

# Conflicts of coastal management in North Sulawesi

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## ABSTRACT

The rapid economic development in North Sulawesi has mainly occurred on the coast, and achieved primarily at the expense of the environment. This research uses qualitative methods of in-depth interview survey with a range of key people involved in coastal management, to make an assessment of causes of conflict and levels of resource degradation. Ambiguity of property rights has emerged as a major issue because every type of property right has different rules that affect the coastal management. This ambiguity triggers user and jurisdictional conflicts. These conflicts then cause in-effective management. Consequently, the trend of coastal resources in the Manado Bay is toward increased resource degradation. To reduce resource degradation, it is necessary to reduce levels of user and jurisdictional conflicts.

**Keywords** Integrated coastal zone management, Property rights, Capacity building

## Introduction

Rapid economic development in North Sulawesi has mostly occurred on the coast, and has been achieved primarily at the expense of the environment. The increasing degradation of coastal resources occurs across a variety of industry and government sectors for example fisheries, mining, tourism and marine conservation and because of urban expansion. A major contributing factor has been the ambiguity of property rights, and associated problems such as competing resource use and conflicts arising from management by different interest groups.

According to Bromley (1997), all environmental problems are property rights problems, and most conflicts about the extraction of exhaustible resources arise because of difficulties in clarifying property regimes. They are four types of property regimes. Bromley and Cernea (1989) and McKean (1992) elaborate the characteristics of the four types of property regime. Open access property belongs to everybody. Common property belongs to a group of people who operate by tacit agreement or traditional law. State property belongs to the government. Private property belongs to a person or a group of people or a company that is recognized by the government. Every type of property right has its own operational rules, collective choice rules and constitutional rules (Ostrom 1990). The different types of property rights determine the framework for coastal management (Stein and Edwards 1996) and they provide the context of how management operates, how property rights contribute or how they can be modified to make successful coastal management.

Ambiguity of property rights triggers conflicts between resource users, and or between government agencies (Clark 1996). These conflicts have resulted in coastal resource management becoming a grey area of management. Jurisdiction is subject to the interpretation of the stakeholders. Every concerned agency will claim

that the coastal resource is under its jurisdiction, while it remains important to the agency and a significant amount of money is involved. But the agency will deny any association once the resource has been degraded or unimportant. Coastal resources then become open access property. This poor definition property regime leads to conflict of coastal management, and jeopardizes the sustainability of coastal resources in North Sulawesi.

The impact of property right conflicts on the resources is that although the general condition of coastal resources in the Manado Bay and Bunaken National Park is favorable compared to western Indonesia such as Java Island, the trend is toward increased resource degradation. Particularly in locations where there is intensive competition for resources use and jurisdictional conflicts, the coastal resource is degrading.

To reduce resource degradation in North Sulawesi, it is necessary to reduce levels of user and jurisdictional conflicts. A property rights framework provides a mechanism which will resolve some of this conflict.

This paper reports on research which aims to identify the impacts on coastal resources resulting from conflicts between sector and regional government agencies, private operators and coastal villagers.

## Methods

Coastal management mostly deals with people, their interaction with the coastal environment and the way they use coastal resources (Hinrichsen 1998). People's interaction and development activities can significantly affect the ecology of the coastal zone and the function of coastal resources (Cicin-Sain and Knecht 1998). Since the biophysical data that are recorded in many reports are not reliable, then this study will use qualitative methods to make an assessment of causes and level of resource degradation.

The qualitative methods are divided into two steps; documentary review, and in-depth interviews (Rubin and Babbie 2001). Documentary data are obtained from study reports, government documents, maps, statistical reports,

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and marine project reports such as Marine Resource Evaluation and Planning, Coral Reef Rehabilitation and Management Project and Coastal Resource Management Project. Conflict issues are verified by the news from local and national newspapers.

The second methods of data collection involved interviewing key informants (Rubin and Rubin 1995). A semi-structured interview was used to obtain the key person's perceptions and experiences of coastal management, especially on the ambiguity of property rights and associated factors that contribute to management conflicts. The key people were chosen from expatriate and national scientists, bureaucrats, decision-makers, coastal managers, investors, dive operators, NGOs and fishers that included in national and North Sulawesi respondents. The transcriptions of the interviews have been coded and analyzed (Strauss and Corbin 1990).

The results from both analyses are then integrated to clarify the significance of property rights and conflicts for coastal resource degradation in North Sulawesi. The data from the fifty-seven key people interviewed and three focus group discussions for this study are reported here. The location of the study is in Manado City and Minahasa District, North Sulawesi - Indonesia; especially in Manado Bay and Bunaken National Park.

