Negotiating Stakeholder Agreements for Conservation: The Case of Tubbataha Reefs, Philippines

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ABSTRACT

Many conservation projects fail because local stakeholders share a disproportionate burden of the cost arising from a no-take zone compared to benefits accruing to global and national stakeholders and more powerful groups. Conflicts arising from the establishment of marine protected areas are usually caused by outside interests colliding with local interests and priorities. Ensuring fishers who will lose access to fishing grounds will be able to negotiate and obtain benefits in return for their losses is key to gaining their support to no-take provisions of a marine protected area. The case of establishing an offshore marine protected area in the Tubbataha Reefs, in the center of the Sulu Sea, Philippines, offers a practitioners' perspective in reconciling competing interests based on the sharing of costs and benefits that all stakeholders consider satisfactory and equitable. User fees from diver groups and grant payments from outside donors that supported local livelihoods and park operations offer lessons in cost and benefit sharing. The experience highlights the importance of generating stakeholders' agreements based on cost and benefit-sharing as a platform for conservation actions.

Keywords: marine protected areas, stakeholders, Tubbataha, coral reefs, marine biodiversity, conservation

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INTRODUCTION

Stakeholders are individuals, groups or institutions sharing common or conflicting concerns, values or interests in a park and who depend on it for some given reason, whether economic, political, social, ecological or even aesthetic. The stakeholder community is a site of both solidarity and conflict, shifting alliances and power structures. People have various interests based on their status and sources of income, and logically, people will look after their own interests.

At the onset of any conservation project, the overlapping and differing stakeholder interests will have to be negotiated to arrive at an arrangement beneficial to all stakeholders. Negotiation is oftentimes embedded in the participatory processes and used with other terms such as social dialogue, consensus-building, mediated agreements, conflict resolution and the like.

Most people would agree that the sustainable use and management of natural resources requires collaboration between different stakeholders. However, collaboration does not develop by people merely agreeing to it. There are barriers to consensus -building among multiple stakeholders that need to be overcome. There are also considerable differences in interests and power amongst those using or dealing with natural resources. Power is not neutral within any given community. There will always be those who possess more influence, higher authority, more knowledge or material wealth, which affect their social, economic and political power. These dynamics strongly influence public decisions including the establishment of conservation areas.

These aspects of natural resource management are often weakly dealt by government departments, local institutions and development agencies that are used to centralized top-down approaches to conservation. In some cases, inappropriately designed development projects impede the creation of social capital and the mobilization of internal capital - both vital ingredients to developing and sustaining institutions for managing common pool resources. Social capital is measured by the quality of social relations, degree of cooperation and trust and willingness to sacrifice one's own self-interest for the collective good. Internal or local capital comprises the skills, financial or in-kind resources that the community can mobilize collectively to achieve a common good. The role of social capital as an important pre-condition to promoting sustainable use of common pool resources has been extensively discussed in the commons literature (Ostrom 1990, Wade 1994, Baland & Platteau 1996, Agrawal 2002).

The experience of integrating conservation and development in the last two decades show that there are few win-win solutions and that there are winners and losers (Brandon & Wells 1992, Larsen et al 1998, McShane & Wells 2004). The lessons point to the role of agreements and win-win platforms as a necessary part of the design, planning and implementation of conservation projects. Trade-offs exists between different interests and priorities, most often sharply divided between economic development, social welfare and environmental goals. A large part of the literature is beginning to detail the tradeoffs between sections of society and biodiversity conservation, often suggesting the rich people benefiting from conservation while the poor bear the brunt of the costs (Wells 1992, Ghimire & Pimbert 1997, Cartwright 1991, Hulme & Infield 2001, Adams & Infield, 2001).

Lately, conservation agents with their huge financial backing and political connections, have been criticized for imposing their preservationist agendas to the detriment of the majority of poorer, fragmented and more powerless groups particularly indigenous peoples who have less access and voice in decisions affecting their lives (Chapin 2004). Conservation areas established under these conditions face an uncertain future as displaced user groups resent and may even undermine the continued operation of the conservation area. To avoid conflict, local communities' economic losses should be compensated for in the form of cash payments, goods or services (Brandon & Wells 1992, Abbot & Thomas, 2001). Ensuring fishers who will lose access to fishing grounds will be able to negotiate and obtain benefits in return for their losses is key to gaining their support to no-take provisions of a marine protected area.

The history of conservation projects offers important lessons to the achievement of negotiated solutions as a

platform for a conservation strategy. The conservation literature views negotiation as an essential part of the participatory process leading to a common vision of a conservation area. It is the part of a process in forging win-win outcomes as a platform for developing a shared vision (Allen at al 2000; Borrini-Feyerband 2000, Babbit et al 1994).

In protected areas settings, the conservation literature cautions on the likely existence of unequal power relationships among stakeholders and potential pitfalls of limiting participation to the rural elite who tend to capture most of the benefits (Allen at al 2000, Borrini-Feyerabend et al 2004). They caution against disenfranchising the poor and marginal groups in the participatory process and encourage practitioners to be more inclusive in their methodologies.

In their attempt to be more inclusive, development practitioners developed parallel streams of consultations to reach out to inaccessible groups particularly women, indigenous peoples and other "invisible" groups. In these parallel meetings, the collective aspirations, strategies, expected outcomes are processed and distilled through facilitated exercises. The group elects a representative to articulate their interests and negotiate in their behalf in the bigger multi-stakeholder settings. This way, the plurality of interests and stakes are considered in the visioning and planning exercise. Negotiations based on more pluralistic platforms tend to be more credible and respected by stakeholders (Borrini-Feyerabend 2000).

The consultation process applied in Tubbataha National Marine Park (TRNMP) takes cue from the need to include the fishers and stakeholders of Cagayancillo in the park planning process. This attempt departs from the centralized approaches of national government agencies in establishing protected areas without the participation of affected communities. Oftentimes, parks established this way were met with resistance and rejection, as in the case of the Mangyan and Tagabanua tribes when they rejected attempts in establishing parks in Mindoro and Coron Island, Palawan, respectively (NIPAP 2003).

