

Ocean & Coastal Management

Financing integrated coastal management: experiences in Mabini and Tingloy, Batangas, Philippines

Vol 48, Isss 3–6, Pgs 205-484

Nicole Milne^a.

Patrick Christie^b

^a School of Marine Affairs, University of Washington, 3707 Brooklyn Avenue NE Seattle, WA 98105, USA

^b School of Marine Affairs and Henry M. Jackson School of International Studies, University of Washington, 3707 Brooklyn Avenue NE, Seattle, WA 98105, USA

Abstract

Integrated coastal management (ICM) is increasingly seen as an effective means to manage coastal resources around the world. In 1991 the passage of the Local Government Code in the Philippines devolved coastal management responsibilities to local governments. At the time of decentralization, coastal municipalities were largely unaware of the tasks associated with managing coastal resources. Additionally, many municipalities found the financial and technical support supplied by the central government to cover these additional responsibilities insufficient. Today, local government units (LGU) struggle to adequately plan, implement, and enforce ICM related activities and legislation. These challenges are due in part to deficiencies in fiscal administration and the misaligned priorities of many LGUs and coastal communities. Several coastal zone stakeholders, from the local to the national level, were interviewed for this analysis; key-informants expressed various perceptions on the financing of ICM in Mabini and Tingloy, Batangas.

© 2005 Elsevier Ltd. All rights reserved.

www.elsevier.com/locate/ocecoaman

0964-5691/\$ - see front matter © 2005 Elsevier Ltd. All rights reserved.

doi:10.1016/j.ocecoaman.2005.04.004

Corresponding author. Tel.: +1 206 718 0078.

E-mail address: nicmilne@u.washington.edu (N. Milne).

1. Introduction

Coastal management activities are rapidly expanding in Southeast Asia due to the urgent need to conserve and manage coastal resources while ensuring secure livelihoods for coastal community members. Integrated coastal management (ICM) is a management framework increasingly being adopted by governments, non-governmental organizations (NGOs), practitioners, coastal communities, and others to help societies align their patterns of coastal resource use in order that ecosystems and communities maintain their productivity and viability. ICM processes attempt to address the complex array of issues present in coastal areas, including: overfishing, destructive fishing techniques, illegal cutting of mangroves, pollution from coastal and upland sources, and conflict over access to resources. The goal of ICM typically is to maximize human benefit from coastal zone resources by maintaining fundamental ecological processes [1].

In the Philippines the process of ICM is derailed by a multitude of factors operating at various scales, such as: the lack of political will, insufficient resources, overlapping institutional jurisdictions, and rising populations in coastal communities. Lowry et al. [2] note that the devolution of ICM authority from the national government to the local government units (LGU) in 1991 [3] did not, for the most part, address the need for improved capacity and additional resources. Today, many national agencies are understaffed and underfunded [2], further complicating their ability to implement sustained ICM processes. The lack of financial resources available for ICM, a major derailing factor, also threatens the sustainability of the ICM process [2,4–9]. In a 1997 survey of coastal mayors, 80% identified the lack of technical expertise and 75% identified inadequate funding for coastal management as key constraints to effective ICM [10].

ICM processes are sustainable to the extent that they contribute to a pattern of self-sustaining behaviors, which lead to the continual practice of ICM. Ideally they are supported by stakeholders from national institutions and endure changes in political appointments. While many factors combine to produce a successful ICM project, Christie [11] maintains that due to limited financial resources, externally funded projects have been the main proponents and implementers of ICM within developing countries. The dependence on external financial and technical assistance creates the potential for unsustainability of institutions and policies as projects are terminated and support staff and funding are withdrawn.

This paper explores the experiences of two coastal communities in the Philippines, Mabini and Tingloy in Batangas, in financing ICM efforts. These study sites were selected for several reasons: (1) their close proximity to Manila makes them popular tourist destinations for Philippine nationals and international tourists, (2) during the time of this research a local NGO was in the process of establishing a revenue-generating system for tourists in the area, and (3) prior research in the communities established a communication network that facilitated and enhanced research on ICM financing. The questions this research attempts to answer are: (1) How and to what degree do financial factors play a role in sustaining ICM processes? (2) What factors are most likely to contribute to the success of financing mechanisms for ICM?

N. Milne, P. Christie / Ocean & Coastal Management 48 (2005) 427–449

428

And (3) What financial mechanisms are capable of sustaining ICM processes in the Philippines?

1.1. Introduction to financing ICM in the Philippines

ICM in many tropical counties is conducted through the assistance of national and international donor-supported projects. However, many central government agencies also provide technical and human resource assistance, further supporting environmental resource management efforts. Increasingly LGUs are expected by donor-supported projects to provide counterpart funds or resource assistance for ICM projects. Many donor-supported projects aspire to initiate management processes that continue indefinitely, though by definition their projects have a phase-out date when resources, such as funds and advisors are withdrawn. This can result in the decline or complete collapse of management efforts if adequate measures are not taken to assure project continuation. Nevertheless, even when ICM initiatives have the support of donors and central government agencies, some ICM efforts do not appear to have created self-sustaining ICM processes.

