrom** and **Bookchin's** theories on devolution and sustainable governance whilst taking into account the contributions and limitations within the theories. On ground community dynamics, power relations and social institutions are used to discuss concepts found within the theories. These concepts include social capital, civic duty and the individual versus collaborative action framework. The discussion, based on observed findings from the field site, is used to inform theory and practice in the field of natural resource governance.

V

The Politics of Natural Resource Governance

5.1 Introduction

In this section, concepts underlying **Ostrom's** Common Pool Resource theory and **Bookchin's** theory of Eco-Anarchism are discussed in relation to the themes emerging from the findings in South Sulawesi, Indonesia. To do this effectively, the concepts are examined and evaluated in the light of the narratives from Chapter Four. This assessment is driven by the writings of **Etzioni** on the common good **(Etzioni 2004)** and also considers how social capital impacts and implicates collective natural resource governance.

As discussed in Chapter Four, there are undoubtedly complex power struggles with implications for natural resource commercialization both at government and local community levels. Identity construction, membership attachments, participative engagement and inclusive governance all emerge in the narratives in Chapter Four. In Chapter Five these are discussed to better understand the complexity associated with collective natural resource governance.

In line with **Ostrom's** Common Pool Resource Theory, Chapter Five argues that informal rules and social institutions play an important part in shaping social sensitivity and ecological sensibility. These shape the landscape for collective action and the sustainable governance of natural resources. Chapter Five also points out that **Ostrom** fails to take into account the power relations and the individual versus collective debate which characterize collective natural re-

source governance. In light of the above there is a need for contextualized governance whereby engagement and participation in natural resource protection emerge from localized settings. Political processes for civic participation and collective action require venturing beyond consensus making and the collective ownership of natural resources, whereas devolution of responsibility requires social inclusion through identity recognition and convergence in imagination. In direct opposition to **Bookchin**, the case of **TongkeTongke's** mangroves suggests that decentralization, localism and collective ownership do not necessarily engender the lateral equality and collaborative participation envisioned by Indonesian government officials; in **TongkeTongke** it was the private ownership of the mangrove plots and the resource users' unanticipated yet purposeful convergence in defining the mangroves which led to their protection and conservation. Although **Bookchin** deserves merit for acknowledging the roles of individuals in shaping collective natural resource governance, **Etzioni** pointed out that the dynamics in social capital and the complexity of social landscapes require us to acknowledge the importance of active struggles, passive resistance and strategic adaptations in shaping collaborative action for sustainable governance. **Agrawal** noted that historical engagements and community participations contribute to the making of environmental subjects, i.e. socially responsive and ecologically sensible individuals who contribute to the protection and sustainability of local natural resources. In short, Chapter Five argues that the dynamics of collective natural resource governance necessitate multi-dimensional approaches, multi-level brokering and an adaptive management capacity.

5.2 Thekey

Using their own initiative, community members in **TongkeTongke**, South Sulawesi cultivated and still conserve the village's mangroves, which today amount to approximately 600 Ha. The success of **TongkeTongke's** mangroves rests in its capacity to engage community members on an individual basis, assisting an attachment to the social and ecological landscape. This attachment motivates resource users in protecting the local mangroves and becomes a source of symbolic, political and material resources for both the cultivators and the various user groups within the village. In addition, the village, the land and the mangroves function to validate and differentiate both the cultivators and the various user groups within **TongkeTongke**. The swelling of resources and incentives emanating from the mangroves, the land and their social constructions catalyze a further attachment to the landscape whilst promoting the need to protect and conserve these local mangroves. This leads to the emergence of individuals who are highly aware of the recognition to which they and others are entitled for cultivating, managing and conserving the mangroves. This in turn leads to a web of complex social and political interdependence and mutual benefit among resource users. Hence, if groups and individuals are interested in retaining the symbolic and material incentives which flow from the mangroves, they will feel the need to collaborate and protect **TongkeTongke's** mangroves.

We began our enquiry into decision making and collective action in the light of **Hardin's** article *The Tragedy of the Commons*. A bleak portrayal of human nature, **Hardin's** article (1968) led me to investigate further and question cases in collective governance where environmental awareness emerged and the collective protection of natural resources flourished. **Ostrom's** theory (2007) on social institutions and collective rules provided the lead for understanding the emergence of collective natural resource protection. To a certain extent **Ostrom's** theory (2007) is proven in the fieldwork: decentralization led to the devolution of power and the emergence of local rules which, in turn, led to opportunities for local resource users to make consequential decisions about the natural resources upon which they depend. However, this also served to splinter community members and entrench both traditional and commercial elites as power brokers in the community. These measures have not given the majority of coastal resource user access to either strategic or structural decision making power. Moreover, social capital and participation in collective natural resource protection is dynamic, fragmented and multifaceted. Hence, there is the need to contextualize collective natural resource governance within its source of knowing.

Bookchin's work (1994) is brought in to provide another analytical prism to the inquiry. According to **Bookchin** (1994), civic participation in collective natural resource governance begins with the individual. **Bookchin** (1994) advocated for collective ownership, localism and egalitarianism in promoting the socially responsive and ecologically sensible individual. However, localism and

egalitarianism neither guarantee the lateral relationship one imagines nor do they warrant the emergence of publicexchange and community validation that are required for incorporating cultural sensitivity and environmental consciousness into people's thoughts and imaginations. Moreover, research findings suggest that private ownership of the mangroves can motivate resource users to protect and collectively manage the local resources.

Promoting social responsiveness and ecological sensibility requires venturing into complex landscapes and the space which disproportionate power relations impart for mobilization and change. This space, when instilled with social reciprocity and social validation which motivate the incorporation of cultural sensitivity and environmental sensibility into people's awareness and imagination, leads to the emergence of collective action and sustainability. As echoed by **Agrawal**(2008) and proven in the fieldwork, participation and engagement in governing the landscapes can promote reciprocity, validation and inclusion for the collective and sustainable governance of natural resources.

5.3 Re-thinking collective natural resource governance

Ostrom's defense of the commons and its collective governance is a consequence of **Hardin's** 1968 paper entitled *The Tragedy of the Commons*(**Hardin 1968**). As noted in Chapter Two, in *The Tragedy of the Commons* rational herdsmen are compelled to add more and more of their own animals because they receive the direct benefit from their own animals and bear only a share of the costs resulting from overgrazing. This leads to the inescapable butdispersed nature of overgrazing and displacement of responsibilities. Despite a trail of literature revisiting **Hardin's** despondency over human nature, **Ostrom** is confident that resource users can manage common resources if their lives depend on them. The case of **TongkeTongke's** mangroves suggests that the emergence of social institutions within local settings can promote reciprocity and stewardship among groups and individuals. This inspires an attachment to the social and ecological landscapes and encourages community members to actively participate in safeguarding the landscape through conservation measures.

With regard to Common Pool Resource (CPR) theory, **Singleton**(June 2000: 5) noted that "few people would disagree that focusing exclusively on particular design principles as recipes for sustainable CPR management or using them as a blueprint for success is at the very least problematic in practice". Although an important part of **Ostrom's** CPR theory, "institutional design principles are only one part of the story" **(Singleton June 2000: 5)**. The tendency of large organizations such as USAID "to transform any set of ideas into a simplistic and one size fits all formula which can be grafted onto projects, can result in a rather narrow and one-dimensional view of CPR situations based on a radically simplified model of human nature" **(SingletonJune2000:5)**. Moreover, this also leads to the simplistic and linear interpretation of the theory.

Ostrom's design principles are useful in explaining the nature of successful local institutions for governing the commons **(Singleton June 2000: 5 - 6)**:

> By and large, design principles describe what successful institutions, for some sorts of CPR, look like, although in some cases they have an independent effect by contributing to the maintenance of a successful process in which users can formulate rules also facilitates the gathering of information about the resource or about other users and encourages the formation of social trust and social capital, which in turn helps to ensure that the regime continues to function effectively.

In CPR literature it is acknowledged that "appropriators…face a variety of adoption and provision problems" **(Ostrom 1990: 46)**, and "when appropriators design at least some of their own rules, they can learn from experience to craft enforceable rather than unenforceable rules" **(Ostrom 1990: 46)**. The case study site in **TongkeTongke** suggested the presence of informal 'rules' and 'regulations' on how the mangroves are to be utilized, allocated and managed. These rules and regulations contributed to the endurance of **TongkeTongke's** mangrove conservation. Although they are always contested, with their implementation and viability deeply seated within local complexity and dynamics. The community members in **TongkeTongke** interpreted these rules through the informal institutions found within the village, and one's interpretations are influenced by complex and dynamic contextual settings.

In *The Tragedy of the Commons* Hardin argued that individuals will exploit the commons for their own benefit **(Hardin 1968: 12:4)**

> Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit – in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons.

Through her design principles and knowledge of the commons, Ostrom(2007) also acknowledged that the commons are not necessarily freely accessible and that local and often informal rules are present to maintain their benefits for the good of the community. With regard to TongkeTongke's mangroves, local rules come into play, ensuring that resource users honor commitments to protect the mangroves on behalf of the community. Through the elders and their leaders the community is determining access and making decisions about natural resource governance. As well, community members are doing this for both the common good and their own benefits. The mangroves' popularity and the good name of the village make even those that thought to benefit as individuals behave in line with a collaborative mentality. In *Understanding Knowledge as a Commons: from Theory to Practice*, Ostrom(2007: 11) noted that Hardin "was actually talking about open access rather than managed commons". To some extent Ostrom's ideas are proven in the case of the mangroves.

Nevertheless, it is important to note that Ostrom's "design principles themselves do not show how a group of people come to solve or fail to solve a particular set of problems related to a CPR or to explain why a group has the capacity to solve such problems" (Singleton June 2000: 6). Even when a community has the capacity to manage a conservation outcome they may still not do so. Singleton(June 2000: 6) noted that a group's collective capacity and its goals should be differentiated; even if a group has certain capacities, it will not necessarily adopt certain goals, such as conservation or the protection of public goods. An example of this is the demise of TongkeTongke's bat populations. Coupled with perplexing permit systems which overrode common sense and a utilitarian mentality which undermined local social institutions, community members would not adopt the goal of protecting TongkeTongke's bats. Hence, there is the need for a complex and contextualized description of social practice at ground level when we invoke expectations of collective common management. It is by contextualizing Ostrom's design principles within its emerging landscapes that the social and political dimensions found within real world phenomena are incorporated. These include the normative beliefs and attitudes of the various user groups, as well as the relations of power among the resource users. The case of TongkeTongke's mangroves suggests that the success of Ostrom's design principles rests in their contextualization within locally emerging social and political (i.e. as opposed to apolitical) settings. Although Ostrom's works (1990; 2000; 2003)provide a very persuasive and powerful denial of Hardin's *Tragedy of the Commons*, narratives relating to TongkeTongke's *ACI* mangrove organization and Sinjai's collective decision making processes suggest that when contextualized, despite having some success, governance structures can fragment communities and entrench both traditional and commercial elites as power brokers.

In examining and understanding **Ostrom's** design principles, what is significant is "the approach that is adopted in studying collective action" **(Kurian June 2000: 6)**. **Kurian**(June 2000: 7) noted that "in terms of approach the emphasis appears to be on the incentives that motivate individuals to act collectively in a collective action system". In the case of **TongkeTongke's** mangroves, symbolic and material incentives emerging from the social and ecological landscapes motivate resource users to act collectively in protecting the local mangroves. In *The Samaritan's Dilemma: The Political Economy of Development Aid* (2005), **Ostrom** noted that institutional incentives are at the center of development processes and these contribute to the development of discourse for increased social capacity and ecological sensibility. As predicted by **Ostrom**(Basurto 2005), in open access CPRs, appropriators find no incentives to invest in the sustainability of the resource. With regard to **TongkeTongke's** bats, the complex and perplexing permit system for bat hunting endowed by the many officials at various levels of governance opens the door to outsiders, leads to open access on an informal level and undermines local collaborative effort for its protection and sustainable extraction. On the other hand, **TongkeTongke's** mangroves suggest that clearly defined properties and boundaries, when supported by local 'institutions' that are instilled with active membership and social reciprocity, can lead

to collaborative action for protecting the local mangroves. As well, in the case of **TongkeTongke's** mangroves, the user communities' rights to participate and monitor the governance of local natural resources are not challenged by internal or external agents.

With regard to CPR theory, **Kurian** (June 2000: 6) noted that "the tendency to categorize collective action as robust or weak based on the design principles can also potentially overlook issues of customary resource use". **TongkeTongke's** mangroves suggest that informal social institutions play a great role in protecting customary mangrove governance within the village. **Kurian** (June 2000: 6) also mentioned that "using clearly defined boundaries or categories such as watershed or village can mask the complex intra-village and inter-hamlet credit, power and ethnic relations". In **TongkeTongke**, mutual validation and reciprocity among community members, government officials and donor agencies across the landscapes have aided in protecting the discourse surrounding mangrove conservation.

The narratives from **TongkeTongke** suggest that **Ostrom's** institutional analysis and development framework need to be contextualized within the complexity and dynamics of group action. They demonstrate that it is by interpolating and combining "theoretical rigor and empirical engagement" **(Kurian June 2000: 6)** that **Ostrom's** institutional analysis and development framework become useful and meaningful.By contextualizing **Hardin** and **Ostrom'stheories** within the complexity of local events, the narratives from **TongkeTongke** suggest that they can provide a greater understanding of why on ground natural resource governance differs from the expectations of theorists and planners. In addition, on ground situations such as those in **TongkeTongke** can only be adequately understood through a detailed ethnographic picture.

Moeliono (2006) argued that the conservation of natural resources by local government requires knowledge of the complications in collective action from the perspectives of local villagers and their leaders. **Moeliono** (2006: 3) remarked:

When an area becomes a protected area, the ways the local people have perceived the changing status of the land have resulted in environmental degradation. When common property of a community was made into a protected area, in effect it became open access. The community had no legal rights while the state was not present to protect the area against illegal acts…As well, the state and international agencies, which are accustomed to simple top to bottom approaches, has had to learn the actual meaning of participation. And the burden for conservation is still put on the local people.