This paper describes the process, results and lessons generated from establishing the Tubbataha Reefs National Marine Park (TRNMP), an offshore marine protected area in the Sulu Sea, Philippines.

1.1 Site Description

The Philippines, together with Malaysia and the Indonesia, form part of the Sulu-Sulwesi ecoregion that encompass the "coral triangle" which is known as the global epicenter for coral diversity. The Cagayan ridge in the Sulu Sea is home to extensive coral reefs, underwater sea mounts and a high biodiversity of species and habitat types. Located at the center of the Sulu Sea (N 8°50'677" E 119°55'734"), the Tubbataha Reefs National Marine Park (TRNMP) is the largest coral atoll in the Philippines and the country's only national marine park. The park covers an area of 33,200 hectares and is located about 160 kilometers southeast of Puerto Princesa City and 80 kilometers southwest of Cagayancillo municipality. (Fig.1). Biologists, oceanographers, ornithologists, fishery and coral experts as well as fishing operators, environmental NGOs, scuba divers, dive boat operators and government agencies have taken interest in Tubbataha's rich marine life and abundant fishery. Lately, the discovery of commercial quantities of natural gas has fuelled a gold rush among energy producers to stake their claims in untapped offshore gas fields in the Sulu Sea off the coast of Eastern Palawan.

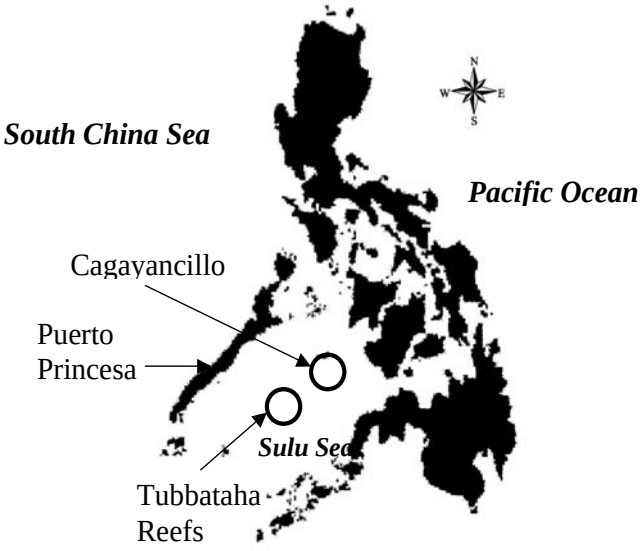

Fig. 1. Map of Tubbataha Reef Natural Marine Park

The TRNMP reef complex consists of two coral atolls separated by a channel eight kilometers wide. The larger north reef is about 16 kilometers long and 4.5 kilometers wide. The south reef is about 5 kilometers long and 3 kilometers wide. Since 1982, biologists, oceanographers and geologists have been fascinated by the manner of reef formation and the high diversity in terms of species numbers and habitat types (Alcala 1993, Dollar & Alcala 1993, Dollar1999). The complex harbors 6 species of sharks, 79 algae species and 7 species of seagrass (White & Arquiza, 1999). The south islet has a lighthouse and serves as nesting ground for 2 species of turtles and 5 out of 12 species of seabirds (Manamtam, 1996). For divers, the more interesting places are the fringing reefs, walls and drop-offs that provide home to 396 species of coral and 463 species of fish (WWF 2004). The United Nations Education, Science and Cultural Office (UNESCO) declared Tubbataha Reefs a World Heritage Site in 1993.

The Tubbataha Reef is believed to provide the Sulu seas and eastern coastline of Palawan with fish and invertebrate larvae (Alcala, 1993). Biologists believe the water current disperses these larvae and enriches the coral reefs and fishing grounds around the Sulu Sea. Studies show the beneficial effects of MPAs to surrounding fishing grounds (Alcala 1999, Alcala & Russ 1990, Ballantine, 1994, 1995, 1997, 1998; Bohnsack, 1994; PDT, 1990; Russ and Alcala, 1989, 1996).

1.2 Legal Basis

On 11 August 1988, President Corazon Aquino signed Presidential Proclamation 306, creating the Tubbataha Reef National Marine Park (TRNMP), making it the first marine protected area (MPA) in the country. This proclamation also transferred Tubbataha's management jurisdiction from the Municipal Government of Cagayancillo to the national government through the DENR.

By the 1990s, the unique and outstanding natural characteristics of Tubbataha have earned enough renown to command international attention. The United Nations Educational, Scientific and Cultural Organization (UNESCO) declared it a World Heritage Site on 11 December 1993. It is the only marine World Heritage Site in Southeast Asia. On 19 November 1999 Tubbataha was inscribed in the List of Wetlands of International Importance, also known as the Ramsar List.

1.3 Issues and Threats

Since the early 1980s, Tubbataha has been a prime destination for scuba divers from the Philippines and other countries. At the same time, Tubbataha has been the prime fishing ground for commercial fishing vessels plying the Sulu Sea and for fishers from Cagayancillo municipality that has jurisdiction over the area. A commercial seaweed farm operated within the reef before it was aborted due to opposition from environmental groups. In 1989, the near pristine condition of the reefs deteriorated due to illegal fishing, including use of explosives, indiscriminate dropping of anchors and unscrupulous collection of wildlife. Fishers from China and Taiwan encroach into the Sulu Sea to catch turtles, live fish and sharks using destructive gears. The living coral cover on the outer reefs had decreased by 24 percent (White et al, 2003). In 1992, the condition of the reefs improved but the El Niño event in 1998 coincided with the hottest year in recorded history and the worldwide increase in sea surface temperatures affected the reefs. Tubbataha lost more than 20% living hard coral since 1998 due to warm water bleaching (White et al, 2003).

