

PORTRAIT OF COMMUNITY MAPPING STAGES THROUGH ZONING SYSTEM ON MANAGEMENT OF TELUK CENDARAWASIH NATIONAL PARK, WEST PAPUA

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Introduction

The biogeographic importance of New Guinea and the South West Pacific in general is apparent, considering various aspects of the flora and fauna (Paijmans, 1975; Muller, 2002). The high flora and fauna diversity in these areas is a consequence of tectonic evolution (Petocz, 1987, 1994). New Guinea has many endemic species and a flora and fauna with high uniqueness. Papua, more specifically, has 51 conservation areas including national parks, strict nature reserves, etc. (CI, 1997; Soesmianto, 2005).

Like other national parks in the world, Papua's national parks include local people who have been around for a long period of time. Local people who live on the borders of protected areas often have a holistic relationship with these areas (Trakolis, 2001); a relationship that is sometimes overlooked when management decisions are made.

Decentralization initiatives have been launched in the majority of developing countries, including Indonesia, nowadays. Furthermore, in line with decentralization, local people are now involved in tasks with regard to natural resources management. Thus, different methods are now being implemented to include the participation of the local people. The mapping of indigenous land to secure and manage natural resources and strengthen cultures is a recent phenomenon. A variety of methodologies have been employed, ranging from highly participatory approaches involving local people sketching maps, to more technical efforts.

Community mapping, or participatory mapping, is a method that elicits the relationship between people and their environment by involving

community members in drawing maps of their surroundings (Knapp and Herlihy, 2001; Eadens *et al.*, 2008). People construct simplified images of their environment whereby an individual 'acquires, codes, stores, recalls and decodes information about the relative locations and attributes of phenomena in his/her everyday spatial environment. These maps are summaries of an individual's knowledge, preferences, assessment and evaluation of the environment and have a significant effect on people's behaviour, beliefs and attitudes regarding places. Especially in Teluk Cendarawasih National Park, people have a special spiritual relation with certain resources. Therefore, taboos and social norms are still prevalent there (Sastrawan and Manulang, 1999). Furthermore, most conservation biologists, for example, include non-use values, such as spiritual or cultural values, in their reasons for conserving an area (Callicout, 1990; Jones *et al.*, 2008). Ostrom (1999) and North (1994) argued that taboos and social norms are informal institutions. Institutions are constraints devised by humans that structure human interactions.

Informal institutions are those not dependent on the state for enforcement and include taboos and social norms. Moreover, it is not only informal institutions involved explicitly in managing natural resources that may be important for conservation. There are many reasons, such as sustainable use, that may cause people to avoid or protect species (North, 1994; Sheil and Lawrence, 2004). Through community mapping on zoning systems, therefore, social norms, community needs and desires will help to ensure long term conservation success.



(Source: Papua Forest office, 2007)

Figure 1. Map of Conservation Area in West Papua

Portrait of zoning system in Teluk Cenderawasih National Park

Teluk Cenderawasih National Park (TNTC) is located in the Bay of Papua Island, the largest bay in Indonesia (1,453,500 ha) and the home of tremendous biodiversity (WWF, 2003). The park is situated at 01° 43' - 03° 22' South Latitude and 134° 06' - 135° 10' East Longitude. It is located in the administrative regency of Wondama Papua Barat Province and Nabire regency, Papua Province. Sixty-four villages with a total of 3,260 people inhabit villages in the Park (CI, 1997; SBSKSDA, 1996; BBTNTC, 2009).

The zoning system is a type of management system especially for national park areas. Permenhut Nomor P.56/MenHut-II/2006, tanggal 26 Agustus 2006 is the law about the zoning manual of national parks. Zoning processes, especially, in TNTC, have been done in several stages and approaches ranging from socialization processes in several villages and districts to public consultations at the regency and province levels. All processes involve local people, NGO's, the local government, people in the villages, the district, the regency, the province, as well as people from universities.

The zoning system is based on the data of: 1) important natural resources; 2) social studies; and 3) religion and culture. The whole process is also covered by several laws:

- Law No.5 of 1990, concerning Conservation of Living Resources and their Ecosystems.
- Law No.41 of 1999, concerning Indonesian Forestry
- Law No.21 of 2001, concerning Special Autonomy for West Papua
- Law No.31 of 2004, concerning Fishery
- Law No.26 of 2007, concerning Spatial planning
- Law No.27 of 2007, concerning Coastal Resources Management and Small Island.

National park zoning is a process of determining space to be included in national park zones (BBTNTC, 2009). The concept of zoning in national park management is an essential aspect, not only as reference to management and conservation development in Teluk Cenderawasih National Park, but also as a system of protection that controls all activity inside the national park. So far, zoning in Cenderawasih National Park has been designed to accommodate all interests inside

the area without ignoring conservation functions (BBTNTC, 2009). The zoning system used in the Cenderawasih National Park is called "community-based zoning".