## Results

Fifty three interviewers and three group discussions stated that coastal resources in North Sulawesi including fish, mangroves, coral reefs, coastal lands and beaches, sea grass habitats, sea weed, and marine mammals, are relatively good compared to other coastal environments in western Indonesia, and other parts of South East Asia, like the Philippines. However, the trends are towards increasing degradation of coastal resources. The following examples of comments from respondents indicate their perceptions about resource degradation in North Sulawesi. One expatriate reported that shellfish began to disappear with the construction of the sea wall along the boulevard of Manado City. Since 1993, the numbers of skipjack tuna appear to have deteriorated quite significantly. Two respondents reported that three-quarters of the skipjack fishing boats no longer operate only one quarter remain. Dive operators stated that the numbers of big fish appear to have declined in the Bunaken National Park (Bunaken NP), and divers hardly ever see big fish or grouper. Apart from indicating a decline in fisheries resource, this may reduce the attractiveness of Bunaken NP for tourists who want to dive or snorkel.

Focus Group Discussion in Malalayang II village stated that the near-shore reef fish have also declined. Five years ago an artisanal fisherman could catch around 7 kg per fishing trip and now he can catch only 4-5 kg per trip with the same effort. Some fishers have to go further to get the same amount of fish as they used to, or they have to change the type of fishing from beach fishing to rumpon, a kind of fish aggregating device at the outer edge of Bunaken NP waters.

The condition of the mangrove resources is reported to be fairly good in Blongko, Talise and Tumbak villages, but a limited area of mangroves is being degraded because of various uses, such as firewood, seaweed stake poles, housing material and the conversion of mangroves into fishponds.

Coral reef resources are considered to be in good condition (Lalamentik 1996). Four interviewers said that this could be seen from the excellent health of reefs with high species diversity of both fish and corals and high coral cover around Bunaken and Tumbak villages. However eight respondents stated that blast and cyanide fishing as well as natural bleaching have led to some degradation of the coral reefs, especially in the southern part of the Bunaken NP. Some fringing reefs around Manado Bay have been degraded due to destructive fishing, boat anchors and reclamation. According to six interviews, some people take coral for aquariums and handicrafts, and construction materials such as roadbeds, house foundations, septic tanks and retaining walls.

The Manado estuary is clearly seen by respondents as deteriorating. There is increasing garbage pollution from Tondano River and several other rivers into the estuary. Almost all respondents stated that a lot of domestic waste and sewage comes from river discharge and elsewhere into Manado Bay, and plastic garbage is spread out on top of the reefs and near shore water around Manado Bay and Bunaken NP. People throw their garbage into the rivers as they traditionally use the river for waste disposal. There is also irresponsible behavior from tourists who go to Bunaken and then dump their garbage into the waters. As a consequence, Manado Bay has become dirty and the water quality has deteriorated.

## Discussion

### User conflicts

Each development sector has set its objectives, targets and operational plans, which aims to gain economic benefit. However, objectives and targets of one sector often overlap and are incompatible with another. Most of these sectors do not have common goals and objectives to sustain the coastal resources. Also local government agencies have not been able to develop appropriate coastal management objectives because they did not have clear authority to manage the coastal resources until the end of year 2000.

Rapid development has consumed coastal land and marine space. Many new hotels have been built along Manado Bay; a pearl farm was established in Talise waters; a giant fishing net was placed in the mouth of Lembeh Strait (Suara Pembaruan 29.05.97); gold mining companies have operated and thrown their tailing mud into Manado Bay, Likupang Bay and Tomini Bay. Despite an increase in economic growth, some of these rapid developments have triggered overlapping planning, resource use competition, and have initiated social unrest (Manado Post 20.09.97).

In Talise, there was conflict between pearl farming operators and local fishers. The pearl farm owned by the Japanese firm of Horiguchi Pearl Co. Ltd., has been given a permit to use an area of approximately 10,000 ha, but they only use approximately 422 ha in the center of the area (Crawford et al. 1998). The pearl farm security guards deny any access to local fishers to fish in this area and forced out fishers from their former fishing ground. Four interviewees reported that some fishers were beaten by the security guards.

The interviewees reported several user conflicts that impact on local fishers. User conflict arises between Bunaken communities versus the park rangers of Bunaken NP, since the rangers prohibit the community taking dead coral for housing material and to fish. User conflicts are reported for Manado Bay, between traditional fishers and developers over the access of fishers to the sea and to dock their boats. The traditional fishers feel that they no longer have a place to dock their dinghies or boats and access the sea. Eight interviewees also identified that user conflicts have also occurred between traditional fishers and foreign commercial fishers with motorized boats especially from Bitung. As a consequence, there has been fighting between local fishers and commercial fishers from Bitung.

In Lembbeh strait, Taiwanese fishers are reported to have killed and disposed of marine mammals such as dugong, sharks and whales, and removed fish using giant nets. This has caused conflict with NGOs and fishers, and caused degradation to the fish resources as well as marine mammals (Rossiter 1997).

Market is the strongest economic factors that determine the coastal resource use. The increasing demand for live reef fish, ornamental fishes, coral reefs, mangrove, and seaweed triggers coastal villagers to exploit the resources intensively in response to the market price. When these resources are abundant the local fishers perceive the coastal resources as open access property (FGD). However, if the destructive fishing continuously occur, the resources are becoming more and more heavily exploited, to the point that the fishers themselves are beginning to see that the resources are decreasing. This is the situation when local fishers perceive that they have to protect the resources as their common property, or they

exploit the resources as much as they can before the outsider exploit them at a faster rate. Although it may seem obvious, it is necessary to remember that conflict of coastal management occurs primarily at certain location where there is multiple resource use.