Nonetheless, the protection of **TongkeTongke's** mangroves by the Regency government can precipitate its conservation and sustainable use by local user groups. This is because community members regard the story surrounding the mangroves as their history, property and identity. Hence, the narratives from **TongkeTongke** suggests that devolution of natural resource management through local governance structures may not overcome the history of how things are done in the village without more attention being paid to social institutions, social capacity and coherence.The narratives from **TongkeTongke's** mangroves also show that government officials need to re-examine the meaning of civic participation to encompass local perspectives and adaptive management capacity.

Ostrom's design principle is about defining the collective good **(Ostrom 1990; Ostrom 1995; Ostrom 2000)**, and the resource users' construction of the collective good is multiple and dynamic. **Ostrom's** design principles can maintain adaptive management capacity in governing local natural resources by considering this idea. In relation to the above, **Moeliono** remarked (2006: 3):

> Reaching a compromise isn't the best way to achieve conservation…The common belief that if we can raise the standards of living, local communities no longer need to exploit natural resources and these areas can be protected more efficiently. The more developed people are, the higher their needs. One should look beyond the site level and address problems at the appropriate levels both geographically and institutionally.

In promoting sustainable natural resource governance, the narratives from **TongkeTongke** suggest the need to look into the multi-dimensionality of the social and the cultural within localized settings. There is also a need to venture into the construction and governance of various natural resources across the geo-

graphical scales and understand how these interconnections promote or deter ecological sensibility. In governing local natural resources, "one should allow for a multiplicity of objectives, instruments, forms and development phases" **(Bavinck 2000: 2)**. The governance of **TongkeTongke's** mangroves and bat resources is shaped and transformed by complex and overlapping management regimes. Hence, as predicted by **Cinner**(2005: 1), local institutions "can range from relatively simple, communally owned marine areas from which outsiders are excluded to the complex and overlapping system of individual and family rights to space, species, gear and techniques to using the gear".

In direct opposition to Hardin, **Ostrom**(2001: 4) noted that understanding natural resource governance requires "multiple disciplines, multiple disciplinary languages and multiple levels of analysis". In *Commons in the New Millenium*, **Ostrom**(2003: 6) noted that resource users engage with one another across landscape boundaries and "seek external legal authorities to protect the institutions governing common pool resources". **Ostrom**(2003: 6) also stated that"external political processes determine how much support community user groups will receive from the national government in enforcing a self organized regime". Members of the *ACI* mangrove organization sought the regency government's aid in dismissing Mr. TYB from his position as head when he undermined the community's collective effort at protecting the discourse surrounding the mangroves. Hence, understanding local governance initiatives requires knowledge of how the various resource users negate and validate each other across the landscapes, as well as it requires multiple levels of analysis.

In the case of **TongkeTongke**, unpredictability and irresolvable disputes led to a need for embracing unique cases outside charted territories. In natural resource governance, contextualized improvisations are necessary since, as predicted by **Leeuwis**(1993), the rules of interpretations are always actively 'negotiated'. In **TongkeTongke** it is this active negotiation that is capable of promoting reflection, responsiveness and inclusive governance for mangrove conservation. This also promotes a novel space for altering the social configurations underlying mangrove governance. In *Governing the Commons*, **Ostrom**(1990) is supportive of creative and innovative responses to managing the commons for sustainable ecological outcomes. She believes in highly participatory processes and active democracy through negotiations and adaptive changes. This is shown

by **Ostrom's** fourth design principle which stipulates that within the collective choice arrangements "most individuals affected by the operational rules can participate in modifying the operational rules" **(Ostrom 1990: 90)**.However, narratives from **TongkeTongke** suggest that informal rules are rarely altered through involvements in local decision making alone; they are transformed through the new barriers and enablers, resulting from a history of resistance and adaptation.

Natural resource governance cannot be defined and practiced in terms of policy directives and bureaucratic contingencies alone. In the case of **TongkeTongke**, simple and romantic evocations of civil action and participatory processes by government departments lead to outcomes which cannot be predicted beforehand. In agreement with **Ostrom**, **TongkeTongke's** mangroves also suggest that "it is the match of institutions to the physical, biological and cultural environments in which they are located that will enable institutions and the resources to which they relate to survive into the 21st century" **(Ostrom 1994: 1)**. Nonetheless, barriers and enablers to change need to emerge from local studies and cannot emerge as a consequence of top down devolution alone. There is also no preparation of the locals for anticipating the complexity of power relations and differences in perspectives.

In response to unusual outcomes in governance and administration, "one may relegate them to the side while sabotaging the signals which produced them or respond to them by reflection, awareness and responsiveness" **(Schon 1987: 6)**. In the case of **TongkeTongke's** mangroves, the multifaceted and unpredictable nature of natural resource governance entails the adoption of *knowingin action* and *reflection in action*. *Knowing in action* refers to "the know how that is revealed in publicly observable intelligent actions such as that of the physical performance of riding a bike or the private operation of analyzing a balance sheet" **(Schon 1987: 25)**. Nevertheless, when the above are explicitly described, the descriptions are always in the form of individualized constructions. *Reflection in action* results as a consequence of the 'elements of surprise' whereby events, procedures and discourse fail to meet one's expectations **(Schon 1987: 26)**:

> A familiar routine produces an unexpected result; an error stubbornly resists correction, or although the usual actions

> produce the usual outcomes, we find something odd about them because, for some reason, we have begun to look at them in a new way.

Hence, collective action for the governance of natural resources is deeply rooted within the contingencies which emerged from the intended and unintended consequences of governing. Complex problems require complex solutions. It is the anticipation of risks, the development of complex responses, and the willingness to reflect and change which lead to devolution, social capability and inclusion in natural resource governance. Using the grazing commons as a metaphor for the problem of overpopulation, **Hardin** undermined the complex social fabric of everyday life which plays a great role in promoting reciprocity, order and coherence.

Although CPR theory acknowledges pluralism and change within the social and ecological landscapes, the theory is lacking when it comes to incorporating a person's constructive and destructive capacity in responding to complex inducements. **Ostrom**(1990) assumed that resource users would act for the common good; nevertheless, individuals cannot be expected to adhere to rules as **Ostrom** anticipated. CPR theory also needs to deal with non-conformists or 'bad behavior' **(Steins 1999)**. To promote sustainability and collective action, **Ostrom**(1990) suggested that officials and community members supply government institutions, resource users follow agreed upon rules and regulations, and appropriators monitor and sanction violators. In the face of complex conflicts and power relations, **Ostrom's** demand for the above does not necessarily lead to its supply **(Acheson 1994)**.

Natural resource management in modern Indonesia has been defined by the tension between the centralized policy strategy of the **Suharto** period and the intentional and reactive strategy of decentralization duringthe post-**Suharto** era. The aim of this strategy of decentralization was to encourage a much higher level of devolution and local participation in natural resource governance. As such, governmental structures have been created which allow a high degree of local decision making and flexibility if used democratically and consensually. Despite these structures, the narratives from **TongkeTongke** suggests that these governmental structures have not given the majority of natural resource users

access to strategic and structural decision making due to power imbalance and traditional power structure.

In natural resource governance the capacity to *knowand reflect* arises from grounding theory and practice within the specific context of human behavior and the embedded nature of localized meaning and purpose. It is this grounding which holds the greatest promise for providing community members with a voice and incorporating resource users in sustainable natural resource governance. These are practices which can strengthen and enable the management of common resources. In **TongkeTongke** the devolution of authority and responsibility for mangrove conservation succeeded since community engagement with the social constructions surrounding the mangroves stemmed from contextualized social and political settings and the various resource users align in co-constructing the informal rules for conserving the mangroves. In addition, participation in mangrove governance emerged from local initiatives. Everybody takes action to protect the mangroves, and there are clear social norms and rules about how to protect the mangroves even when the resource is privately owned and not communally owned by community user groups. Contrary to **Hardin's***Tragedy of the Commons*, this suggests that the mangroves are collectively managed, and this leads to opportunities for local resource users to make consequential decisions over the resource upon which they depend. Hence, to a certain extent **Ostrom's** theory is proven in the case study: when a collective management scheme is attached to local natural resources, resource users will be very careful in managing them. **TongkeTongke's** mangroves suggest that it is in this context that decisions will be socially workable and ecologically sustainable.

Towards a locally emerging natural resource governance

The case of South Sulawesi suggests that positivism informs Indonesia's community based natural resource governance and lies squarely with the country's policies and programs for sustainable coastal resource management **(Resosudarmo 2006)**. According to positivists, an apprehensible reality driven by immutable laws and mechanisms is assumed to exist. In positivism knowledge is acquired through the accretion of facts and the verification of cause and effect linkages **(Denzin 1998)**. Positivism requires inquiry processes that are

objective and inquirers who are conscious of the independence of theories and language used within the inquiry **(Denzin 1998)**.The objective nature of social inquiry is assured by the independence of hypothesis from the ways in which facts needed to test them are collected and generated **(Denzin 1998)**. In positivism these facts are immutable laws which govern the working of the social and natural world. One issue which besets the positivistic approach is its assumption over the possibility for defining facts and values **(Pels 2003)**. Another is the assumption over the objectivity of theories **(Fuchs 1992: 53)**:

> Theories are themselves value statements. Thus supposed facts are viewed not only through a theory window but through a value window as well. The value free posture of the received view is **[indeed]** compromised.

With regard to natural resource management, theory and practice for the sustainable governance of the commons is value laden and difficult to separate: it is by putting theory alongside practice that theory becomes informative and functional. In the social world theory is continuously being challenged by practice. In research, the act of theorizing can never be separated from the researchers' value preferences, sense making and perspectives. It is through location in their complex origins that theories function to inform and bridge the gaps between knowledge and action and policy and practice.

In *The Commitment to Theory,* **Bhaba**(1994) noted that objectifying theories not only leads to the further detachment from their sources of knowing, but also to the further affixation with the researchers' interests. Moreover, the objectification and seclusion of theories have led to their being "eternally insulated from the historical demands and tragedies of the wretched earth" **(Bhaba 1994: 19)**. According to **Bhaba**(1994: 19), this leads to the formation of dualistic forms of theories which force social observers to classify social constructions within labeled spaces whilst continuously comparing and rating them against each other:

> Must we always polarize in order to polemicize? ... Between what is represented as the larceny and distortion of European meta-theorizing and the radical, engaged, activist experience of Third World creativity, one can see the mirror image (albeit reversed in content and intention) of that historical nineteenth century polarity of Orient and Occident which, in the name of progress, unleashed the exclusionary imperialist ideologies of self and other.

TongkeTongke's mangrove governance suggests that it is by embedding natural resource governance within community dynamics and local contexts that multiple voices are heard and active participation is facilitated. **Cornwall**(1994) noted that the dislocation of social inquiries and natural resource governance from local contexts have led to distortions which condition outsiders to assume that community members are passive and devoid of initiatives. In **TongkeTongke**, despite competing timelines, community members give back to the social and ecological landscape by actively participating in structuring the social order and the social constructions underlying mangrove conservation. In **TongkeTongke** the good name of the village makes even those that expected to benefit as individuals behave collectively in protecting the local mangroves. Hence, to a certain extent **Ostrom** and **Bookchin's** theories are proven in the case of the mangroves: given the chance, resource users will opt for more sustainable methods of natural resource governance when their livelihoods depend on them. As well, these moderate initiatives emerge from group attachment to localized settings and governance mechanisms that are adapted to complex and dynamic landscapes.

In social research, positivism holds that the inquirer does not affect the proceeding of the social phenomena understudy and vice versa. Positivism assumes that the inquirer is capable of "standing behind a one way mirror objectively recording natural phenomena as they happen" **(Denzin 1998: 249)**. In adopting positivism as the underlying edifice to natural resource governance, the governor is assumed to be independent of the governed **(Harmon 1986)**. In implementing policies, programs and projects the governor is assumed to rely on immutable laws and mechanisms. Governance then takes place through a one way channel, namely from the governor to the governed **(Harmon 1986)**. Positivistic underpinning holds that the governor is capable of governing with-

out being entangled in the messy web of the social, psychological and political intricacies typifying human relations **(Harmon 1986)**. The case study in **TongkeTongke** shows that the 'governor' and the 'governed' engage with one another whilst mutually reconditioning the social and ecological landscape upon which they both depend. The case study in **TongkeTongke** also shows that collective action and social inclusion for mangrove conservation requires that intervention and governance be grounded within the complexity of political engagement and social reciprocity. In the context of mutual validation and reciprocity, there is the need for policy makers to be diplomats and negotiators. Narratives from **TongkeTongkealso** suggest that brokering is important for promoting devolution of rights and responsibilities and instilling participative engagement in natural resource governance. These promote adaptive management capacity whilst "lessening the tensions between benefits and costs of institutional arrangements at various levels" **(Ostrom 2003: 23)**.

In relation to the role of the state, the separation between state and society is highly improbable since the state and its governing bodies are shaped by the very individuals whose interests and stakes are anchored within the landscapes **(Giddens 1981)**. **Giddens**(1981: 212) remarked that the governor and the state "operate in a context of various capitalistic and public imperatives" while simultaneously "expressing mechanisms of class domination and instilling elements of morality and justice". In **TongkeTongke** government institutions operate under the capitalistic imperative to increase resource extraction for greater production and revenue whilst also operating under the public imperative to conserve local resources and ensure sustainable future use. Hence, perceptions over natural resource governance are dynamic and tailored to changing circumstances, whereas multiple management regimes converge and diverge within the context of change and complexity. The case of the mangroves suggests that these create ever changing barriers and enablers which motivate individuals to act in a way that benefits the overall good even when they are avowing individual rights. As suggested by **Ostrom**(2003), in **TongkeTongke's** mangroves the coexistence of private rights and public obligation is made possible by the minimization of transaction costs and disincentives associated with sustainable governance.