Process of Teluk Cenderawasih National Park zoning

The Teluk Cenderawasih National Park zone was proposed in 1988 (BBTNTC, 2009). It has gone through various processes and stages, including meetings/forums with the participation of local communities, religious leaders, community leaders, academicians and the local government. Historically the following stages can be noted:

1. The Management of Irian Jaya's Teluk Cenderawasih Marine Conservation Area Plan 1988-1992 (WWF, 1987; Petocz, 1989).
2. The Management of Teluk Cenderawasih National Park 1994-2019 Plan (World Bank Project, 1994) (BBTNTC, 2009)
3. The 5-year Management Plan of Teluk Cenderawasih National Park (1994-2019) (Sub BKSDA I Irian Jaya, 1996).
4. The Management and Zone Plan of Teluk Cenderawasih National Park in cooperative work of Manokwari and Nabire regencies, WWF and BBTNTC (29-31 October 2001).
5. From 2000 to 2009, there have been various seminars and workshops as well as public consultations held in order to get input and zone concepts for the Teluk Cenderawasih National Park area. Stages and processes in implementing the Zone Plan of Teluk Cenderawasih National Park Area are managed through several stages. Figure 3 shows the zoning stages as mentioned above.

Figure 2 shows a flow diagram of the main stages of the zoning process in Teluk Cenderawasih National Park:

1. Consultation at village level

The consultation at village level aims to ask for moral support and policies in affirming the zone of Teluk Cenderawasih National Park Area. In addition, it aims to identify the property rights towards proposal zones and to design customary meetings regarding the declaration and affirmation of the zone areas.

2. Consultation at district level

Consultation at the district level aims to ask for moral support and policies in affirming the zone of Teluk Cenderawasih National Park Area. The consultation is managed by a team consisting of BBTNTC, NGOs, and Governments.

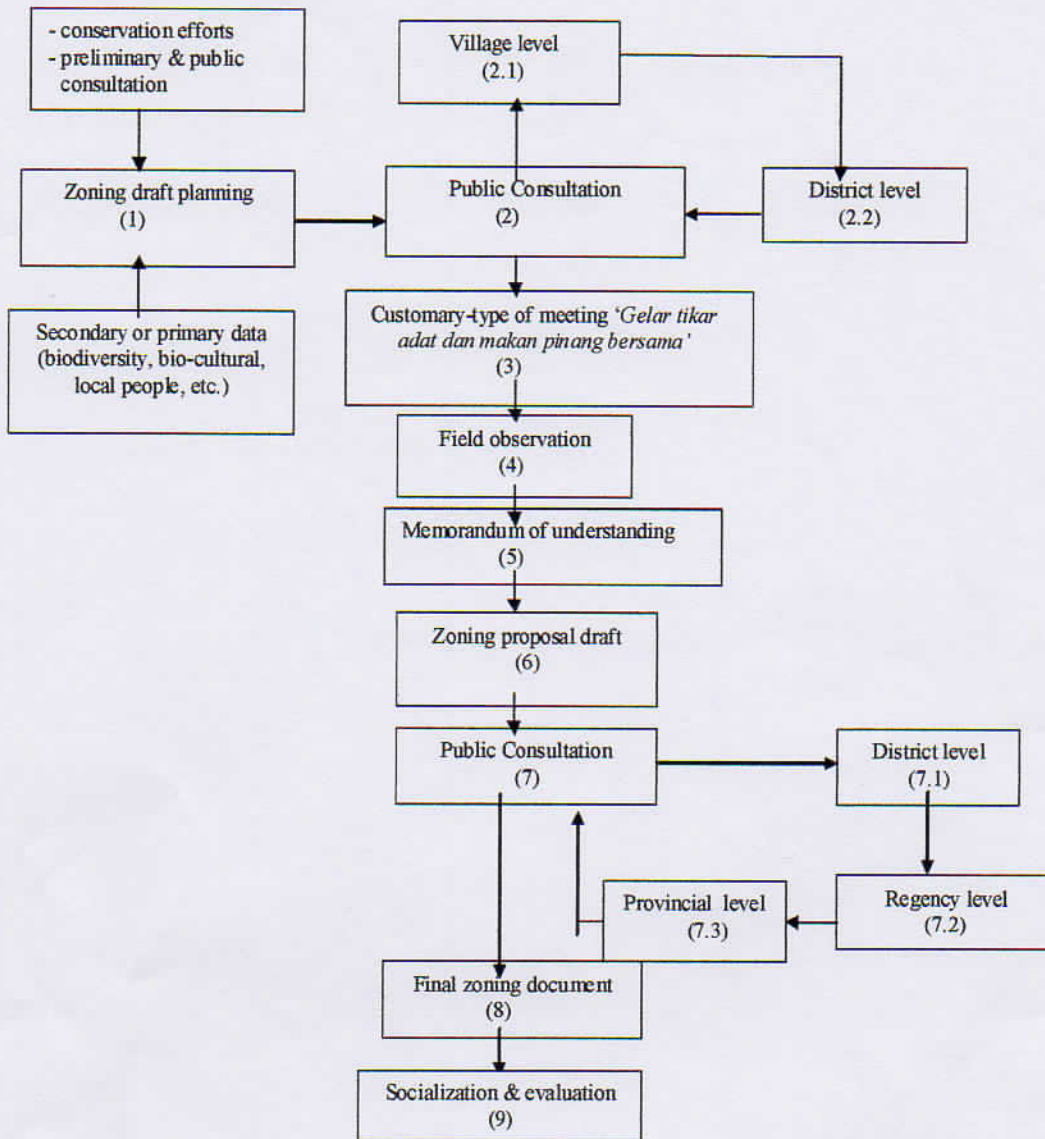
3. Customary-type meeting 'Gelar tikar adat dan makan pinang bersama'¹ (lit: customary mat meeting and chewing betel nut)