#### Jurisdictional conflict

There appears to be several jurisdictional conflicts, predominantly between the Ministry of Forestry through the Bunaken Park Office and the local government (Pemda) of North Sulawesi. Bunaken was at one time, not a national park but rather a local marine tourism park. It was declared as Bunaken National Park in 1991, by the central government through the Ministry of Forestry Decree No. 730/Kpts-II/1991 dated 15 October 1991 (Direktorat BKSARKFF 1999).

The Pemda North Sulawesi has never been very happy about that because they felt that it was a major resource of theirs in terms of tourism development. Pemda claims that North Sulawesi does not benefit at all. Local government is very keen to develop tourism, as one of the priority objectives of this province (Kanwil Parpostel 1997). However, many people in the Bunaken NP Office would like to see Bunaken Islands utilized more as a conservation area. Some of the conflict arises because of the ambiguity over who has legal jurisdiction, Forestry or local government.

Another jurisdictional conflict had risen between Pemda Minahasa with the Ministry of Mine and Energy in relation to PT. Newmont Minahasa Raya over gold mining royalty. Pemda Minahasa felt that the royalty distribution was unfair and Pemda claims that the resource is Minahasa state property, so it has right to get the benefit stream.

From the interviewees and focus group discussion statements, which were verified by the local newspaper Manado Post 20.09.97 and national newspaper Suara Pembaruan 27.12.97 and 24.04.99, it is clear that some conflicts have occurred in Manado Bay and Bunaken NP. The range of user and jurisdictional conflicts that have occurred is elaborated in Table 1.

Once the conflict emerges, the users discourage any sense of environmental ethic, because they do not get

Table 1. Conflict in Minahasa District and Manado City of North Sulawesi

| Type         | First Party                  | Second Party                       | Location             |
|--------------|------------------------------|------------------------------------|----------------------|
| User         | Traditional fishers          | Foreign commercial fishers         | North Sulawesi*      |
| User         | Traditional local fishers    | Pearl farm operators               | Talise*              |
| User         | Traditional fishers          | Developers of reclamation area     | Manado Bay *         |
| User         | Coastal land owners          | Developer of reclamation area      | Malalayang **        |
| User         | Bunaken communities          | Bunaken Park rangers               | Bunaken, NP*         |
| Jurisdiction | Tourism & Fisheries Agencies | Ministry of Forestry               | Bunaken, NP*         |
| Jurisdiction | Government of Minahasa       | Mining Agency/ PT Newmont Minahasa | Minahasa District ** |

Source: \*Interview & observation, \*\*News Paper: Manado Post, Suara Pembaruan Daily - Note: NP = National Park

any reward or incremental benefit to conserve the resource. Such conflict may therefore jeopardize the sustainability of the coastal resources.

### The Implications of Conflicts

The relationship between the ambiguity of property rights, conflict, and resource degradation are illustrated as follows: for users, ambiguity of property right leads to uncertainty and insecure property rights and denies local community accesses to the benefit stream of the resources. This triggers user conflict between pre-existing coastal users and new leaseholders or intruders. The existing conflict discourages maintenance of the sustainability of the resources. The resources become exploited excessively by locals, because if they don't take it then the intruders will take it. This situation becomes "the tragedy of commons" of Hardin (1968). As a result the resources will be degraded.

For institutions or agencies, ambiguity of property rights leads to overlapping jurisdiction and lack of clarity as to who has the mandate. If the overlapping of jurisdiction can not be resolved, then it creates jurisdictional conflicts. Once jurisdictional conflict emerges, none of the agencies will respect the other management guidelines or plans. Hence, management plans and law enforcement becomes ineffective. No agency will care for the resource and consequently the resource deteriorates.

### Conclusion

The impact of property rights conflict on the resources is that although the general condition of coastal resources in Manado Bay and Bunaken NP is fairly good compared to other places such as Java and the Philippines, the trend is toward increased resource degradation. Particularly in locations where there is intensive competition for resource use, and conflicts, the coastal resource is degrading.

User conflicts arise mainly between local communities and incoming private operators who stand to gain the most economic benefit from resource exploitation. For example, fishers in Talise Island and the pearl farm operator, and traditional fishers over foreign commercial fishers. These conflicts discourage sustainable use of coastal resources by local people as well.

Jurisdictional conflicts are mainly between national government sectors and local government agencies. The conflict has occurred from the beginning of policy formulation. Each sector has set its objectives, targets and operational plans. However, objectives and targets of one sector and another are often overlapping and incompatible. When conflicts emerge, no management framework can be applied effectively.

To reduce of resource degradation in North Sulawesi, it is necessary to reduce levels of user and jurisdictional conflicts. A property rights framework provides a mechanism, which will at least partially resolve some of this conflict. Therefore the ICZM framework has to address

multi property regimes and clarify the property rights for North Sulawesi.

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