Governance, as underpinned by positivism, entails that prescribed procedures be followed and possible confounding social and psychological elements carefully controlled in order to minimize disturbances**(Cornwall 1994)**. Theascendancy of positivism as the underlying edifice to governance lies in the assumption of its capacity to ensure direct performance. When threats to acts of governing and productivity are recognized or even suspected, various stages are followed to reduce and eliminate it **(Harmon 1986)**. In **TongkeTongke** risks are all-pervading, prescribed procedures cannot always respond to the multidimensional realities within the landscape, and controlling mechanisms run the risk of engendering lack of participation. The dynamics surrounding **TongkeTongke's** mangrove management suggest that participative governance requires removing impediments to change as opposed to reducing and eliminating risks and threats. Natural resource governance needs to respond to changing demands. The positivistic underpinning to governance can easily be deterministic, shallow and prejudiced. The omnipresent risks and irreconcilable perspectives leads to the need for contextualizing governance and social inquiry within the source of knowing. Contextualization has many implications, including promoting discourse exchange and engagement, and catalyzing inclusion and reflection for both the 'governor' and the 'governed'. In *The Tragedy of the Commons*, **Ostrom**(2007) noted that **Hardin** undermined the communication which takes place among the various resource users. The narratives from **TongkeTongke** suggest that resource users not only communicate with one another, they do so within the context of mutual engagement and reciprocity and not in a cultural and political vacuum.

Schon(1987)advocated the adoption of the *reflective approach* when theorizing social inquiry since theory can never be dislocated from practice:

> In broad terms, a *reflective approach* acknowledges that, contrary to the idea that formal theorizing precedes action in a linear and deductive relationship, theory is typically implicit in a person's actions and may or may not be congruent with the theoretical assumptions the person believes themselves to be acting upon.

Research experience shows that relations of power and bureaucratic values are expressed through natural resource governance discourse. Although

positivist thinking underpins officials' perspective of governance and may limit the ability to be socially reflective and aware, further engagement with officials and community members show that officials believe the concept they espouse may not be congruent with their practice. The reflective approach reaffirms that social reality is the extent and ways in which the various individuals share an understanding of the situation (**Schon 1987**). The various resource users in **TongkeTongke**share a different understanding of the concept of collective action and common governance. The resource users' perception of collective action and common governance is dependent upon the dynamic patterns of power relations and resource exchange at the local level.

A reflection of this research suggests that it is by incorporating local pluralism and complexity that "the experiential and interconnected ways of knowing the world" becomes evident and participatory research practices materialize (**Schon 1987: 29**).Hence, while it is not the focus of this research to provide answers to the hugely complex issues of natural resource management in Indonesia, it is precisely this contextualized and detailed ethnographic picture which is needed to direct locally emerging initiatives and guide decision making in the future.

The political process

Promoting civic participation and collective action requires organization and institutionalization. The need to organize and institutionalize suggests the need for politics; but politics can never be expected to conform to the mandates set out within acts of governance and institutionalization (**Dyrberg 1997: 203**):

> The political is in the social as an ordering and organizing principle, which means that the social as the underlying framework of consensus cannot be prior to the political, or beneath it, enveloping it, restricting it or conditioning it.

A number of consequences follow from the account above. The social and political will always exceeds given regime structures since theycannot be reduced to the interests of the formal and legal institutions from which they arise (**Dyrberg 1997**). In **TongkeTongke** the resource users' perception and connection to the local mangroves are markedly different at different times. Resource users often disrupt and undermine the social constructions of the mangroves advocated by the existing regime due to perception among villagers that some management initiatives are illegitimate in nature. As well, a political power struggle does not allow for collective action to be "conceptualized in terms of the consensual decision making approach" (**Dyrberg 1997: 204**).

Community members in **TongkeTongke** contest the social constructions underlying the local mangroves while power inequality shapes what is achievable. As well, social and political processes "cannot be defended on procedural grounds alone since these grounds are themselves in need of being grounded in political values" (**Dyrberg 1997: 204**). In **TongkeTongke**, the unstated 'rules' for governing the mangroves are grounded not only within local politics at the village level but also within the political relations between donor agencies and government institutions at the national, provincial and regency levels. Parallel to**Ostrom's** remark in *Commons in the New Millenium* (2003), there is the need to develop an understanding of the kinds of social and structural relationships that need to be developed for participative engagement and reciprocity in sustainable governance to be surmounted.

In *The Means of Correct Training* **Foucault** (1999) argued that power and politics are not solely within the domain of the state. **Foucault** analyses power from the inside and below, "taking its point of departure fromthe infinitesimal mechanisms of power" (**Foucault 1999: 97**). In **TongkeTongke** power relations and power struggles are found within social and government institutions at various levels. These multiple sources of power add to the complexity in decision making. Hence, there is "the need to grasp how the overabundance of local politics and power coalesces into general onesand become embedded in various institutions through practice" (**Dyrberg 1997: 106**). For this reason we have described in detail in Chapter Four how governance practices are enabled or deterred in the case of **TongkeTongke's** mangroves. The ethnographic narratives from **TongkeTongke** suggest that the reality of on-ground mangrove governance can undermine democracy and equitable consensus. In addition, the case of **TongkeTongke** also suggests that local contests, competing timelines

and social dynamics all influence a person's perception of ecological goods and their instruments of governance.

In *The Circular Structure of Power: Politics, Identity and Community*, **Dyrberg** (1997) noted that political representation and political processes shape identity construction by bridging the structural disparity between individual and citizen, private and public, and state and society. As a result, power strategies may become embedded within informal institutional settings (**Dyrberg 1997**). The influence which institutional settings have on social relations among groups and individuals is then projected through "relations of representation and regulatory institutional network which cut across the state and civil society distinction" (**Dyrberg 1997: 192**). In **TongkeTongke** political processes and political representation contribute greatly in shaping and altering the social constructions surrounding the local mangroves. Through political processes, the social constructions of the mangroves and the landscapes are (re)configured into local institutions such as the *ACI* mangrove organization. These institutional settings in turn influence groups and individuals through the constraints and enablers they impose.

Dyrberg (1997: 192) noted that "the crystallization of political authority is made possible throughthe capacity to enforce social relations under the expression of representation". In **TongkeTongke** political authority is crystallized through relations of representation and the disciplinary institutional network. The region's social and ecological landscape is also marked by systematization of differences over "what is ethically acceptable and unacceptable" (**Dyrberg 1997: 206**). Over long time spans these differences may converge in distance (**Dyrberg 1997: 206**). According to **Dyrberg** (1997: 206), although "aggregation and integration mutually condition each other", they"should be seen in relation to this systematization of differences, which in a democracy is continuously negotiated".

In **TongkeTongke's** mangroves,collective action for its protection cannot be expected to sustain itself on the basis of the disciplinary institutional networkand/or adherence to common values alone. Identification and engagements are always marked by struggles and resistance as well as alignments and adaptations.As well, the consequences of the disciplinary institutional network are not as pervasive and profound as that imagined by proponents of critical theory

(Adorno 1982; Marcuse 1988; Horkheimer 2002). Conflicts and contentions among the cultivators suggest differences and negotiations, and this can open the space for promoting communicativeexchange, social capability and ecological responsiveness. Hence, in the absence of a contextualized ethnographic narrative there is an inadequacy of **Ostrom's** common pool theory to understand local contests.

Collective control and private ownership

The collective governance of natural resources is associated with the need for collective ownership and co-management (**Ostrom 1990**). The need for collective resource governance is based on the assumption that private interests are contradictory to collective needs (**Ostrom 1990**). **Ostrom's** CPR theory also suggests that collective governance can be facilitated through common ownership, consensus and joint decision making (**Ostrom 1990**).

The narratives from **TongkeTongke** suggest that private ownership of the mangroves is not contradictory with the need for protecting them. Private ownership of the mangroves is more associated with public obligations as opposed to private rights. The narratives from **TongkeTongke** suggest that mangrove ownership by local user groups leads 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. An example of this was when Sinjai's Marine and Fishery Resource Department collaborated with Mr. TYB to advocate the construction of aquaculture ponds within the mangroves. The villagers refused stating that Mr. TYB, the former head of *ACI*, was misusing his power, subverting the other *ACI* members, and undermining efforts at protecting the mangroves.**TongkeTongke's** mangroves suggest that social constructions, underlying property and user rights influence social and ecological responsiveness for natural resource protection. In *The Tragedy of the Commons* **Hardin** assumed there are only two choices to 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. However, the privatization of **TongkeTongke's** mangroves

can co-exist with social capability and public obligation for their protection and conservation. Noting **Hardin's** narrow categorization of natural resource management, **Ostrom** remarked that multiple management regimes are present and that **Hardin** undermined the presence of social institutions created through mutual engagements **(Ostrom 2007)**. However, what **Ostrom** failed 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 **TongkeTongke** mangrove owners are highly motivated to protect and conserve the mangroves due to the symbolic rewards (e.g. status, identity, political space) they receive from the private ownership and the collective management of the plots. **TongkeTongke's** mangroves also suggest that their private ownership and collective management lead to their association with non market resources such as that of family time, social life and eco-systems as opposed to their association with market commodities. With regard to **TongkeTongke's** bats, the baffling permit systems, the unregulated competition to catch and sell these resources among community and non community members and its 'open access' nature have all led to the bats' association with market commodities.

Rules and Regulations

The narratives from **TongkeTongke** suggest that **Ostrom's** CPR theory cast **Hardin** in a different light and is much more aligned with our experiences in the field. To some extent, **Ostrom's** ideas on decentralized governance and social capability are proven in the case study. Through decentralization, the commons can cease to be a free access; the commons can thus be governed by local and often informal 'rules' which can contribute to its sustainability.These rules,as pointed by **Ostrom**(1990), can lead to opportunities for local resource users to make consequential decisions over the resources upon which they depend. In direct opposition to **Hardin, Ostrom**(1990)suggested that these rules are useful as community members are very careful concerning their livelihoods, and, in this context, decisions will be socially workable and ecologically sustainable. The problem is that this approach rests upon the capacity of communities to reach a consensus untainted by local politics, commercial imperatives, cultural customs and traditional power structures. As well, voluntary action for protecting common resources can take many forms, including participation and non participation. Hence, **Ostrom** fails to take into account the power relationships within and between the small communities and government departments that we came in contact with. Scenarios emerge which cannot be explained by **Ostrom**.

In the light of the above, **Bookchin's**theory (1994)is brought in to provide another analytical prism from which to view the problem.**Bookchin's** eco-anarchism(1994) focuses on what happens when power is devolved to smaller communal units and examines how these units may come to see the environment in which they live as a communal resource that needs to be governed for the benefit of all. During fieldwork scenarios emerged which could not be explained by **Ostrom's** theory, that is, the individual versus collaborative action scheme and the complex interplay among individuals for achieving civic collaboration by way of individual acts.**Bookchin** (1994) suggests that individuals will act in a way that benefits the overall good even when they are acknowledging individual rights. **Bookchin's** libertarianism (1994) insinuates that individuals ultimately act for the common good because they evolve behaviors which commensurate with their responsibilities. **Bookchin** (1994)suggests that with decentralization and devolution, community members will develop an ecological awareness which will then lead to innovative power structures which are more locally sensitive and environmentally appropriate. Community members will do so because they will find that they have a greater sense of civic duty as individuals in the light of decentralization and devolution (1994).

To promote civic duty in natural resource governance, **Bookchin** (1994; Light 1998) advocated the formation of small communities which are more closely dependent on their local resources and less dependent on bureaucracy and heavy technology. This, he argues, will lead to more ethical ways of living within the Earth's capacity **(Bookchin 1994; Light 1998)**. In addition, **Bookchin** also advocates libertarian municipalism, a form of local government mandate which replaces the overarching State in managing local ecosystems **(Light 1998)**. **Bookchin's** anarchist state depends on individuals' taking responsibility to do the right thing and this is contrary to the ordered acceptance of the capitalist imperative to grow and consume regardless of the earth's carrying capacity **(Eckersley 1992; Light 1998)**. According to **Bookchin**, ecological awareness,

civic duty and participative engagement for natural resource protection are best facilitated through devolution, localism and the communes **(Eckersley 1992)**.

The governance of **TongkeTongke's** mangroves suggests that although decentralization may appear to remove the categorized structures that limit engagement and change, decentralization does not guarantee the quality of the cross relationships one imagines are the goal. Chapter Four discusses how the regency government seeks to create interfaces among community members and the decentralized arms of a system that will allow for roughly approximate power. However, the case of **TongkeTongke's** mangroves suggests that liaisons with government officials and decision making power remain centralized among the village elites. Nevertheless, drawing on experiences in creating social capacity for protecting public goods, the narratives from **TongkeTongke's** mangroves suggest that decentralized governance leads to reciprocity and civic duty for the conservation of the mangroves. Echoing **Bookchin's** argument, the case of the mangroves suggests that if resource users are operating in a system that rewards individuals for power expansion, bureaucratic advancement and capitalist growth, groups and individuals will respond to this incentive. If resource users are in an environment where reciprocity, civic duty and a shared purpose to protect the environment are present, the social and cultural institutions which emanate will reinforce the above values. Hence, the greatness for urgency in-undertaking social relations between individuals, and despite its limitations, **Bookchin's** Eco-Anarchism advocates a sustained effort for understanding individual relations within local communes, an endeavor much less advocated by otheritheorists.

Common ground between **Ostrom's** Common Pool Resource Theory and **Bookchin's** ideal lies more within the need to promote informal social and cultural institutions capable of engendering capacity for protecting local natural resources across and within communities. The governing structures and formal institutions discussed in these theories become secondary; neither state official nor community leader are capable of ensuring compliance through government institutions and localism alone. Hence, in this case, a more complex and contextualized understanding of **Ostrom** and **Bookchin's** concepts are needed. We note that **Agrawal's** work entitled *Technologies of Government and the Making of Environmental Subjects* provided a complex discussion of individual actions

with reference to collective arrangements while linking **Ostrom's** institutionalized collectivities and **Bookchin's** individual subjectivities through the concepts of identity, environmental subjects and environmental practice **(Agrawal 2008: 222)**:

> Environmental practice…is the key link between the regulatory rule that government is all about and imaginations that characterize particular subjects. In contrast, social identities such as gender and caste play only a small role in shaping beliefs about what one considers to be appropriate environmental actions. This is not surprising. After all, the politics of identity considers significant the external signs of belonging rather than the tissue of contingent practices that may cross categorical affiliations.