1.4 Management History

A timeline of management events up to the present follows:

1988	Park declared by Presidential Decree
1989	Seaweed farm established but stopped in 1990. First draft of park management plan based on limited information
1990	Sporadic patrols started to stop illegal and destructive fishing
1991	Illegal seaweed farm removed from the Park
1992	Research expeditions by Silliman University to collect baseline data on the coral reef
1993	Park management plan re-drafted; illegal activities increase

1993 UNESCO World Heritage status declared

1995 Japan International Cooperation Agency (JICA), Marine Parks Center of Japan, Department of Environment and Natural Resources (DENR) and Haribon Foundation conduct marine and bird studies; Presidential Task Force set up to implement management plan and provide funds; Philippine Navy assigned to guard park

1996 Management plan refined with support from JICA, DENR, Palawan Council for Sustainable Development (PCSD), World Wide Fund for Nature (WWF) and stakeholders in Palawan and Cagayancillo

1998 Protected Area Management Board (PAMB) formed; management plans endorsed in a workshop with all stakeholders with support from PCSD, DENR, WWF, Sulu Fund; coral bleaching event kills more than 20% of living coral cover

1999 PAMB becomes operational with a park manager appointed and supported by WWF; Global Environment Facility (GEF) approves 5-year funding through United Nations Development Program (UNDP) and WWF to implement park management plan; Park ranger station constructed

2000 Management plan fully endorsed by the PAMB for implementation and user fees based on willingness-to-pay study of WWF established; Tubbataha Management Office (TMO) organized. Coastal Resources Management Project (CRMP) and the Sulu Fund jointly implement reef monitoring; PAMB & WWF implements ecosystem research & monitoring plan

2001 LGU of Cagayancillo establishes five marine protected areas (MPA). WWF launches credit and livelihood program in Cagayancillo municipality.

2005 End of GEF-UNDP funded WWF project. Participatory stakeholder evaluation conducted.

1.5 Stakeholders

The stakeholders of Tubbataha, as well as in many other protected areas, reflect heterogeneity across stakeholder groups and changing power relationships. Table 1 presents the stakeholder organizations, mandates, interests and scale of operation as they relate to the TRNMP.

1.5.1 National Government Agencies

The National Government Agencies comprises the Dept of Environment and Natural Resources (DENR) and the Office of the President. The DENR is mandated to manage the protected areas system of the country under the National Integrated Protected Areas Act. The former President Fidel V. Ramos, being an avid diver himself, has brought the powers of his office to trouble shoot the park. The creation of the task force in 1995 by the Office of the President was in line with the purpose of establishing Tubbataha as a national park.

1.5.2 Local Government Units

The local government units of Cagayancillo comprising the municipal and barangay governments have a stake in the park as it used to be under their political jurisdiction. The interest of the local government units lies not only in the preservation of the park's resources but also in the generation of funds to benefit the LGU, and to finance social services particularly to its constituency whose livelihood is affected by the cessation of access to park resources. The municipal and barangay government officials of Cagayancilllo wanted to regain their management control over the park. Their main reason was their exclusion from any benefits derived from the park which was their traditional fishing grounds. The barangay officials wanted not just management control but also extraction rights. These rights were not just limited to fisheries but also to shells, birds and turtle eggs and the establishment of seaweed farm within the park.

One reason behind the "aggressive" position of the barangay leadership was that nobody had explained to them and to their constituency the reason behind the sudden ban on extraction activities in Tubbataha Reef. The mayor, then a member of the Executive Committee of Tubbataha Reef National Marine Parks Task Force was understandably interested in the municipality's share in the proceeds from tourism in Tubbataha Reefs. Given these explicit aspirations, fixing the user fee

Stakeholder	Mandate	Interests	Level
GOVERNMENT			
Office of the President	Execute laws through National agencies	Preservation of resources	National
Department of National Defense (DND)	Defense and security	Enforcement of existing regulations	National
Department of Environment and Natural Resources (DENR)	Conservation of Natural resources	Preservation of resources	National
Department of Tourism (DOT)	Tourism promotion	Preservation of resources	National
Department of Budget Management (DBM)	Allocation of financial resources	Preservation of resources	National
LOCAL GOVERNMENT UNITS			
Palawan Council for Sustainable Development (PCSD)	Implementation of RA 7611	Preservation of resources; jurisdiction under RA 7611	Provincial
Provincial government of Palawan	Governance	Generation of funds for park management and other activities; jurisdiction under RA 7611	Provincial
Municipal government of Cagayancillo	Governance	Access to park's resources, generation of funds for local governance, alternative livelihood	Local
Barangay government of Cagayancillo	Governance	Access to park's resources and generation of funds for local governance	Local
Private Sector			
Diving tour operators	Live-Aboard Dive business	Preservation of resources and safe park access	Local
Cagayancillo fisherfolks	Fishing	Access to park's resources	Local
Palawan fishermen	Fishing	Access to park's resources	Local
Outside fishermen	Fishing	Access to park's resources	Local
NGOs			
WWF	Biodiversity conservation	Preservation of the resource while addressing concerns of communities in Cagayancillo	Global
SAGUDA	Conservation	Preservation of the resources	Local
Research Institutions Marine Science Institution (MSI), Silliman University, Western Palawan University	Research; applied research	Preservation of the resources	National/Local

Table 1. Tubbataha Reef Stakeholders, Mandates, Interests and Level of Involvement in Tubbataha

system and benefit-sharing arrangements were definitely considered key to resolving the issue of management control.

While the vice-mayor also lobbied for municipal control of Tubbataha Reef, he admitted their lack of knowledge and skills in environmental management and their difficulty in stopping the use of destructive fishing methods. He was considering alternative livelihood projects for the residents of Cagayancillo as part of the solution to the issue. It appeared that the poverty level in the municipal and barangay level was such that the leadership cannot overemphasize their need to derive economic benefits from the project.