'Gelar tikar adat dan makan pinang bersama' describes the culture of togetherness to come, sit, discuss and take a decision on particular things for the future of the community. The figurative phrase symbolizes togetherness and brotherhood with outsiders. Such a meeting is held by the consultation team and local communities and aims at asking for moral support in each area with certain measurements.

4. Forum Group discussion

In this part, each person present is given a basic map. The map is used to search and make notes. Participants are asked to show where they live, based on the map. They are expected to point out which areas are under property rights and the local wisdom concerning any areas, e.g., which areas are under the taboo system, which are used for traditional ceremonial purposes. The information gathered is used to determine the zoning system and utilisation functions. In marking the maps, people often cluster their activities based on specific environmental features (Holling, 1992; WWF, 2005; BBTNTC, 2009). These maps are a summary of an individual's knowledge, preferences, assessment and evaluation of the environment and they have a significant

¹A term used by Melanesian people of the north coast of Papua when they have a customary meeting to discuss important issues within their communities and/or outsiders. They usually hold the meeting with all participants sitting on mats and having betel nuts while discussing things.



(Sources: adapted from various references)

Figure 2. The main stages of the zoning system in Teluk Cenderawasih National Park.

effect on people's behaviour, beliefs and attitudes regarding places. The next step is discussing the mapping results together with a BBTNTC officer.

5. Field orientation

Field orientation is a cross-checking process. The purpose is to actually see the area that was laid out in the first mapping during the group discussing process mentioned above. This part is essential because authority holders will immediately know the real circumstances.

Through field orientation the authority holders also learn what property rights there are, the cultural histories of the area in terms of natural resources management, and how people interact with local resources and other things in a certain area. Therefore, this work will help BBTNTC staff to minimize and avoid property rights conflicts in the future.

6. Memorandum of Understanding process

The next step is to legalize all the agreements which resulted from the group
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discussion and field orientation through a Memorandum of Understanding (MOU). In this stage, local peoples are facilitated to sign the document. By doing so, it implies that they are concerned about natural resources management for now and for the next generation. At the same time, by signing the document, they show their commitment to future potential development processes. During this process the parties involved are: 1) BBTNTC staff; 2) NGOs; 3) district heads; 4) village heads; 5) religious leaders; 6) cultural leaders; 7) community leaders; 8) women's leaders; and 9) youth leaders.

Note: Developing this MOU process was done from 2006-2008. It took three years to finish this because of the long discussions between the people, the officers and the local government.

Workshop on community perspective for zoning system at District level

Transparency concerning natural resources management is currently a hot issue. In line with this concern, all of the results from the above-mentioned processes were presented during a workshop at the district level. Local people, along with other stakeholders, were invited to witness the results achieved from the processes described above. Moreover, during this session all stakeholders had the opportunity to add more ideas, comments and to give further inputs. One purpose of this workshop was to collect more accurate data and information in terms of zoning documents. Furthermore, the workshop also provided an opportunity to gain more consensus, leading to the advanced workshop at the Regency and Provincial levels (BBTNTC, 2009).