As suggested by **Agrawal**(2008), **TongkeTongke's** experience shows that participation in mangrove planting and conservation can provide the link between government regulations and the subjects' imaginations and motivate community members to comply with government regulations for mangrove protection. This suggests that decentralization, devolution and localism alone do not guarantee the social reciprocity and sense of belonging that are needed for stimulating environmental consciousness and natural resource protection.

TongkeTongke's experience suggests the probability for very organized forms of heightened capitalism through the institutionalization of resource commercialization, e.g. establishing parks for eco-tourism purposes and the enactment of tax for fish and export commodities.Moreover, government departments comparesocial and economic development with the institutionalization of joint decision making.Nevertheless, to resource users, local natural resources are also saturated with multiple social and political constructionswhich have resulted from a history of engagement and identification with the landscapes. A resource system produces a substantial variety of resources, and individuals are not solely tied to one type of resource within the system but engage with many different types of resources with each affiliation carrying its own weight and meaning **(Steins 1999)**. The construction of **TongkeTongke's** aquaculture

ponds contributes to community members' perceptions of the mangroves and their collective management. The social constructionsunderlying a particular resource orresource system carry multiple consequences and have interconnected implications which act as barriers and enablers for the protection of the various local natural resources. A limitation to **Bookchin's** Eco-Anarchism(1994) is that it influences the use of natural resources for a single purpose, namely the utilitarian and commercialization purpose.

The social and ecological landscape is both complex and diverse in nature. Grounded within diverse landscapes, resource users converge and diverge in producing and transforming the discourse underlying the local mangroves. Despite the need to incorporate privatization, market competition and resource maximization issues in natural resource governance, the social and political dimensions of resource users cannot be reduced to those demands alone. Resource users in **TongkeTongke** choose not to compete in commodifying the mangroves since there is a mutual gain for all over time. In the case of the mangroves, social reciprocity and its anticipated rewards are present to ensure the village mangroves are conserved and/or managed in a sustainable manner even when they are privately owned. In direct opposition to **Bookchin**, when contextualized within complex patterns of reciprocity and mutual validation, the private ownership of **TongkeTongke's** mangroves leads to their protection and sustainable governance.

A critical reflection of eco-anarchism leads us to investigate the representation of resource users. Eco-anarchists depict resource users as utility maximizing individuals who employ strategic and purposive rationality in directing their social and private lives **(Bookchin 1994)**. The presence of class and pecking order, when unsubstantiated by government institutions and reinforced by the capitalist's system ofrelations of production and consumption, are perceived to result ininequality, mass resource extraction and environmental degradation **(Bookchin 1994)**. Eco-anarchists advocate an anarchic and communitarian form of governance devoid of class and hierarchy. Eco-anarchists argue that self governance at the community level is the key to promoting egalitarianism, inclusion and voluntary cooperation for natural resource protection **(Bookchin 1994)**.

Eco-anarchists contradict their own assumption when arguing that in communitarian and anarchic forms of governance resource users change from their

previous existence and adopt a communicative form of reasoning marked by hospitality, mutuality and voluntarism. Reciprocity and voluntarism are not given properties of individuals within communitarian and radical forms of governance; they are developing propertieswhich are dynamicallyshaped by the multidimensionality and complexity within the social and ecological landscapes. **Steins** noted (1999: 6):

> Co-opted natural resource management is neither simply the pursuit of individual interests through voluntary cooperation nor is it merely the pursuit of a collective interest by individuals. It is a combination of the two, shaped differently in different circumstances.

This explains why the mangrove cultivators in **TongkeTongke** act in a way that benefits the overall good even when they are declaring individual rights. Different circumstances create different responses. Collective needs in **TongkeTongke** are translated differently by the various resource users. The urgency of voluntary cooperation to protect local resources is reliant upon individual constructions, competing timelines and complex landscapes. Resource users are social agents whoseinspiration and are influenced by their surrounding community of social practice. Customs and sentiments also play a role in shaping group dynamics, thus opening the possibility for collective action and social cohesion within contrasts and struggles. **Steins** noted (1999: 57):

> We do not consider human beings as mere organisms, but as social actors because they have material properties (e.g. fishing vessel, nets, oilskins), and a history of social relations (e.g. family, friendships, feuds, competition and authority relations), which they may have control over, but on which they equally depend.

The social constructions underlying the mangroves shape the constraints and enablers for participation in strategic decision making. Resource users control and equally depend on these constraints and enablers, whereas local contests and social reciprocity play a big role in their contingent restructuring. The

strength of **Bookchin's** theory lies in its human relations approach, whereas its limitation lies in its underestimation ofthe roles which diversity, power relations and structural differences have in shaping enduring sustainability.

Social agents are shaped by, and help shape the context in which they act. Moreover, participation and engagement are not spoken and motionless but growing and vibrant. Participative engagement is capable of promoting not only learning and reflection, but also responsiveness and change. The *ACI* members are protective of the dialogue underlying their mangrove conservation scheme and resisted Mr. TYB's leadership when he undermined their collective effort at protecting the mangroves. As well, the mangrove suggests that community members are acting collectively on private land for their protection. Hence, community responsiveness, participative engagement and social change all emerge from real world complexities as opposed to being the consequence of a political system. Clearly, promoting sustainable natural resource governance requires an understanding of the relations of domination and mutualism within local contexts **(Light 1998: 291)**:

The project, today, must be to analytically and practically understand the particular forms and general structures associated with contemporary enablement and constraint so as to produce ecologically and socially appropriate responses to social and ecological crises. The key to this process is to understand the graded mediations of exploitation and domination, mutualism and competition, and local democracy and national bureaucracy rather than to continue to generate polemics in favor of one-sided approaches to unproductive dualism.

A whole-hearted endorsement of eco-anarchism is as frozen an approach as an endorsement of capitalism's sustainable development rhetoric. Juxtaposing dualistic concepts such as mutualism and competition, local democracy and national bureaucracy, and hegemony and egalitarianism does not provide a greater understanding of the barriers and enablers to change which emerge from the ground. These theoretical directions, although especially powerful when used in conjunction with each other, only come into their own as analytical tools when contextualized within complex landscapes through ethnographic methodology.

Community members in Tongke Tongke compete in conserving the mangroves since efforts at conservation yield symbolic and political resources for validating and distinguishing both cultivators and community members within the village. The reality of Tongke Tongke's bat hunting also shows that the presence of competition for resource commodification, when underpinned by a non functional permit system that overrides and undermines local social and cultural institutions, can lead to the commercialization and over utilization of local coastal resources. Tongke Tongke's mangroves and bat resources suggest that competition for the commodification of local resources is set within a contextual setting influenced by socially constructed realities and configurations. The implications which market rationality and market competition have on groups and individuals are contingent upon the complex social and political practice found within the locality. The importance of **Bookchin's** eco-anarchism lies in its sustained proposition for the desirability of contextualized and grass-root democracy, as well as in its continuous emphasis on self-realization and voluntarism of community members living within complex local communes.

In *Which Way for the Ecology Movement*,**Bookchin**(1994: 28) noted:

> A decisive collision looms: On one side is the 'grow or die' economy lurching out of control. On the other, the fragile conditions necessary for the maintenance of advanced life-forms on this planet. This collision, in fact, confronts humanity itself with sharp alternatives: an ecological society structured around social ecology's ideal of a confederate, directly democratic, and ecologically oriented network of communities, or an authoritarian society in which humanity's interaction with the natural world will be structured around a command economics and politics.

Bookchin's sharp alternative undermines complexity, whereas his proclivity for the "confederate, directly democratic and ecologically oriented network of communities" is overly idealistic**(Bookchin 1994: 28)**. Narratives from **TongkeTongke** suggest that although participative engagement needs to emerge from local contexts to enable social capability and ecological responsiveness, the roles which command and obedience play in shaping order, consistency and a cooperative framework for sustainable natural resource governance cannot be undermined. As well, the privatization of **TongkeTongke's** mangroves does not necessarily lead to the restriction of collective action for their protection. The

case of **TongkeTongke** suggests that promoting a "confederate, directly democratic and ecologically oriented network of communities" **(Bookchin 1994: 28)** isvulnerable to commercial necessities and local politics. Moreover, the motivation to protect local natural resources is shaped more by the social constructions underlying competition, power relations and collective natural resource governance.

5.4 Community participation

Bookchin's theory of eco-anarchism reflects many of the concepts found within the participatory politics of sustainable development. The participatory politics of sustainable development treats the local as communal entities whosekinship ties and acts of voluntarism contribute to the supply of social institutions **(Mohan 2000)**:

> The locals, who are considered poor and disadvantaged, are set against an unspecified elite whose only defining feature is their non poorness, with the former group operating through effective ties of kinship, ethnic group, communalism, etc, and the latter utilizing the modern methods of state channels.

Stokke(2000: 248) also noted that "practitioners of participatory research and development practice assume that local knowledge will reverse the effects of previously damaging interventions". **TongkeTongke's** mangroves suggest that local knowledge isgrounded within the dynamic contentions and struggles found within the landscape. Hence, local knowledge is fluid and easily susceptible to disruptions and interventions.

In the case of the mangroves, the 'endurance' of local knowledge lies in the patterns of engagement among user groups and in the social constructions underlying the mangroves. It is through a personalized form of affiliation with the social and ecological landscape that *ACI* members and villagers retain a commonality on the subject of collective interest and are motivated to protect the discourse underlying mangrove conservation even when certain actors (e.g. Mr. TYB) are perceived to undermine their 'collective' interests.Hence, contrary to **Bookchin's** ideal, localism on its own does not necessarily promote social and ecological sensibilities. Nonetheless, as substantiated by **Bookchin**, the case of the mangroves suggests that promoting community commitment and social inclusion in sustainable natural resource governance requires devolution and "the need to closely examine the premises of one's views, and the ways they could potentially unfold" **(Bookchin 1994: 8)**.

A central issue in collective governance lies in the view that natural resource management is conducted by groups of people who act together in pursuit of common goals **(Ostrom 1990)**. Moreover, the introduction of government encouragedorganizations with clearly defined aims and democratic decision making arrangements are assumed to engender accountability **(Nuijten 2005)**. In addition, there is an assumption that when power holders with formal responsibilities can be effectively controlled decision making can remain with the majority **(Nuijten 2005)**. The case study site suggests that collective action for natural resourcegovernance is not about enforced consensus and homogeneity but rather about individuals who collaborate and resist in achieving the collective good through self organization. Moreover, "the existence of multiple force fields show that power relations are diversified and that, for example, the relations of peasants to the state cannot be reduced to a general vertical model"**(Nuijten 2005: 87)**. **Nuijten**(2005: 90)also noted:

The different force fields and modes of socio-political ordering have consequences for the resulting forms of governance, power relations and space for action for the different parties involved. In some force fields people have much room for maneuver and are in a relatively powerful position vis-à-vis others in relation to certain resources, while in others they have little individual influence.

The narratives from **TongkeTongke** suggest that what is politically thinkable is shaped by the collective process. However, in **TongkeTongke** there are historical contexts which shape relations of reciprocity and create expectations around natural resource governance practice, including what resource users can accept as legitimate new practice.

Efforts at promoting participation and social inclusion for the sustainable governance of local coastal resources require further examination of the

weights and implications which social and political networks have on groups and individuals. **Nuijten**(2005) noted the need to understand how laws and procedures, formal organizational structures, and the interplay of their various discourse shape the landscape for sustainable natural resource governance. As well, the telling and re-telling of stories and discourse are ways of reordering the world and are central to the organizing, mobilizing and empowering processes that are needed for change and development **(Eckersley 1992)**. In the case of **TongkeTongke's** mangroves, the continuous reflection by human agents of their discourse and story telling around different forms of organizing can promote a new social space for participative engagement, social inclusion and the sustainable governance of natural resources.

Social capital

Collective action for the protection of natural resources is conceived by government officials as the aggregation and integration of individual interests articulated through common values (USAID 2004). The development of social capital is perceived as the key to facilitating common values and collective action (USAID 2004). Social capital is defined here as a "network of strong and cross-cutting personal relationships developed over time that provides the basis for trust, cooperation and collaboration in communities" **(Lesser 2001: 121)**. As pointed out by Mr. SRJDN, an executive from Sinjai's Forestry Department, the narratives below illustrate the need to institutionalize social capital:

> What we're interested in seeing is how the different interests within the community can be united as one to simultaneously promote economic development, social equity and sustainable coastal resource use. The community here is known to possess a common cultural value that can be used for uniting them in building the village and managing the natural resources. This is an asset and capital which the community here has. We see that when the road needs to be built the villagers come to the site to build the road together, we see that the *ponggawas* and the fishermen work together for one another and trust each other, we see that the villagers' distant relatives from all over the village and Sinjai would come together should there be family gatherings and important family events. These are the things which the *Bugis* have and can be used to strengthen the bonds between community members and unite them as one for building the village and conserving the natural resources for public needs.

The perception that social capital aids common values and collective action warrants further inquiry. As the actualization of interests require venturing into politics and power relations, the emergence of social capital could not have taken place in the absence of contentions and struggles. Moreover, there is the need to venture into "the good, the bad and the ugly in social capital" **(Lesser 2001: 217)**to understand the complexity associated with motivation, participation and collective action.