Surprisingly, the community members were not as adamant as their leadership to regain management control over Tubbataha Reef. They demanded more intensely to have persons of authority explain to them the reason for banning extractive activities in the park. They also wanted clarification on their participation in park management particularly in areas of decision-making and rule enforcement and their share from proceeds derived from the beneficial use of the park. It was only in Brgy. Nusa that they raised the need to

revive their fishing rights in the park. Likewise, it was only in Brgy. Magsaysay that the ban on the slaughter of sea turtles for meat was raised. The generally open position of the rest of the communities and their eagerness to participate augured well for the existing management arrangement.

1.5.3 PCSD

Between the divergence of interests of the national agencies and those of the municipal and barangay government units, was the provincial government in the person of the Governor, who chairs the Palawan Council for Sustainable Development (PCSD). The PCSD is mandated to implement the Environmental Critical Areas Network of the Strategic Environmental Plan of Palawan passed under a Congressional Act (RA 7611). The PCSD had a stake in exercising its devolved powers under RA 7611 over Tubbataha and to manage it under their own terms.

1.5.4 Fishing Operators

The fishing operators in Tubbataha catch a range of species from coral associated species such as napoleon wrasses, groupers, lobsters, sharks (for their fins) and sea cucumbers to pelagics and small pelagics. The dominant fishing gears used are long lines, hook and lines, purse seines and ring nets. There are occasional reports of destructive and illegal fishing including the use of dynamite and cyanide. Chinese poachers have been reported to enter Tubbataha to catch turtles and live fish. The resources extracted by these fishing methods were not limited to fisheries. Sea turtle and eggs of sea birds, giant clams and collector's shells were also included (White & Palaganas, 1991).

The problem of resource extraction in Tubbataha Reefs is a recent phenomenon resulting from a confluence of factors: resource depletion of other traditional fishing grounds, commercialization of fishing production, modernization & improvement of fishing and sea transport technology and increasing unavailability of farmlands in out-migration areas in the Visayas. The lack of effective enforcement allows illegal, unregulated and unreported fishing to prosper in Tubbataha.

1.5.5 Dive Tour operators

Simultaneous with intensified fishing in the Tubbataha Reefs was the development of the diving industry in the Philippines. The reef hosted the first diving expedition in 1982 and from then on became one of the world's top diving destinations. It is estimated that during March to May of 2006, there are about 80 boat-trips and about 1,500 guest-visits to Tubbataha's diving spots. Total spending is estimated at US$ 1.9 Million per year excluding foreign travel.

The presence of dive boats discourages illegal fishing activities during the tourist season. Members of the diving industry were the first to raise their voices against the fishing operation in the area. Because of the prohibitive cost of diving to Tubbataha, these divers are mostly rich and influential people. Some of them have cross-memberships with NGOs, research institutions and government agencies.

1.5.6 NGOs

The environmental NGOs (WWF-Philippines, Sulu Fund, Palawan NGO Network Inc. & SAGUDA) in Palawan have always supported the preservation of the Tubbataha Reef, as evidenced by their involvement in a number of conservation activities benefiting the reef. Their involvement has mainly been in information, education and communication campaigns, research and monitoring, community organizing in Cagayancillo, policy advocacy, installation of mooring buoys and participation in policy- making bodies. But the remoteness of the Tubbataha Reefs (the reason for its relatively pristine condition) and their limited resources constrain their participation in on-site activities. Later, the Environmental Legal Assistance Center (ELAC) provided the legal services to help the Park on its enforcement work.

1.5.7 Research Institutions

Research institutions were occasionally present in Tubbataha Reef. Their presence was dictated by research interest and fund availability. Silliman University conducted earlier researches in Tubbataha in the 1990's and published their findings in 1993 and

1999 (Alcala 1993, Dollar & Alcala 1993, Dollar1999). The CCEF and EarthWatch volunteer group undertook survey expeditions to monitor reef health in Tubbataha Reefs in the early 2000's and published their findings. The Western Palawan University and University of the Philippines Visayas conducted various studies in 2004. These research institutions wanted to preserve Tubbataha Reefs as a living laboratory for their scientific and educational use.

METHODS AND MATERIALS

This section describes the process used to ensure participation of the more marginalized stakeholders, reconcile the different interests of stakeholders and generate the agreements that serve as basis in managing and sustaining the park. The process initiated in 1998 involves five steps: (1) conduct of stakeholders' analysis, (2) community workshops with Cagayancillo' s small-scale fishers to prepare for their participation in the stakeholders' meeting, (3) small meetings between small-scale fishers and their local government officials to consolidate their positions for the stakeholders meetings, (4) small meetings between personnel of environmental NGOs and government agencies to consolidate their positions for the stakeholders meetings; (5) conduct of the stakeholders' meeting where the agreements together with vision, issues and action plan were generated and (6) monitoring and evaluation.

Stakeholders Analysis

The stakeholders' analysis was conducted to identify the stakeholders, characterize their interests and determine their capability and potential contribution to manage the park. Knowing their capability was important because they would prepare and implement the management plan and the capability of a stakeholder would define its role in the implementation. Through the stakeholders' analysis and the extent of their involvement in preparatory meetings and small group workshops, the management measures to be implemented could also be designed to be within their capacity.

Figure 2 depicts the flow of activities completing the full cycle of project management beginning from an analysis of stakeholder interests to the formulation, implementation and monitoring of the management plan. The cycle culminated with the presentation of the project outcomes, participatory evaluation, generation of lessons and recommendations from a stakeholder workshop in 2005.

RESULTS

3.1 Conduct of Stakeholders' Analysis

The stakeholders were characterized as to mandate, interest, level of involvement in Tubbataha (Table 1). The detailed explanation of each stakeholder group is presented in the preceding section.