Workshop of zoning proposal on Regency and Provincial levels

Governments, NGOs and the people are the three main actors in development programs. People can be seen as a development object of this process on one hand, and become a subject on the other hand. NGOs are voluntary and have a partnership

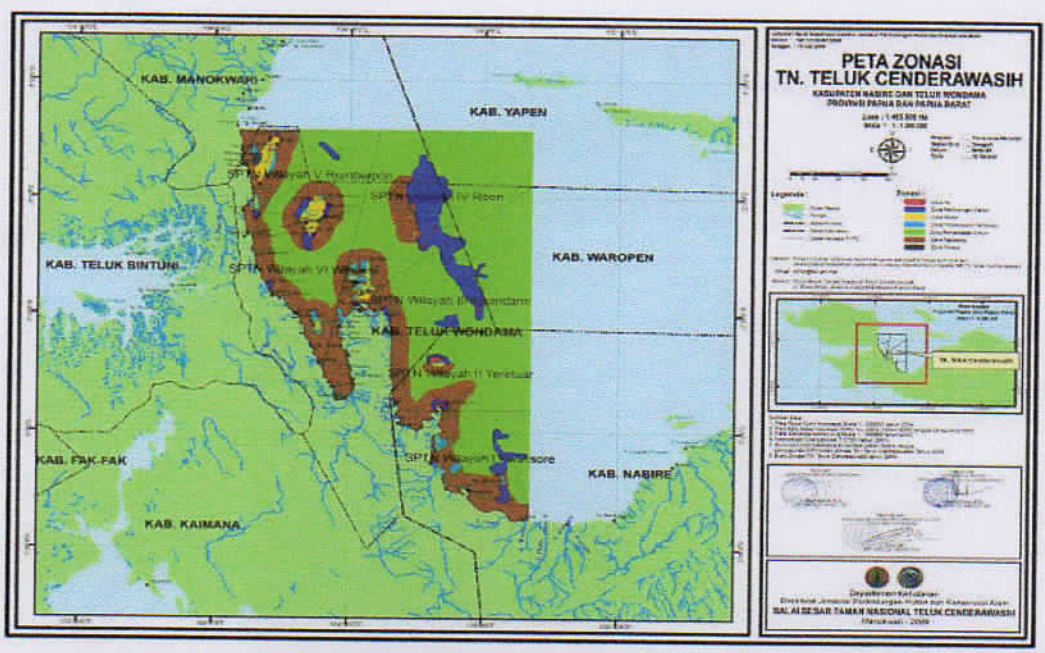
approach working for both stakeholders: either for people or the government.

In order to gain more approval and commitment, a workshop on zoning proposals at the Regency and Provincial levels was held. The main target of this seminar was to collect and gain more inputs and constructive ideas until the legal approval of the zoning document.

The document of zoning systems for the National Park is the final product. During this seminar, all parties were invited (i.e., from the government: local and provincial; National Park officers (BBTNTC); representatives of the local people; NGOs; university representatives; and social organizations). Most of the participants actively took part in the whole discussion and decision making process. Six zoning areas resulted from this process. These zonings refer to resource potential, biodiversity value, area characteristics, people interactions and socio-economic aspects. Each zone has, therefore, been characterized as follows (BBTNTC, 2009): 1) Core zone; 2) Protection zone: marine for sea and jungle for forest area; 3) Utilization zone for tourism; 4) Public utilization zone; 5) Traditional zone; and 6) Special zone.

Socialization and evaluation process

The next tasks after the workshop are socialization and evaluation. These are essential to how the zoning document will be implemented and applied in the field. Socialization is done in order to spread and distribute the zoning document as a main product to each level mentioned above. The socialization process takes a bottom-up approach: from village to provincial level. According to the zoning document, all stakeholders are expected and obligated to do something based on their own duty and authority. Through the socialization process, each stakeholder will avoid overlapping utilization of certain areas in and around the National Park. Zoning activities control each activity inside the National Park (BBTNTC, 2009). Besides socialization, assessment of the zoning efficiency is important. Evaluation will be done periodically in order to analyze barriers and constraints to the implementation of the zoning program. Through assessment, problems can be detected either by



(Source. BBTNTC Office, 2009.)
Figure 3. Zoning Map of Teluk Cenderawasih National Park, West Papua.

working together with local people on extraction resources activities or from the national park managers. On the other side, by implementing zoning activities, local governments have the opportunity to run development programs such as infrastructure development in order to support and encourage a better life for the local people. These activities were scheduled for May 2010 (BBTNTC, 2009)

Conclusions and recommendations

Although this was an internship field study, during the field work the authors saw that there was a lack of access for local people to education, nutrition and health care. In other words, there was much poverty. This in turn has influenced the management of the natural resources in Teluk Cenderawasih National Park. It was noted that the zoning process ran from 2002-2009. It has been a long process and there were many conflicts and difficult situations in terms of conservation efforts and economic orientations. In addition, although the zoning system document is ready and has been signed by local people, there are still conflicts from time to time. Thus, increasing the economic welfare and prosperity of the local people around Teluk

Cenderawasih National Park is a prerequisite, even though it is a big challenge.

The BBTNTC officers need to prioritize dealings with the programs and projects in the national park. High anthropogenic disturbances in Teluk Cenderawasih National Park occur due to economic reasons; therefore, economic programs should be the main priority. The only way to reduce economic problems is through providing alternative economic incentives, which will enable conservation efforts to run for long periods.

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