To promote participation and collective action, a mechanism for integrating diverse perspectives and interests can be used, such as through 'development' meetings or *MUSRENBANG*.Moreover, integration can be facilitated through mutual engagement and social reciprocityand by inspiring interests and decisions into political agendas.Consequently, the gap between what was acceptable and what was unacceptable gradually diminished, simplifying integration and social cohesion among the diverse resource users.Yet, differences remain omnipresent, and these could not be amassed through principles of mono-dimensionality, commonality and linearity. These are typified by the diverse perspectives underlying community based mangrove governance. Government officials define community based mangrove governance as a set of policies, programs and projects geared towards the economically viable production of commodities and the region's economic development and recognition. The head of the *ACI* mangrove organization defines it as community initiatives which require protection, direction and development by community organizations. The mangrove cultivators who refuse to join *ACI*define it as action for protecting the land and the identity and history of the residents who shape the land. Whereas the villagers who do not cultivate and own mangroves define it as effort at protecting the village from wave encroachment and an effort at promoting village development through national and regional exposures. These differences in perspective can-

not be reduced to the linearity found within the nation's government structure, development meetings (*MUSRENBANG*), and procedures for promoting inclusive policies and programs (i.e. see Appendix One, Three and Four).

Understanding local dynamics in natural resource governance means acknowledging and appreciatingsocial capital's downside. In *Knowledge and Social Capital: Foundations and Applications*,**Lesser**(2001)considered solidarity a form of social capitalism**Lesser**(2001) also noted that solidarity can result in excessive claims and excessive identification with certain focal groups. Some decisions result in the fragmentation of the broader whole due to excessive identification with certain central groups and collusion against broader aggregate interests. This is exemplified by the *ACI* elites' decision to include some of its members in the seed trade whilst excluding others. However, **TongkeTongke's** mangroves suggest that in the presence of social institutions user groups are rewarded with identity recognition and symbolic resources. It is these rewards which motivate resource users to align with local mangrove conservationalists. In the long term groups and individuals will act for the best if they see and acknowledge the importance of their actions.

In the face of social dynamics, the narratives from **TongkeTongke** suggest **Bookchin's** ideal on civic duty and collaborative governance is dependent upon complex network of trust and reciprocity which resonates across groups and individuals. This network can stimulate groups and individuals to give back to the social and natural environment through effort at conservation and sustainable governance. **In Bookchin's** eco-anarchism the establishment of local collectives is perceived to promote trust, reciprocity and civic duty due to the geniality which local communes are perceived to embody. Still, local communes are also rife with contentions and struggles. Moreover, the sustainable governance of natural resources within a certain community cannot reverberate to other nearby communities through policy measures and monetary incentives alone. Building on **Bookchin's** ideal, in promoting sustainable natural resource governance the project should be that of introducinga network of trust, reciprocity and identity validation across time and space. In the case of **TongkeTongke's** mangroves, this can alter the social constructions underlying local natural resources and promote joint action for resource protection. This extends beyond promoting localism and hospitality to incorporating the concept of the responsible individual who gives back to the social and natural environment.

Collective powers

Bookchin's eco-anarchismfocuses on what happens when power is devolved to smaller communal units. **Bookchin's** libertarianism implies that in communal units individuals ultimately act for the common good. Similar to **Bookchin**, **Ostrom** is also stating that, given the chance, resource users will opt for more impartial and sustainable methods of natural resource governance when decisions are in their hands and their livelihoods depend on them.However, real power relationships in actual resource management contexts may undermine the possibility of democratic and equitable decision making as that envisioned by **Bookchin** and **Ostrom**. **Etzioni's** work is used to bring this further to light by providing ananalysis of the power structure involved at the various levels. As well, **Etzioni's** work on power and power relations is incorporated into this thesis to provide a better understanding of the nature of power and its consequences on collective action and natural resource protection **(Etzioni 1968: 328)**.

Power is defined here as "the capacity to introduce [and/or inhibit] change in the face of resistance" **(Etzioni 1968: 670)**. Power can be classified into 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)**. Although coercive power may result when threatening assets are used, the sophisticated nature of the social and ecological landscape lends itself to heterogeneity and co-existence. Also, government and law enforcement officials are not standardized, and community members interact with officials at an informal level within the village. Consequently, critical engagement in natural resource governance comes down to individual decisions and actions. According to **Etzioni**(1968: 331), persuasive power is exercised "through the manipulations of symbols, such as appeals to the values and sentiments of the citizens". Persuasive power is exercised "in order to mobilize support and penalize those who deviate by excommunicating them" **(Etzioni 1968: 331)**. Consequently,

persuasive power rests in the social ties which bind the members of a unit to each other **(Etzioni 1968)**.With regard to natural resource governance, the narratives from **TongkeTongke** suggest that these various sources of power influence groups and individuals in a great variety of ways. They also alter the barriers and enablers for collaborative action and collective natural resource protection. Hence, these barriers and enablers are always vulnerable to negotiations and changes, leading to the potential of reflection and social and ecological sensibilities to emerge.

As suggested by **Etzioni**(1968: 336), the narratives from **TongkeTongke's** mangrove governance show 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)**. This entails a conflict between two leaders, one of which mobilized the persuasive power of the community members within the unit **(Etzioni 1968: 336)**. In **TongkeTongke** contentions between leaders with normative and persuasive power surface when those who seek to mobilize an un-mobilized group are confronted by "the apathy institutionalized in social bonds" **(Etzioni 1968: 337)**. Both **Bookchin** and **Ostrom** suggested that decentralization and devolution leads to a high degree of local decision making and flexibility, although**TongkeTongke's** experience suggests that local contests can undermine the possibility of democratic and equitable consensus making, and this has largely been the reason behind communities not acting in the way described by **Ostrom** and **Bookchin**.

Inherent within eco-anarchism is the assumption that power has expansive, limitless and all-encompassing influence **(Bookchin 1994)**. As well, eco-anarchists perceive power and influence synonymous and interchangeable **(Bookchin 1994)**. Nonetheless, these two terms should be distinguished from each other. As suggested by **Etzioni**(1968: 346), the narratives from **TongkeTongke** suggest that "an application of power influences and changes the actor's situation, but not the consciousness over an individual's preferences". Systematization of differences among user groups is universal, and in the case of **TongkeTongke**, disconnections and limitations in the application of power leads to the creation of space for the contingent restructuring of the social and ecological landscape. In addition, although power inequality may exacerbate the competition to extract natural resources and stimulate the drive to maximize private gains, such competition and stimulation result more from the complex social relations and patterns of reciprocity among resource users than from power disparity itself. Competition and decision making power in natural resource use and allocation are neither unrestricted in scope nor still in nature.

Power is related to authority and legitimacy **(Etzioni 1968)**. Just as power and influence are not inter-changeable, power and authority differ considerably **(Etzioni 1968: 353)**. Authority is defined as legitimate power, or"power that is used in accord with the subject's values and under conditions viewed as proper" **(Etzioni 1968: 353)**. The narratives from **TongkeTongke** suggest that although power and authority can influence community members, they are incapable of regimenting and amassingpreferences through force and the disciplinary institutional network alone. Community members will always be conscious of how power influences and alters group and individual preferences. Therefore, the eco-anarchist's assumption in which power and authority within capitalistic relations lead to expansive homogenization, domination and unfettered competition for natural resource extraction **(Bookchin 1994)** is not proven in the fieldwork. Moreover, narratives from **TongkeTongke** suggest that the urgency for protecting the discourse surrounding the mangroves leads to contentions, power struggles and a sustained effort for questioning local power and authority.

TongkeTongke suggests 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)**. Hence, the various forms of power tend to neutralize each other **(Etzioni 1968)**. As well, multi-dimensionality and the various forms of power exacerbate multiplicity in decision making. **TongkeTongke's** mangroves suggest that "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 **TongkeTongke**, due to the neutralization effect some of the power may be lost. This contributes to the contingent emergence and dissipation of multiple management regimes in local natural resource governance landscapes.

Moreover, "power is always relative to the authority which supplies its justification and legitimacy across time and space" **(Etzioni 1968: 355)**. As with *Haji* ALMDN, the wealthy *ponggawa* chosen as *ACI's* leader, the enactment of

power and authorityis anticipated and welcomed for (re)structuring the political agenda, mobilizing the masses and creating a new social space for community members to voice their concerns. Nevertheless, in the absence of devolution of responsibility, the devolution of power to local communities and their leaders may lead to nested relations of power. This can entrench both traditional and commercial elites as power brokers, fragment communities and aggravate the competition to extract local natural resources as in the case of **TongkeTongke's** bats. Therefore, there exists a continuous tension to implement and discard hierarchy and power.

In **TongkeTongke**, the use of power by community members, along with the need to involve higher level authority, is associated withtiming, perceived urgency and the pace of change. **Etzioni**(1968: 364) suggested 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 present lack of initiatives from the *ACI* mangrove organization leaders, narratives from **TongkeTongke** suggest that engagements and 'negotiations' between the various members contribute to a dynamic and ongoing protection of **TongkeTongke's** mangroves.

In **TongkeTongke's** mangrovesthe dynamic interplay between resistance and adaptation among community user groups facilitate the path for reflection and increased responsiveness. As well, through the appreciation and internalization of constraint and enabler groups and individuals reflect on their decisions and actions and becomeconscious of the need to protect the local mangroves. This also encourages groups and individuals to promote reciprocity and commitment to safeguarding local natural resources. Hence, the institutionalization of commitment depends on reflection as when the *ACI* members recognize and validate each others' existence and labor for protecting the mangroves and its social constructions.

Narratives from **TongkeTongke** suggest that social capability and ecological sensibility are shaped by the multiple sources of power found within local contexts and the constraints and enablersthey engender for various groups and individuals. The path to achieving participation for natural resource protection requires venturing beyond anarchism and communalism and into the complexity of power relations among user groups.

Micro-structure and locality

Bookchin's theory of eco-anarchism recognizes the importance of individuals and communities in paving the path towards an environmentally benign culture (**Eckersley 1992**). It prioritizes local autonomy and democracy and advocates for human scale institutions. Eco-anarchism "incorporates the consequences of face to face human interactions while acknowledging that top down approaches are out of touch with allegiance" (**Eckersley 1992: 268**). **TongkeTongke's** mangroves suggest that bottom up approaches also require scrutiny. To date theories on the collective governance of natural resources have focused solely on enforced collectivities as opposed to incorporating the emerging consequences of face to face individual interactions.

Bookchin's focus on local community emphasizes the need for an alternative development scheme which focuses on the roles of individuals, households and communities. These social components impart different forms of power capable of contingently restructuring the social and ecological landscape. In furthering the pursuit of life and livelihood, mangrove cultivators, households and communities in **TongkeTongkearray** three different forms of power: social, political and psychological power (**Friedmann 1992**). Social power is concerned with access to information, knowledge and skills, participation in social organizations and financial resources (**Friedmann 1992**). Political power concerns access to processes by which decisions, particularly those that affect one's own future, are made (**Friedmann 1992**). Political power include the power of voice and collective associations, namely that of aligning or merging with other voices to form political alliances (**Friedmann 1992**). Psychological power is best described as an individual's sense of potency (**Friedmann 1992**); where present, psychological empowerment is demonstrated in self confident behavior (Friedmann 1992). The case of **TongkeTongke** suggests that the juxtaposition of these different forms of power by the various user groups generates constraints and enablers which in turn influence the emergence of social responsiveness and ecological sensibility at the local level. Findings from **TongkeTongke**

suggest that it is the human interactions within the village and community level which hold a great promise for promoting ecological sensibility, participation and inclusion in sustainable natural resource governance.

It is important to note that empowerment and development questions cannot be reduced to the structures of household, community and locality. Issues of scale across regional, national and international levels require knowledge and understanding of intricate social, political and ecological relations. Demarcation and seclusion will potentially lead to romantic ideals and inapprehensible sterility (**Harvey 1996**). To understand social and ecological relations within one locality requires an understanding of the historical events within other localities (**Harvey 1996**); likewise, facilitating responsiveness, participation and engagement within a certain aspects of the landscape requires events within other dimensions to function as catalysts.

Hence, devolution of authority and responsibility to the local level cannot function in isolation. The very act of local management calls into question how the local will be defined in the light of governance and issues across the jurisdictions. In the case of **TongkeTongke's** mangroves, this reciprocal interplay of micro-practice and regional structure, each producing largely unintended consequences for the other, as **Hoy**(1986)suggests, leads to the emergence of **TongkeTongke's**explanatory 'model' for improved sustainability in the governance of its mangrove resources. Nonetheless, this does not account for how the resource users will manage to integrate others in the protection of natural resources across the dominions. **Bookchin** saw eco-anarchism in its ideal form as doing away with the need for the nation state; however, **Harvey** pointed that eco-syndicates would still have to organize and 'substitute' the role of the state in organizing sustainable natural resource governance across jurisdictions. In **TongkeTongke**, mangrove cultivators belonging to the *ACI*organization, government agents who act as negotiators, and arbitrators from the Indonesian Self Growth Foundation or *YTMI* all act as eco-syndicates which organize sustainable natural resource governance across the landscapes. These individuals play an important role in enabling local governance structure and promoting the resourceful relationships envisioned within Indonesia's policy for devolution, participation and inclusive natural resource governance.

Individuals in complex landscapes

TongkeTongke's mangroves suggest that the social and ecological landscape comprises of many actors intertwined through the "convergence and divergence" **(Boxelaar 2004)** of groups and individuals. Different individuals shape and exert pressure on the discourse surrounding the mangroves. Hence, knowledge of the social and natural environment can never be separated from an understanding of the individuals and their discourse and roles in restructuringthe landscape. By contextualizing individuals and embedding treatise within their local environment, a number of implications arise for policy makers and extension agents. At the outset, the individual's predicament and response to the environment will become apparent. A focus on the rooted nature of individuals promotes an understanding of individuals as socially proficient, jointly active and culturally dynamic agents capable of influencing and being influenced by the social and ecological landscape. Moreover, focusing on individuals within the landscape is the path to accommodating the multiple voices found within the community.

Nevertheless, democracy and participatory processes for the sustainable governance of natural resources require both the individuals and the collective; they are the different faces of the same coin and they purposively come together and move away in enabling collective natural resource management. Collective action in natural resource governance is less about enforced agreement and equality. It is more about individuals who join forces and resist in constructing, maintaining and altering the idea of collective action and natural resource protection. In promoting adaptive management capacity it is important for policy makers and extension agents to incorporate group and individual dynamics. The roles of government and extension agents need to extend beyond that of policy planning and the regulatory framework and into that of support, negotiation and mediation among groups and individuals. The strength of **Ostrom's** common pool resource theory lies in its advocacy for social flexibility and adaptive management capacity grounded within local contexts.