The stakeholders in Tubbataha Reefs vary with respect to their interests and to degree of power they hold. We classified stakeholder groups by their interests, namely: pro-preservation, pro-extraction, fund generation, alternative livelihoods and national security .

The following agencies comprise the "preservationist" category: Office of the President, Department of National Defense (DND), Department of Environment and Natural Resources (DENR), Department of Tourism (DOT), Department of Budget and Management (DBM), Palawan Council for Sustainable Development (PCSD), Silliman University, Marine

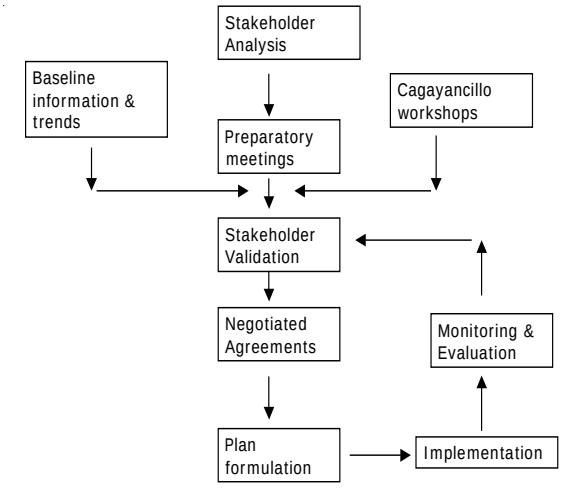

Fig. 2. Stakeholder Process in the Formulation and Implementation of the Management Plan

Science Institute, Saguda NGO, SPCP, dive operations and divers, World Wide Fund for Nature - Philippines. The "pro-extraction" group consists of the Municipal and barangay local government units of Cagayancillo, Cagayancillo fisherfolks, Palawan fishers and outside fishers. A large sub-group of fishing operators are usually in the area for 6-7 months in a year coming not only from Cagayancillo and Palawan but from Luzon and Visayas and even from China and Taiwan. Local residents of Cagayancillo, known as *Cagayanen,* enjoyed the privilege of fishing on the coral reefs and in the offshore waters by virtue of their residence. Outsiders were required to get a fishing permit from the municipal mayor's office in the town center. The coverage of the fishing permit included the Tubbataha Reefs.

The *Cagayanen* are no longer considered a stakeholder by themselves, i.e., separate from the islands' fishing operators or from the constituency represented by its local government. This is because migration from the Visayas and the resulting acculturation and intermarriage has made it difficult to differentiate the *Cagayanen* from the new settlers who are engaged in fishing.

The municipal LGU, WWF and other NGOs constituted another group that promoted alternative livelihoods for affected fishers. Those expecting cash benefits from park user fees are the provincial government and Cagancillo LGUs.

The DND through the Philippine Navy has a continuous presence in the park. The area is important for safeguarding national security during the terrorist threats emanating from the southern Philippines. The diving tour and fishing operators are seasonally physically present although the latter's activities are heavily curtailed by the presence of the Philippine Navy.

In the case of Tubbataha, the stakeholders' interests follow the typical conservation-development divide. Interests are sharply contrasted between those pushing for more preservationist approaches such as banning fishing within the park and those claiming their rights to extract resources in the park. These interests also differ across scales. Interests of the provincial, national and global stakeholders collide with those directly dependent on the park for livelihoods and government allotments. Not only are interests sharply divided, power imbalances exist across stakeholders and also within a stakeholder group.

For example, the category of "preservationist" stakeholders has large political and financial backing. This category consists of the dive boat operators, international conservation NGOs, donor agencies, provincial and municipal officials and national government agencies. This block lobbied to declare the entire 33,000 park as a no-take zone for fishing. Only recreational diving and research were proposed as allowable activities.

Within the "extractive" group, power differs as the commercial fishing operators have more money and flexibility to fish elsewhere within the Sulu Sea. They are also more vocal during meetings and are able to articulate their concerns. In contrast, the smaller fishers from Cagayancillo are fragmented, marginalized and have little voice to influence policies that may affect their condition. They fish in Tubbataha for livelihood and capture sea turtles for ritual food.

In the middle are the local government units and the some NGO members who may be open to limited and regulated use of the reef's area fisheries subject to limits with respect to its sustainable yield and carrying capacity. Although this option was discussed, the cost of monitoring sustainable catches and the viability of launching fishing expeditions to Tubbataha given prescribed limits to catches rendered this option unfeasible.

Thus, the conflict is sharper between the "extractive" and "preservationist" groups. The conflict seems to be skewed in favor of the "preservationist" block since the position had powerful backing from wealthier and politically connected stakeholders. Those losing out in the park are the Cagayanen and outside fishing operators. In contrast to Cagayancillo fishers, outside fishing operators can fish elsewhere given the no-take policy. For Cagayancillo residents, the conflict remains unresolved until the issue of livelihood is addressed. Cagayancillo residents consider Tubbataha Reef as part of their traditional food range and felt entitled to its

use. This means that if other stakeholders are directly and indirectly benefiting from Tubbataha Reef, they should pay for their use. Ideally, the share of the local residents from the proceeds must be enough to replace their foregone benefits. Although they proposed a 7% sharing scheme from user fees, the basis of this proposal is unknown outside the Cagayancillo community.

3.2 Community Workshops and Small Meetings

It is recognized that negotiations based on stakeholders' interests alone cannot start given the poor quality of relationships between government agencies, NGOs and fishers of Tubbataha. For example, relations between the Palawan-based NGOs, Phil. Navy and and local Cagayancillo fishers were strained over past enforcement actions in Tubbataha. Their relationship must improve for agreements to come out from the process.

Recognizing the relational problems and disparities in power, workshops and meetings were held before the final multi-stakeholder planning workshop. The community workshops were done to draw out the common interest of Cagayancillo fishers in Tubbataha Reef, identify areas of compromise and improve their skills in expressing their interest and negotiating with other groups. A Palawan-based NGO, known to be a local advocate for fishers' rights, facilitated the focus group discussions in five island barangays in Cagayancillo.

Results from the Cagayancillo workshop show that majority of its fishers wanted a share derived from user fees, followed by management control, participation in enforcement, fishing and extraction rights and access to alternative livelihoods. One barangay wanted to revive fishing rights to Tubbataha Reefs. The municipal officials were briefed on the result of the workshops and a common position was agreed upon which the officials agreed to present in the stakeholder meeting.

3.3 Conduct of Stakeholders Workshop

Preparations

Based on a stakeholders list, a list of stakeholders who would attend the workshop was made. WWF sent a letter to each listed stakeholder requesting for an interview. A set of guide questions was prepared for the interview. The guide questions asked for the stakeholders' interests, current use of the reefs resources, potential contribution to its management and role in managing it. The interview did not only draw out information from the stakeholders. The process also enabled the stakeholders to reflect on the current state of Tubbataha, weigh its options for the future and prepare their positions for the stakeholders' workshop.

Within two weeks before the workshop, the small meetings between WWF and other stakeholders further enhanced ground working activities. The Cagayancillo workshops were part of this process. The stakeholders include other NGO, provincial government, DENR, Philippine Navy, dive shop operators and scientists who have done work in the reef. The meetings validated the positions of each stakeholder, hew their differences to a common view and consolidate a common position for the reef's closure to extractive activities. Within a week before the workshop, WWF and the facilitating NGO, Palawan Network of NGOs Inc. (PNNI), called on the stakeholders to ensure their attendance to the meeting.

Validation of Findings and Resolving Conflicts

The stakeholder validation workshop began with two presentations: one is the physical and biological characteristics of Tubbataha and another on its history and results of the stakeholders' analysis and preparatory consultations. The stakeholders validated the information contained in the presentation afterward. The differing positions of the pro-extraction and preservationist groups were presented and validated.

The Cagayancillo group presented their request to be granted fishing access to Tubbataha in one of zones designated for the purpose. But the Tubbataha park management was concerned with cost of conducting fishery studies, estimating sustainable yields and monitoring allowable catches for each fisher that entered Tubbataha. This imposed a heavy burden on park management. Besides, with catch limits, the potential returns from the yield may not be enough to cover for the cost of traveling all the way to Tubbataha. In response, the Cagayancillo LGU proposed instead

for technical assistance in coastal resources management and enforcement against illegal fishing. The LGU also asked for technical and credit support for seaweed production (where most fishers are engaged in one way or another). The LGU also asked for a 7% share from future user fees since the idea of charging entry was presented during the preparatory meetings.

The bigger group agreed to have Cagayancillo LGU to take on a greater role in management and enforcement in Tubbataha through their membership in the TPAMB but the group avoided making financial commitments. At that time, WWF was accessing grant support for park infrastructure and Cagayancillo livelihoods from the Global Environment Facility through the United Nations Development Program. In return for this future support, WWF asked the bigger group to support a user fee system that will be charged among divers and boat operators for entry to the park. The group acceded to this proposal and the benefit sharing with Cagayancillo.

The purpose of the presentations was to draw out the stakeholders from their view of Tubbataha as confined by their current interest and enable them to see it in a broader picture including its diversity of users. The validation enabled the stakeholders to share similar understanding of the condition of Tubbataha by providing new information and rectifying misinformation. This facilitated consensus to be arrived on the proposals, counter-proposals and their refinements. The facilitator ensured that consensus was reached for each decision point reached. No decision was reached using voting as the means to resolve the issue.

After the stakeholders agreed on the access and compensation issue, they put together their vision of Tubbataha Reef. They subsequently worked as small groups and identified the issues that must be addressed to attain the vision. The small group output is consolidated into plenary output. The consolidation includes categorizing the issues. The categories include enforcement, research, alternative livelihood and funds among others.

Based on the validated issues, the participants again worked in small groups and formulated the actions that will be done on each category of issue. The actions are presented in the plenary session. The break-though agreements on the actions were negotiated during the plenary session. The agreements were reached through consensus and the facilitation process used prevented a potential chaos from erupting. When the set of actions is finalized, the stakeholders proceeded to match the doers of the actions. A framework plan was derived from the workshop output.

A management plan for the TRNMP was completed based on the agreements reached among the stakeholders in the multi-stakeholder workshop in 1998 and subsequently endorsed by the TPAMB. The plan incorporated both conservation and development aspects to reflect these tradeoffs. WWF helped find donors to finance the plan and execute a project to implement agreed actions. A proposal was designed to set up park management systems, provide livelihoods and help establish coastal management in Cagayancillo.

3.4 Stakeholder Agreements

A summary of the stakeholder agreements resulting from the workshop were as follows:

Cagayancillo fishers to respect no-take zone
Commercial & Palawan fishers to respect no-take zone
Divers and dive operators to pay user fees
7% share from user fees allocated for Cagayancillo
Livelihood and CRM support for Cagayancillo
PCSD to draft bill and authorize pilot collection of user fees
PAMB to establish Tubbataha Management Office
Phil Navy & coast guard to establish and staff ranger station

The response from the commercial operators to the no-take policy was unexpected. One would expect opposition from the bigger fishing boat operators but this did not materialize when they realized Tubbataha's ecological importance in the Sulu Sea. The theory posited by Alcala (1993) that Tubbataha is a larval source for Palawan fishery and would need protection

efforts if fishers were to benefit from spillover to adjacent fishing grounds caused a turnaround among the commercial fishers. The realization on the importance of Tubbataha to the Sulu Sea and to their fishery operations was enough for them to give up their access rights to the park.

DISCUSSION

4.1 Outcomes - Five Years After

With funding from GEF through the UNDP and co-financing from Packard Foundation and WWF-US, a 5-year project implemented activities under seven components - biological research and monitoring, information and education, enforcement, sustainable financing, visitor management and coastal management and livelihood development for Cagayancillo municipality. The resources leveraged internal resources from other stakeholders. The results and outcomes are summarized below.