TongkeTongke's mangroves suggest that individuals self-organize themselves into higher levels of development. Moreover, groups and individuals alsounite themselves instilling order and social cohesion. The role of policy

makers, extension officers and community members is that of removing impediments to change and facilitating change by recognizing diversity and untapped potentials **(Harmon 1986)**. **TongkeTongke** suggests that efforts at protecting the mangroves emerge from the fluid, subtle and multi-dimensional relations among individuals. Moreover, the boundary for natural resource governance is not static, fixed and easily determined, but rather dispersed, lively and reliant upon the complexity of human relations among individuals.

The narratives from **TongkeTongke** suggest that the leadership of the various cultivators are recognized and respected. Consequently, there is a mutual act of leadership validation among the mangrove cultivators. Even though Mr. TYB, the former *ACI* leader, wass ousted by the other *ACI* members, when government officials visiedt **TongkeTongke**, the *ACI* members recognized his contributions and (past) leadership, and encouraged him to take centre stage and liaise with government officials. This mutual act of leadership validation among individuals acts as a platform for alignment and conjunction and promotes a thoughtful capacity for incorporating social and ecological obligation in mangrove protection. As well, Mr. TYB's willingness to abdicate suggests individual dignity and a heightened capacity to be socially responsive and ecologically responsible. In the case of **TongkeTongke's** mangroves, this capacity for self realization, when coupled with mutual validation among various community user groups, leads to power structures which are more locally sensitive and environmentally appropriate. Mr. ZNDN, the vice head of *ACI*, stated that "all of the people in the village know the importance of the mangroves and we all respect and appreciate what the mangrove cultivators have done for the village; because of this the cultivators and the villagers all help in conserving the mangroves".

In **TongkeTongke**the governance of the local mangroves leads to successful private and collective outcomes.Moreover, the regency government's effort to conserve the mangroves and its social constructions provides a sense of existence and recognition for the various user groups, and this facilitates engagement and empowerment for protecting the resource. Resource users make individual choices on when and how to engage with the natural resources and their social constructions. Participative governance and democracy at the local level requires adopting diversity, as in the resource users' varied response to the de-

volution of coastal resource governance in Sinjai, South Sulawesi. Community members do not have to act uniformly; since they are living in the same landscape and experience a 'common' destiny, they are changing the landscape to suit their needs and anxieties.

Although the need for individuals to be a collective can be serendipitous, this need can equally be purposeful, as in **TongkeTongke's** mangrove protection and conservation. The complex interplay between individuals and the collective is much more stressed in **Bookchin's** works than it is in **Ostrom's**. Although **Bookchin** and **Ostrom** both noted that "human beings are subject to highly changeable social institutions, relationships, cultural traditions, ideologies, and technologies" **(Bookchin 1994: 7)**, **Bookchin's** "spontaneous development" and "logic of differentiation" **(Light 1998: 6 - 7)** points much more forcefully to the need for stimulating individuals to behave differently in the light of social and ecological needs.

Promoting social responsiveness

TongkeTongke's mangroves suggest that the emergence of social responsiveness and ecological sensibility is associated with self-reflection, social - psychological empowerment and participative engagement. In **TongkeTongke** the path to promoting social responsiveness and ecological sensibility begins with the creation of social space.This involves the production of new space within the possible spatial order of human existence and consciousness**(Soja 1989)**. **TongkeTongke's** mangroves suggest that the marginalization and alienation of some *ACI* members led to the rise of insurgence for recognition and validation, as well as the creation of social space.This occurs through thepropagation of competing discourse.Through identity and dialogue struggles,multiple stories flourish; the symbolic and political constructions underlying the mangroves negotiated; new restrictions and enablers incorporated; and the social order contingently restructured. In eco-anarchism **Bookchin** leaves open the question of which determinate social practice best serves his political vision. Narratives from **TongkeTongke** suggest that the dynamics surrounding its mangrove governance can serve as the trajectory to achieving **Bookchin's** vision.

In**TongkeTongke**groups and individuals continuously challengethe social

structures surrounding the mangroves. Attempts at challenging these social constructions are rewarded with symbolic capital. In **TongkeTongke** this reward becomes closely connected to self identity and imagination. This sense of identity and imagination becomes a source of motivation for protecting the local mangroves. The governance of **TongkeTongke's** mangroves suggests both the stubbornness and flexibility of the social constructions surrounding local mangrove management. Its suppleness refers to the individual's ability to harvest and care for the mangroves at different levels to withstand different intentions over time, whereas its stubbornness refers to the commitment to protect and conserve the mangroves.

Social and ecological awareness are important for preventing the disconnection of community members from their social and political surroundings. To be aware means to be critical of the social and political relations shaping social constructions and the social order **(Honneth 1999)**. In the case of **TongkeTongke**, being aware also entails being accustomed to complexity. In **TongkeTongke** individuals who are aware and responsive to social and ecological issues understand the need to give back to the social and natural environment which provides them with symbolic rewards, identity and recognition. This promotesengagement and attachment to one's social and naturalsurroundings beyond commodification and commercialization. This also leads to complexity and a heightened sensibility for protecting the local mangroves.

Once established and maintained, the complexity of reciprocity and social practice becomes difficult for government officials and stakeholders from outside the community to infiltrate. This occurs because disturbance to certain elements within the landscape causes the enlistment of the various community members. This enlistment is an effort atprotecting the discourse surrounding the mangroves and this creates a strictly dependent platform for aligning and converging with the user community.

Similarly, when running projects with the mangrove cultivators, government officials find it easier to provide funding than to overtake *ACI*'sorganizational structure. By the same token, they can still 'count' the village as part of the project and vice versa because the *ACI* elites are organizing the project for them. This creates problems internally for the villagers but only indirectly for government officials. An example of this was the *GNRHL* or the national land and forest rehabilitation program held by Sinjai's Forestry Department in **TongkeTongke**. This program led to suspicion and mistrust among the *ACI* members.

5.5 Devolution of authority

In **Ostrom's** CPR theory devolution in natural resource governance is achieved through participation, inclusion and integrated natural resource management **(Ostrom 1990)**. **Ostrom's** common pool resource theory (1990)supportedthe involvement of government institutions within and across the different scales; a wide ranging representation of the various groups in joint decision making; agreement building based on equal opportunity and transparency; and the integration of planning and sustainable natural resource extraction.The narratives from **TongkeTongke** suggest that while there is talk of a more complete social and ecological position, the reality is that sustainability and natural resource protection is defined in a utilitarian approach by government officials and donor agencies.

The notion of participation found within **Ostrom's** common pool resource theory is relatively simple. Participation in **TongkeTongke's** mangrove governance is associated with active membership for the advent of a new social space and the protection of local natural resources. The endurance of **TongkeTongke's** mangrove conservation scheme is attributed to participation that is closely tied to engagement and individual identity of whose historical links extend beyond commodification and commercialization. In **TongkeTongke** this has promoted the rise of groups and individuals who are passionate about conserving the mangroves and its social constructions.

Mainstream models of developmentbased on the classic notion of participation have been challenged for failing to address the question of sustainability **(Batterbury 2003)**. This failure is compounded by the non-humanist model of development and participation that tends to prevail as sustainable development **(Light 1998)**. The non-humanist model develops self-reliance through full participation in a system that perpetuates economic and utilitarian dependence **(Light 1998)**.

The case of **TongkeTongke** suggests that policy makers and extension

agents associate devolution and participation with wide ranging representation and consensual decision making. Ideally, in promoting agreement resource users assemble and discuss the facts of the situation, their logical implications, the available policy alternatives, and then choose the most empirically suitable and logical one. The narratives which emerge from **TongkeTongke** suggest that contentions are ever-present, and often 'resolutions' are driven by passive resistance and local struggles. Nonetheless, as pointed by **Etzioni** (2004), these narratives also suggest that discrepancies and contradictions can cause individuals to engage in moral dialogues and align in protecting the commons through "shared public focal points". In *The Common Good*, **Etzioni** (2004) stated:

> Whole societies, even if their population counts in the hundreds of millions, do engage in moral dialogues that lead to changes in widely shared values. The process occurs by linking millions of local conversations into society wide networks and shared public focal points.

Bookchin's eco-anarchism deserves merit for acknowledging the roles played by ecological awareness in shaping innovative power structures, although he does not specify in his works how that can come about. In the case of **TongkeTongke**, community members hold moral dialogues, for example when leaders such as Mr. T undermine others' identity and labor in protecting the mangroves. These moral dialogues lead to changes in widely shared values and changes in the social constructions underlying the mangroves and the land surrounding **TongkeTongke**.

The case study in **TongkeTongke** suggests too that devolution in natural resource governance requires critical reflection and political participation for removing impediments to change. The narratives from **TongkeTongke** suggest that devolution of authority and responsibility cannot take place in the absence of critical reflection, political participation, and the commitment to undergo personal changes in the light of complex contextual settings. These are required to change social constructions, decision making and the social order.

Both **Ostrom** and **Bookchin** argue for decentralization and devolution in natural resource governance. Contrary to **Bookchin (Light 1998)**, research findings suggest that devolution cannot be facilitated through the formation of local communes alone; devolution also requires looking closely into patterns of exchange within and across local communes. In the case of the mangroves, devolution of authority and responsibility is made possible through participative engagement, tradeoff and mutual validation among community members across the social and ecological landscapes. This promotes a greater sense of civic duty and ensures that both rights and responsibilities are maintained. As pointed by **Ostrom** (2003), the costs of excluding resource users suggest a need to incorporate contextualized natural resource governance across boundaries and landscapes. Although these theoretical directions speculated by **Ostrom** and **Bookchin** are especially powerful when used in conjunction with each other, they only come into their own as analytical tools when used with an ethnographic methodology.

Mobilization and change

Mobilization is defined as "the process by which individuals and groups gain considerably in the control of symbolic, political and utilitarian assets it previously did not possess for the expansion of social spaces" **(Etzioni 1968: 476)**. **Etzioni** (1968) noted that mobilization can be either coercive (e.g. when feudal lords turn their armies over to the control of the king), utilitarian (e.g. when a state raises the levels of taxation) or normative (e.g. when loyalties to the nation are increased, while those to local communities decline). In protecting the discourse surrounding **TongkeTongke's** mangroves, as predicted by **Etzioni**(1968: 305), mobilization processes "take off for a short time, loose momentum, and are extinguished after a period of heightened activities".

In Tongke**Tongke**, mobilizations are affected by internal constraints, including the social and political structure found within the locality. Similar to resistance, mobilization is that of a spectrum and can be temporary or prolonged. In **TongkeTongke** mobilization depends on cultural practices, relations of power and alignment of competing timelines. Moreover, mobilization is disjointed and delicate. As predicted by **Etzioni**, the narratives from **TongkeTongke** suggest that "mobilization uses whatever option the structure allows for changing it, whereas changing the structure expands the space and options for further

mobilizations" (1968: 310). In **TongkeTongke** change is sporadic, diffused and incremental.

After having mobilized the *ACI* members remain committed and active in securing and safeguarding the local mangroves. Moreover, as the situation changes to allow for more social and political involvements, it is as **Etzioni**(1968: 311) predicted, "the collectivity becomes more in line with its socio-political context, and future mobilizations become less difficult". In the light of locally induced contradictions and struggles, "the actor's capacity to mobilize and be mobilized is determined by external factors to a lesser extent than is often assumed" **(Etzioni 1968: 312)**. As predicted by **Ostrom**(2007), the narratives from **TongkeTongke** suggest that knowledge of the structure of the situation, the opportunities which individuals face, and the costs associated with diverse actions all contribute to the capacity to mobilize and be mobilized.

Inclusion through community of communities

Narratives from **TongkeTongke** suggest that the sustainable governance of the local mangroves require devolution, inclusion and participative engagement. These are important for negotiating and shaping the discourse surrounding mangrove protection. Discourse struggles also have a direct implication on the creation of space for devolution and social inclusion. Unexplored by both **Bookchin** and **Ostrom**, **Etzioni's** concept of municipal communities is incorporated to provide a greater understanding on enabling devolution and social inclusion**(Etzioni 2004)**. "The model of a community of communities points to the possibility of adding global layers of loyalty and state power without threatening particularistic involvements" **(Etzioni 2004: 177)**. **Etzioni's** concept of community of communities acknowledges the impossibility of attributing absolute sovereignty in a landscape of interrelatedness **(Etzioni 2004)**. However, **Etzioni** never mentioned how the concept of community of communities would create, transform and bind itself together beyond the use of hard systems such as policies, treaties and economic incentives and sanctions.

The governance structure underlying **TongkeTongke's** mangrove management can serve as the trajectory to establishing **Etzioni's** community of communities. **TongkeTongke's** mangroves suggest that the creation and maintenance of community of communities is more due to the unforeseen but purposeful alignments and convergence among diverse user groups than due to common interests, consensus and joint decision making. Its creation and maintenance are also stimulated by the intricate exchange of symbolic resources between groups and individuals across time and space. Through this exchange user groups across the landscapes recognize, differentiate and validate each others' identities and roles in maintaining the mangroves, contributing to the creation and maintenance of a community of communities which protects the discourse surrounding mangrove conservation. An example of this is when regency government officials, *ACI* members and villagers in **TongkeTongke** recognize and validate each others' roles in socially constructing and conserving the mangroves.

In the case of the mangroves, mutual recognition and mutual validation among the various user groups lead to symbolic interchange which can strengthen and reinforce the social institutions for protecting the mangroves. Resource users are tied to each other and the natural landscape through interpersonal relations and exchangerather than by way of government institutions, regulations and economic incentives. Consequently, engagement and mutuality among groups and individuals at every level becomes very important, and through this devolution can be achieved without having to undermine the inclusion of community members. In **TongkeTongke** it is also these unexpected yet purposeful patterns of mutuality which catalyze reflection, action and social capability towards the protection of the mangroves as a common good.