After 5 years, Tubbataha reefs is now operated by the Tubbataha Management Office which is staffed with eight rangers providing year-round enforcement and monitoring support using modern equipment including radar technology. The Philippine Navy and Coast Guard provide the manpower and the bi-monthly relieving trips to the ranger station. Since 1999 when enforcement campaign was launched, there were fewer reported illegal fishing violations coming from Cagayancilo and Palawan-based fishing boats. Most infractions to the park came from ships who failed to notify the rangers about their passage through the park while on their way to fish aggregating devices outside the park boundaries. In 2001-2003, Taiwanese and Chinese vessels were found poaching in the park and were jailed in Puerto Princesa. Also, some dive boat operators were suspended for various violations.

Visitor arrivals and user fee collections are on the uptrend since user fees were started in 2000. Park collections have reached P18 million since 1998 with 2006 collections approximating 80% of the core costs to run the park. Approximately 6 million pesos is needed annually to run the park, about half of which are provided through in-kind support by the Philippine Navy and Coast Guard.

While it is acknowledged that no single group or institution can provide all the required resources to run the park, a multi-stakeholder management model allows for cost and benefit-sharing which was not possible under centralized command-and-control models. Few parks in the Philippines can boast of full park staffing and a mechanism for sustainable financing through user fees. Compared to other parks, the TRNMP is well funded with financing sources ranging from user fee systems and grants from foreign donors.

Returns from investments in protection showed improvements in biological health. Reef health, fish biomass and densities have improved or have stabilized. Live coral cover stabilized at 40% from 1999-2003 before reaching 50% in 2004 (WWF 2004). For 2004, commercial fish biomass are at its highest at 60 mt/sq-km (WWF 2004) and is twice that reported by Alcala (2001) for a healthy reef at 30 mt/sq-km. Total biomass and density averaged 166 mt/sq-km and 60 individuals/100 sq-m respectively, the highest since 1998 (WWF 2004). Visitor satisfaction is high with most boat operators claiming more sightings of mega fauna species (i.e. manta rays, turtles, whalesharks, etc.).

The Cagayancillo municipality is a model in "bootstrap" development. Illegal fishing has been contained due to large part to strong leadership supported by an active citizenry. On their own initiative, local officials established five MPAs as part of their coastal resources management program. Live coral cover and fish biomass in these MPA are at their highest levels (WWF 2004). Perceived fish catches outside the MPAs by fishers during the focus group discussion reportedly increased from 10 kg/day to 15-20 kg/day for the period 1999-2004 (Todd & Nunez 2004).

In 2004, the LGU of Cagayancillo finally collected on their 7% annual share accumulating to PhP 435,000. The money was used to build a section of a farm-to-market road which improved access of farm products. A micro-credit program provides the needed financial

services that support a broad number of families and their livelihoods. The micro-credit facility released PhP 680,000 in loans to 175 borrowers for their livelihood, education and health needs and enjoys a healthy repayment rate of 90%.

The participatory evaluation in 2005 was attended by Cagayancillo LGU officials led by the mayor, and fisherfolk representatives. The delegation affirmed the positive outcomes of the project. Interestingly, the *Cagayanen* participants in the participatory evaluation did not raise the issue of reviving their fishing rights to Tubbataha. It seems the recovery of fish stocks in Cagayancillo due to enforcement of fishing laws are providing benefits on its own.

Indicator	2000 (NSO)	2004 (Subade)
Households who owned lots	82%	86%
Households who owned houses	85%	95%
Houses with GI roof	58%	72%
Households using kerosene for lighting	65%	50%
Households using LPG as cooking fuel	11%	10%
Houses with water-sealed toilets	46%	56%
Houses with television	5%	6%
Houses with refrigerator	5%	7%

Table 2. Data on Selected Living Standard Indicators in Cagayancillo: 2000 and 2004

The level of biodiversity conservation attained in TRNMP has not sacrificed socio-economic development and living standards. They are in fact the twin fruits of integrated conservation and development.

To measure changes in living standard, selected data from NSO census in 2000 and WWF-sponsored study in 2004 (Subade 2004) are compared.The living standard shows positive change in the eight indicators used. Lot ownership increases from 82 percent in 2000 to 86 percent in 2004 (Table 2). The difference is 4 percent. The increase is even greater in house ownership jumping from 85 percent in 2000 to 95 percent in 2004. The difference is 10 percent. The quality of houses has improved in even larger scale as seen in the type of roof. In 2000, only 58 of the houses have galvanized iron (GI). This percentage rises to 72 percent or 14 percent increase from the 2000.
The utilities that the households enjoy have also improved for many. The users of kerosene lamp for lighting are reduced from 65 percent in 2000 to 50 percent 2004. It means that 15 percent more households benefit from electricity in 2004 than in 2000. The percentage of liquefied petroleum gas (LPG) users as cooking fuel is about the same (11% versus 10%). But toilet ownership dramatically rises from 46 to 56 percent. The ownership of appliance has not changed much. Households with television is about the same (5% versus 6%) but slight increase in noted in refrigerator (5% versus 7%)..

Although no quantitative data exists, the fishing benefit derived by Cagyancillo from Tubbataha seems to have been offset by the higher fish catch in the fishing grounds around their islands. The small fishers using hook and line, spear and net gears are the main beneficiaries. Sources of income have diversified partly through the rising membership in livelihood cooperative. The loan that the members obtained serves as capital for general merchandise (*sari-sari*) stores, poultry, livestock, seaweed production and fishing.

An important component of the management plan which was not fulfilled was the enactment of the protected area bill for Tubbataha by Congress. As part of the NIPAS process, the PCSD drafted a protected area bill for Tubbataha and filed the bill with the office of Cong. Mitra who became the bill sponsor. The bill incorporates innovative elements to avoid problems experienced by other protected areas such as devolving chairmanship of the PAMB from DENR to the provincial governor; localizing the collection, management and accounting of protected area funds and creating a special account for user fee collections, fines and donations. Without this bill, the institutional framework and legal mandate of the TPAMB and TMO, to effect arrests at sea, are not secured by law.

Finally, the participatory evaluation conducted with the stakeholders in 2005 validated these positive results. The workshop concluded that: (1) agreements reached in 1998 were complied with, (2) current bio-physical

condition is closer to the vision through the evident improvements in coral cover, fish biomass, higher occurrences of mega-fauna species, and (4) general improvement in the socio-economic condition of Cagayancillo residents (although attribution to the project needs to be ascertained).

The evaluation completes one cycle as the lessons and recommendations from the workshop are carried into the next cycle of planning and implementation. Rarely have parks benefited from completing an entire project life cycle.

4.2 Balancing Costs and Benefits of Conservation

Central to the issue of compliance by stakeholders to these agreements was the incentive systems created resulting from the distribution of costs and benefits, rights and responsibilities among stakeholders. Higher levels of responsibility (costs) on the part of one stakeholder without parallel increase in incentives have proven unworkable in practice. On the other hand, private operators benefiting from resource rents from public goods are associated with low burdens of responsibility (or costs).

In the case of Tubbataha, one camp comprising the "preservationists" are those who directly benefited from establishing the no-take zone, This group consists of divers, dive operators, researchers, environmental NGOs and national government agencies.

On the opposite camp was the "pro-extraction" group such as the fishers and LGU officials from Cagayancillo or those who depend on Tubbataha resources for their livelihoods. With the imposition of a park and a no-take zone policy, this group will directly bear the cost by giving up their access rights and political jurisdiction to Tubbataha. Although it can be argued that the Cagayancillo and the commercial fishers were to indirectly benefit from the park through a "spillover" effect, their costs were short-term and immediate.

In principle, by having the beneficiaries "pay" for the costs borne by the fishers and service providers, each will have a positive "return" from establishing a no-take zone for Tubbataha. The objective is to create residual incentives by netting out benefits and costs arising from conservation actions.

To create the financing needed to "pay" the fishers and services provided, , a user fee system for divers based on their "willingness to pay" was introduced in 2000 (Tongson & Dygico 2004). The user fees contributed to financing the cost of park management, and fulfill the 7% share expected by the Cagayancillo LGU.

4.3 Win-Win Arrangement as Platform for Stakeholder Compliance

The success of the TRNMP can be attributed to the high degree of compliance by stakeholders to the agreements reached in 1999 and corresponding actions by the stakeholders themselves. Compliance is the fruit of win-win arrangements designed from the beginning. Except for infractions by a few dive boat operators at the early part of the user fee system, majority of the boats followed the park rules including mandatory anchoring on mooring buoys, ban on visitors to set foot on bird island and registration upon entry to the park.

The fishers from Cagayancillo became busy tending to their seaweed farms. Some island barangays set up marine sanctuaries. The LGU allocated a budget to seed 50% of a livelihood fund, provided manpower complement to manage the credit program and passed ordinances setting up five barangay-managed MPAs. The project introduced new technologies in seaweed culture to prevent diseases ("ice-ice"), shortening the harvesting cycle, organizing the farmers into cooperatives and marketing support.

The Coast Guard and Navy fulfilled staffing and provisioning commitments despite all year round including voyages across bad sea conditions during the off-season. On the part of the PCSD, they supported drafting of a draft bill for Tubbataha and provided secretariat support to every TPAMB meeting. Other NGOs provided legal and technical support to the park staff for their litigation and reef monitoring needs.

The stakeholder understanding of the reason for park set-up, banning of extractive activities and need for

cooperation is rooted on the collective vision of restoring Tubbataha to its original state for the long-term benefit of stakeholders including the fishers of Cagayancillo. These stakeholders collectively experienced the rise and fall of Tubbataha since the early 90's. This shared experience enhanced social capital that is benefiting the park.

The case affirms essence of social capital as a condition to develop trust and mutually supportive relationships and as pre-condition in achieving self-enforcing agreements. According to game theory, trust is developed through repetitive games among parties. These games play out in every stakeholder meeting where issues and decisions are deliberated and accounted for. It also affirms stakeholder management as an operational paradigm ensuring ownership and sustainability of actions.

4.4 Creating a Sea Change - The bigger challenge

The successes of Tubbataha are still dwarfed by the wide spread destruction of marine resources in the Sulu Sea. The disparity in economic yield between these areas surrounding Tubbataha and the park itself attracts poachers and violators to fish in Tubbataha especially during the off-season. Basterra and Jesse Beazely Reefs, for example, used to be highly productive reef systems but are not part of the TRNMP park boundaries. Reports indicate wide spread poaching and destruction in these reefs which is indicative of the fate of Tubbataha had interventions not materialized in the park. There is need to embed these parks and MPAs in broader Integrated Coastal Management programmes to manage "push and pull factors" to ensure sustainable development of the entire area. This means zoning a larger area for commercial fishing, municipal fishing, strict protection, oil exploration and development, tourism and seasonal closures (in the case of spawning aggreagations).

Sea change needs to happen at a larger scale. As the range of stakeholders concerned with natural resource management broadens, the complexity of the inter-linkages between them increases. In such contexts, the potential for conflicts is high and tools are needed to examine and address these relationships. These tools will help inform the allocation of costs and benefits and elicit workable solutions from affected stakeholders.

More work needs to be done in developing capacities of park managers throughout our park system in using participatory tools in designing win-win arrangements and resolving conflicts through facilitation. As shown by the Tubbataha case, a win-win arrangement in turn, can transform "battlefield" natural resource use into shared assets capable of meeting divergent needs and aspirations. The greater challenge is bringing the lessons and tools from these small successes to create the sea change that is needed.

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