5.6 In summary: the dynamics

The social world is marked by multiple perspectives and interests;it is multi-dimensional, dynamic and chaotic. Community members adapt, resist and exchange resources with one another. These resources can take the form of money, capital and symbols (e.g. social status, identity recognition, political authority, etc).

Collective action for protecting natural resources cannot be maintained solely through collaboration and consensus since contentions and antagonistic relations are present within the social and ecological landscapes. **TongkeTongke'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.

The concept of collective action has to make room for the differences in the resources required to change an individual. Resource users change through their personal experience of engaging with one another and through a reflection of themselves and the social and ecological landscapes. Changing an individual is different for different people, meaning that the length of time and amount of resources required to change a person varies 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 alterations within groups and individuals which hold the greatest promise for the collective and sustainable governance of natural resources, and any willed action by an individual will inevitably be context dependent. Therefore, when speaking of the initiation and maintenance of collective action we are obliged to take up a position on the matter of agency (i.e. human actions) and social structural forces.

The need to involve others and promote collective natural resource governance looms large in the face of Indonesia's mass environmental disrepair and structural inequality.To promote participation and collaboration for natural resource protection, there is a need to provide resource users with a sense of importance and dignity which appeals to their identity and imagination. Only then can individuals be actively involved in supporting the cause to protect Indonesia's natural resources. The narratives from **TongkeTongke** suggest that an individual's sense of importance, recognition and obligation to act for the common good will motivate them to perform extraordinary actions beyond their everyday practice, including that of protecting local natural resources.More importantly, participative engagement and inclusive governance cannot take place in the absence of complex tradeoff among various groups and individuals. The principle of mutuality suggests the shared need for power, recognition and validation in order for social responsiveness and ecological sensibility to emerge. The narratives from **TongkeTongke** suggest that complex patterns of exchange among groups and individuals shape the discourse surrounding the mangroves and influence the barriers and enablers for participation in natural resource protection.

Undermining mutuality can result in power imbalance, resistance and decreased social capability. The narratives from **TongkeTongke** suggest that when power imbalances surface, when reciprocity is damaged, and when private interests override local social institutions, suspicions and mistrusts arise, fueling the potential for the over-utilization of natural resources. An example of this is the depletion of **TongkeTongke's** bat population. On the other hand, the narratives from **TongkeTongke's** mangroves also suggest 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 **TongkeTongke** requires the formation of alliances, which not only provide identity and voice for the various resource users, but also motivate groups and individuals to mobilize and participate in the conditional restructuring of the landscapes. Resistance and mobilizations are also conditional to alignment of competing timelines and the complexity of events within the landscapes. They tend to be fragmented and diffused.

Complex patterns of mutuality among user groups promote attachment to the mangroves and the natural landscape. This attachment also emerges from a history of living within landscapes. A person's ties and commitmenst to nature cannot be dictated solely by institutions, policies and monetary incentives; it is very personal and is precipitated by the person's identity, imagination and sense making. Such attachment to nature is dynamic and multi-dimensional as opposed to being static and one-dimensional, as an individual's construction of natural resources and their governance is fluid and dependent upon the complexity of local circumstances.

TongkeTongke's mangroves suggest 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 whilst protecting the social and ecological landscapes. In the case of the mangroves these ties also stimulate the emergence of a reflective capacity to collectively protect the resource.

VI

A Concluding Afterthought

6.1 Intro

The exploration wasintroduced with an interest in issues relating to decentralization and devolution in natural resource governance. Indonesia's policy to decentralize and devolve natural resource governance to regency government departments and local communities led us to consider investigations of decentralization and devolution essential for promoting sustainability and social integration across the landscapes. The initial phase of the exploration was marked by attempts to encounter government-induced institutional models capable of promoting social – ecological responsiveness, social inclusion and consistency in natural resource governance. We considered the concepts and design principles within Common Pool Resource theory as key elements to promoting responsiveness, participation and inclusion. Nevertheless, the complexity of Indonesia's natural resource governance produces issues of power relations and contentions that deviate from CPR theory's consensus and collaborative principles. The social and ecological landscape is not only marked by conflicts and struggles, but also marked by fragmentation and partiality. Noting the above, we began to take interest in **Bookchin's** Eco-Anarchism.

Bookchin's Eco-Anarchism stresses the implications of power relations and domination in natural resource allocation and distribution. According to **Bookchin**, individuals had to take responsibility to protect the earth through

their local communities. **Bookchin** contended that nested power relations and domination would result in the increased domination and nullification of nature, as well as resulting in the competition to over-utilize natural resources. This would lead to the undermining of social and ecological sensibility and attempts at protecting the earth. **Bookchin** suggested doing away with the all-encompassing state whilst advocating for self governing local communes and the collective ownership of common resources. In this model, small community more closely dependent on their social and natural environment would develop more ethical ways of living within the earth's carrying capacity.

Nevertheless, responsiveness and attempts at protecting the earth do not rise within apolitical settings. Local communities are frequently romanticized to embody egalitarianism, conviviality and the spirit to collectively own and protect common resources. The case of South Sulawesi's bats and mangroves suggest that contexts determine how relations of power and domination influence the collective governance of natural resources. Hence what is necessary is knowledge of how complex engagements shape the landscape for natural resource governance as opposed to polarizing one term against another.

6.2 Devolution of resources in complex landscapes

In promoting devolution, inclusion and rationality in natural resource governance, the GOIpublicized joint decision making and consensus over their allocation and distribution across the different levels of government. Devolution of rights and responsibilities is ensured through participation in village and regency level planning and decision making, whereas coherent implementation across the different levels of governance is facilitated through coordinating agencies and government mandates. However, the case in South Sulawesi suggests that devolution through joint decision making and consensus, while having some success, has served to fragment communities and entrench both traditional and commercial elites as power brokers. These policies have not given the majority access to either strategic or structural decision making power; what can result is a lack of participation, engagement and identification in natural resource governance. Coupled with a utilitarian approach, Indonesia's policy to devolve natural resource governance to the regency government and local communities may result in devolution marked by a utilitarian and consumer culture in which funding acquisition and natural resource commercialization becomes the main goal in promoting sustainable development. This is exemplified by Sinjai's attempt to promote 'sustainable' shrimp and fishery export and the regency government's effort to promote eco-tourism.

The case of South Sulawesi's mangroves also suggests that historical involvement and different forms of attachment to the mangroves motivate resource users to protect and conserve the local mangrove forest. The mangroves have become a source of symbolic resources and identity for the community and the regency government, thus encouraging a form of attachment beyond utilitarianism and commodification. Decentralization and devolution in natural resource governance needs to take into account the different forms of perception underlying community involvement in natural resource management and how these encourage groups and individuals to evolve behavior which equals their responsibilities. Moreover, multiple management regimes are present, and involvements in natural resource governance are characterized by multi-dimensionality and partiality.

Critical to the success of natural resource governance is the consideration of dynamic power struggles and complex alignments among various user groups. Social capital, an edifice for the collective governance of natural resources, is neither static nor romantic; it is marked by a dynamic of the good, the bad and the ugly, and this influences the collective processes for achieving sustainable natural resource governance. The case of South Sulawesi's mangroves suggests that relations of power and domination, when purported by social institutions and mutuality among resource users, led to the recognition, validation and differentiation of identity and the inclusion of groups and individuals. This facilitates attachment to the social and ecological landscape and motivates resource users to participate in the collective and sustainable governance of natural resources. In contrast, the case of South Sulawesi's bats suggests that when complex utilitarian attachments to the bats overrode social institutions for natural resource protection, groups and individuals preferred to resist by disengaging themselves from the bats and seeking identity and social meaning elsewhere, such as in the mangroves. This may curtail community participation in sustainable governance and undermine social institutions for natural resource

protection. Participation, when contextualized within the need to devolve rights and responsibilities to local user community, is simultaneously marked by active struggles and passive resistance. The formation of new alliances and the propagation of competing discourse can also be the key to promoting social inclusion and good governance. Observation of South Sulawesi's mangroves suggests that perceived inequality can become the driving forcefor community members to actively participate in altering the structure of governance within the village level.

Understanding natural resource governance requires venturing into groups and the patterns of exchange underlying their everyday social practice. This shapes the structure of community life within a particular locality.The case of South Sulawesi's mangroves indicate that this structure and pattern, when 'successfully altered' to incorporate the concept of social and ecological responsibility, may become the basis forimparting 'agendas' related to equity and sustainability.Consequently, there is a need to incorporate agency (i.e. willed action), social structural forces and their interactions when promoting devolution in natural resource governance.

Decentralization and devolution of natural resource governance in **post-Suharto** Indonesia is almost always correlated with the collective ownership of natural resources. The policy to co-manage Indonesia's common resources is almost always characterized by their nationalization by the state and/or their collective ownership by local community user groups. Hence, natural resources are considered to be publicly owned by the state and/or collectively owned by the user communities. The Indonesian government's perception that co-management necessitates collective ownership echoes recent sustainable development trends which advocate for localism, egalitarianism and collectivism, although this does not take into account the dynamic and multiplicity of local management practices. The case of South Sulawesi's mangroves suggests that, despite their privatization by local user communities and nationalization by the state, they are collectively managed by the diverse user groups as opposed to privately managed by individuals or publicly managed by the state and regency government. South Sulawesi's mangroves show that the presence of multiple and conflicting management regimes, when purported by symbolic reciprocity and social institutions which reward, validate and engage resource users in sustainable mangrove governance can lead to their protection.

6.3 Community responsiveness and participative engagement

To incorporate local aspirations and promote social inclusion, donor agencies and the government of Indonesia rely on nested public institutions, joint decision making and wide-ranging representation. Community members' aspirations are taken into account through meetings and joint decision making across the vertical levels of government (i.e. *MUSRENBANG*), whereas the representatives' task is to voice the communities' interests and concerns. This is perceived to increase public participation and community responsiveness in the sustainable and equitable governance of natural resources.

Nonetheless, findings suggestthat facilitating participation and social responsiveness through representation is not without limitations.In the case of South Sulawesi, a large majority of the community representatives within the village, district and regency levels are the village elites, whereas community members who liaise with government officials and take initiatives in implementing government induced programs and projects are community leaders and/or village officials. Moreover, information distortion and power imbalance mark joint decision making. The case of South Sulawesi suggests that a majority of the community members participate in government policies and programs neither by being represented in joint decision making nor by voicing their interests and concerns in government meetings. They participate by simultaneously demonstrating passive resistance, active struggle and strategic adaptation in the course of policy and program planning and implementation.

In the case of South Sulawesi,the development of clearly defined policies and programs within government-induced local institutions does not guarantee social responsiveness and participation for collective natural resource protection. The case also suggests that trust and reciprocity among resource users can promote social capability, ecological responsiveness and civic participation for the collective protection of the mangroves. This violates the assumption that "individuals cannot overcome collective action problems and need to have ex-

ternally enforced rules to achieve their own long-term self-interest" (**Ostrom 2000: 137**). The ties which community user groups have to the social and ecological landscape are multidimensional, and can motivate groups and individuals to act for protecting common goods. Despite the need to adopt clearly defined policies and programs for elevating social and environmental issues into local political agendas, inclusion and ties to the landscapes are facilitated more through mutual engagement, identity convergence and the structure of mutuality within the landscapes.

Explorations from South Sulawesi suggest that facilitating responsiveness and participationfor protecting common resources requires creating a new social and political space which provides a sense of importance and identity to community user groups. At the heart of this is the need to engage resource users through identity, imagination and social reciprocity in collective natural resource protection. Active engagement of this nature can lead to the creation of space for reflection and change, therefore stimulating groups and individuals to be more responsive in assuming responsibility for protecting the social and ecological landscape. Hence, the user groups' sense of importance, recognition and obligation to act for the collective good will motivate them to perform extraordinary actions. Tongke Tongke suggests thatfacilitating participation and inclusion in natural resource protection requires extending beyond utilitarianism and into the social, political and psychological.

Social engagements and group attachments to the social and ecological landscape extend beyond the utilitarian and policy measures found within intervention approaches. Tongke Tongke suggeststhat planned changes within policy measures are most likely to result in highly restrictive environments, whereas social, psychological and political engagements will most likelyresult in new spaces for empowerment and incorporation.In the case of South Sulawesi, proposal for action to secure active participation andgroup inclusion centers on the extent to which social and political changes are actively secured.

In **TongkeTongke** changes occur due to individual willingness and social structural forces: hence there is the need to understand how structure and agency mutually interact. Therefore, in speaking of devolution and change for improved sustainability we are obliged to take up the matter of agency and structure within a context dependent setting. It is precisely through ethnography and the case study approach that emergent properties within context dependent settings emerge and innovative responses are encountered.

6.4 Collective action across landscapes

To promote collective action and connect local action across the landscapes, the Government of Indonesia, along with donor agencies, adopts two noteworthy measures. The first involves the replication of 'sustainable' governance models across Indonesian regencies and provinces. The replication of marine sanctuaries, eco-tourism sites, protected areas and community based monitoring and enforcement institutions are among some of the GOI's preferred models. The second measure involves the declaration of nested regulations and institutions across the various levels of government. These are perceived to promote integration, coordination and cohesion across the social and ecological landscapes.

The case of Tongke Tongke suggests that diversity and prejudice in participation lead to gaps in policy and program planning and implementation. The case study sites also suggest interconnections among resource users across the landscapes; these interconnections are facilitated more through acts of mutual engagement, identity convergence and symbolic reciprocity. In the case of South Sulawesi's mangroves, the provincial and regency government officials are connected to the mangroves, the cultivators and the community members through common needs, identity and imagination, whereas community members across local villages are connected to the mangroves and each other through kinship ties, mutual engagement and social reciprocity. These forms of interconnections, when rewarded with incentives and symbolic resources, stimulate groups and individuals to act collectively and protect local natural resources across the landscapes. In the case of South Sulawesi's mangroves, the various user groups participate in dialogues and engagements across the landscapes through mutual constraints, complex reciprocity and the identity and imagination, and this facilitates complex converge and alignments which simultaneously stimulate resource users to assume social responsibilities and protect local natural resources. Therefore, an individual's commitment to nature and the common is very personal and is precipitated by one's identity, imagination and social

constraints.Etzioni (2004)noted that the above form of interconnections can facilitate the rise of community of communities. Drawing from Sinjai's mangroves experience, the concept of community of communities lends itself to social, psychological and political ties among resources users. These ties not only stimulate civic participation and inclusion in the sustainable governance of Indonesia's natural resources, they also promote social cohesion and political integration across the landscapes.

6.5 Implications for government and natural resource management agencies

This inquiry on community dynamics and natural resource governance yields the following implications for government and natural resource management agencies. At the outset, intervention approach for promoting participation and inclusion in natural resource management requires inquiry and venturing into the network of exchange and reciprocity within local settings. Hence, it is important to identify the individual resource users and the network and symbolic resources which help define their existence and roles in the community. Moreover, in planning and implementing intervention policies it is important for government agencies to understand how struggles, resistance and adaptations shape the constraints and enablers for participation in strategic and structural decision making relating to natural resource governance.

Secondly, promoting sustainable natural resource governance requires venturing into novel and possible social and political spaces. These social and political spaces are often 'absent', yet, when created and purported by social institutions these new spaces can alter the incentive-disincentive scheme and incorporate social and ecological agendas into everyday community life. The case study site suggests that the preconditions for creating new social and political spaces include forming new alliances, establishing contending organizations and stimulating incentives and rewards which appeal to the imagination and identity. Lastly, in light of the need to promote good governance and accountability there is a need to institute sound intervention approaches. I would argue that establishing sound intervention policies and programs require securing flexibility and adaptive management capacitythrough negotiations and brokering. They are important for responding to dynamic and complex issues in natural resource governance. Through these processes, communication is fostered and alignments of the various user groups are facilitated, thus becoming capable of instilling a governance structure akin to Etzioni's vision of community of communities. This can encourage loyalty to higher levels of governance without undermining devolution and social institutions for natural resource protection within decentralized collectivities.

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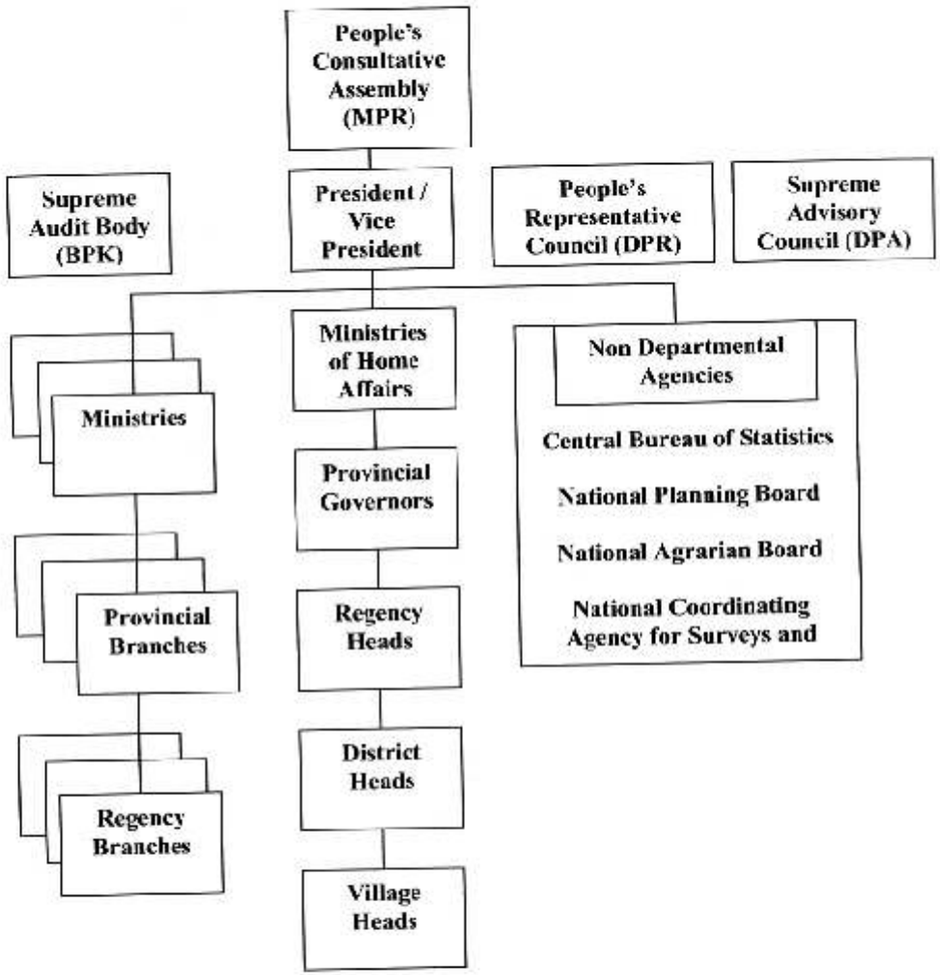
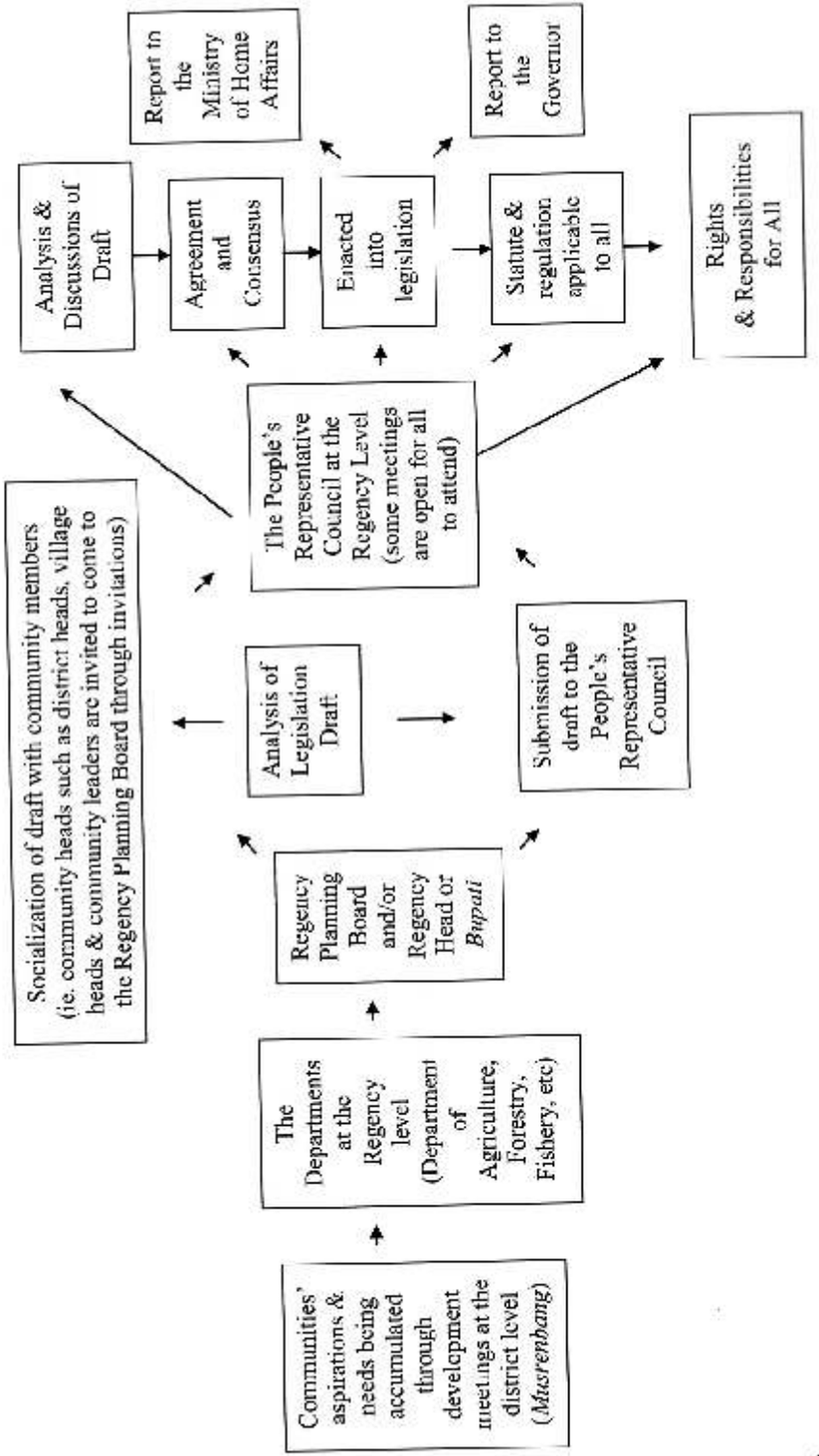
The government structure of the Republic of Indonesia



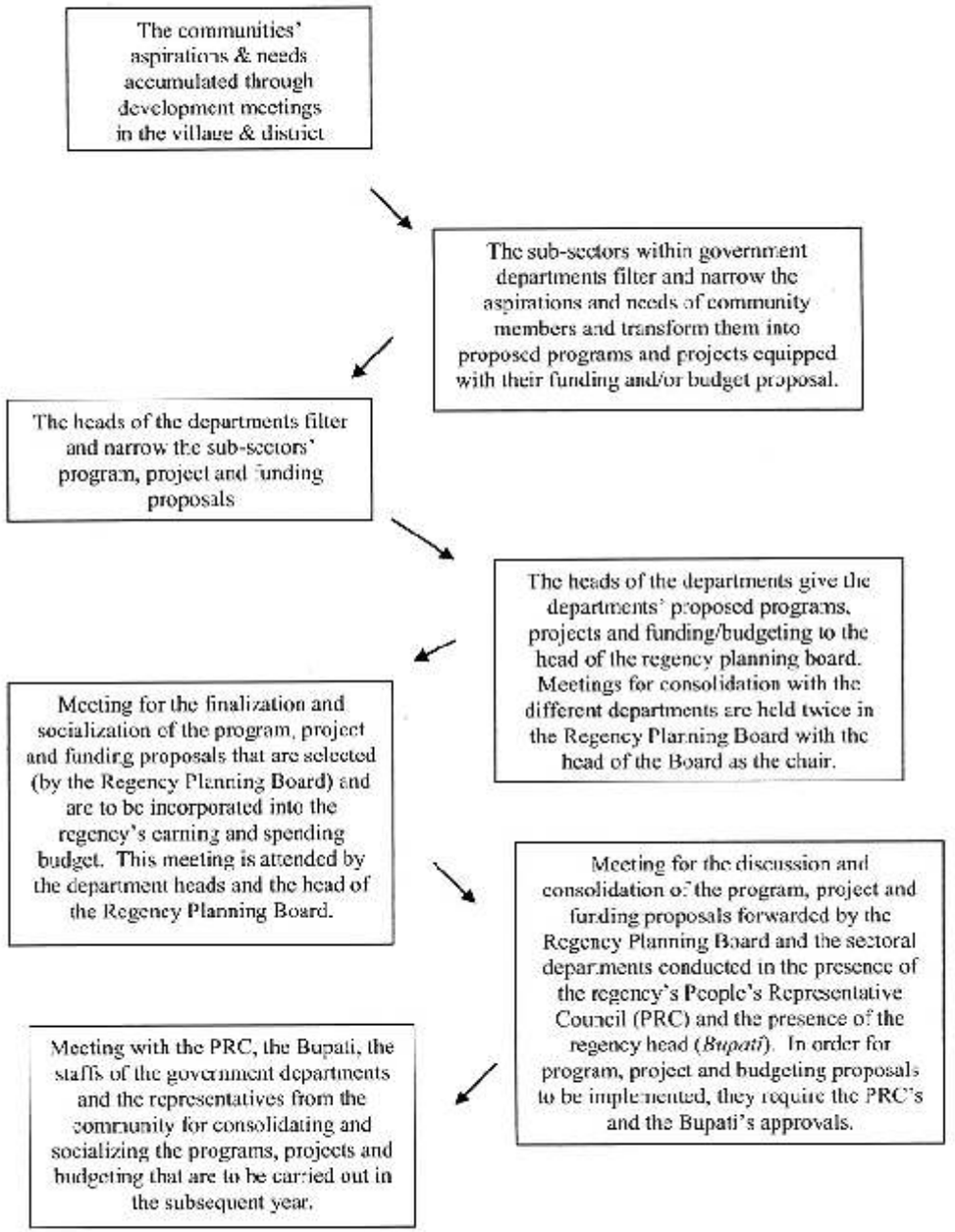
Indonesia's hierarchical order of law

INSTRUCTIONS	WRITTEN LAW	LAW MAKERS
	State Ideology & Constitution	
	Law *(Undang Undang)*	Central Government and the Parliament
	Governmental Regulations *(Peraturan Pemerintah)*	Central Government
Instruction of the President	Presidential Decree *(Keputusan Presiden)*	President
	Ministerial Regulations *(Peraturan Menteri)*	Ministers
Instruction of Ministers	Ministerial Decision *(Keputusan Menteri)*	Ministers
	Provincial Regulations *(Peraturan Daerah Propinsi)*	Governor & Provincial Legislative Body
Instruction of the Governor	Governor's Decision *(Keputusan Gubernur)*	Governor
	Local Regulations *(Keputusan Daerah Tingkat II)*	Regency Head/Mayor and Local Legislative Body
Instruction of the Regency Head / Mayor	Regency Head's / Mayor's Decision *(Keputusan Bupati/ Walikota)*	Regency Head / Mayor

Consensus building for promulgating regency statutes and regulations



Consensus building for program and project planning



The governance of Tongke Tongke's mangroves in Indonesia suggests that social institutions and local rules lead to their protection and sustainability. Social institutions, as neighbourly ties, collective identity, reciprocity and a shared obligation to protect the social and ecological landscapes, motivate community members to make responsible decisions over mangrove management. Community members act to benefit the overall good even when avowing individual rights. This leads to innovative power structures which are more locally sensitive and environmentally appropriate. Through anthropological inquiry, this book explores the nuts and bolts of power relations and social capital at play within the community level for sustainable governance.

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