Relatively few of these initiatives continue once direct funding via central government agencies ceases (Few of these projects directly impact the quality of life of coastal communities or (the) quality of ecosystems [12].

The sustainability of the ICM process thereby depends upon the ability of ICM policies, institutions, activities, and practitioners to support coastal and marine resource use and conservation goals beyond donor-assisted project support. Oftentimes this necessitates the creation of internal financing mechanisms or revenue sources capable of sustaining project needs. The Coastal Resource Management Project (CRMP) defines an internal revenue source as monies from the internal revenue allotment (IRA) and those derived from local revenue-generating mechanisms. External revenue sources include: grants, loans, shares of the national wealth in addition to the IRA, national and international NGO assistance, etc. [13].

The main purpose of this research is to uncover the fundamental causes behind the perceived lack of funding for ICM in the study areas. This requires an analysis of both proximate (i.e., those most readily observed) and root causes of financial short-fallings. It also requires an analysis of the current financing mechanisms available. A financing mechanism, for the purposes of this paper is defined as a means to fund coastal and marine management activities through international aid (i.e., grants, loans, technical assistance), government budgets (including taxes, fees, surcharges, etc.), national institutions (for profit and nonprofit), trust funds, and donations. In the Philippines, two pieces of legislation devolved significant responsibility for coastal management activities to coastal communities. This devolution of authority has placed considerable stress on local governments who are already charged with considerable duties and strapped by meager budgets. The Local Government Code (LGC) of 1991 [3] devolved many responsibilities from the central government to local governments at the provincial, municipal (LGU), and *barangay* (village) levels,

N. Milne, P. Christie / Ocean & Coastal Management 48 (2005) 427–449
429

specifically regarding the provision of goods and services. Devolution also resulted in increased taxation powers and the authority to enact and enforce policies concerning issues of coastal management [9]. Another piece of legislation, the Fisheries Code of 1998 [14], mandates several mechanisms for limiting access to coastal resources. These include the establishment of protected areas and fishery management strategies such as demarcated fishery rights, limited entry into overfished areas, closed and open seasons, catch ceiling limitations, and licensing [5]. Both the LGC and the Fisheries Code gave LGUs legal authority to manage fisheries and aquatic resources within municipal waters, up to 15 km offshore [5]. Unfortunately, neither piece of legislation has devolved sufficient funds to the LGUs to cover the additional responsibilities, nor are many regional offices able to provide LGUs with enough technical support to allow the LGUs to deliver new services effectively [15]. Under the new LGC, LGUs have partial fiscal autonomy. This means they are now responsible for financing coastal management efforts with internal revenue sources. LGUs have multiple revenue sources at their disposal, including: taxes, fees and charges; a share of national taxes; a share of national wealth (i.e., internal revenue allotment or IRA); grants and donations; domestic loans; credit financing schemes; investment income from development enterprises; and inter-government cooperation [16]. The principal local revenue source for municipalities is their share of central government tax revenues, called the IRA. The IRA is transferred as a block grant from the central government to LGUs and, as such, LGUs enjoy considerable discretion in its utilization [17]. The IRA is distributed to LGUs according to a formula based on population, land area, and equal sharing. Specifically, the LGC of 1991 set the IRA of LGUs at 40% of internal revenue tax collections three years prior to the current year [17]. In other words, this year 40% of the national revenue collected 3 years prior, will be allocated among the many provinces, cities, municipalities, and *barangays* in the Philippines. Prior to the LGC, the share of LGUs in national taxes was equal to 20% of the internal revenue taxes. This increase has subsequently increased LGU dependence on the IRA. Unfortunately, many LGUs have come to see the IRA as a “dole out” and have not exerted greater effort in raising revenues through taxation powers [18]. Ultimately, the IRA share is still quite small, particularly when one considers the numerous duties to be carried out by the LGU.

Currently, the success of most ICM projects in the Philippines depends, in part, on the ability of municipalities to secure adequate financial and technical support for coastal management initiatives [2]. The funds available to municipalities for ICM related activities are typically drawn from the 20% development fund (20% of the IRA is channeled to this fund), the same pool of funds that supports other community services such as health care and education. To supplement lacking ICM budgets, communities in the Philippines and around the world are experimenting with revenue-generating strategies such as user fee systems for marine protected areas (MPA) and licenses for the use of coastal and marine resources. Increasingly, the desire to develop financing mechanisms capable of sustaining ICM activities is great, as many governments and other groups that finance conservation efforts are beginning to demand increased fiscal accountability and measurable results in

N. Milne, P. Christie / Ocean & Coastal Management 48 (2005) 427–449
430

biological, social, and economic environments [19]. Financing mechanisms able to generate funds for ICM from sources at the national, provincial, municipal, or community level, hold promise as a source that may continue past the termination of donor-sponsored ICM *projects* and initiate sustainable ICM *processes*.

2. Methods

Between July and September 2002, approximately sixty in-depth interviews were conducted with key-informants familiar with ICM activities in Mabini and Tingloy, Batangas to assess perceived trends in ICM financing. The questions explored the relationship between financing and ICM process sustainability. The informants include: government officials at various levels (30), NGO employees (11), ICM practitioners (4), resort owners (3), *bantay dagat* (sea patrol) members (10), fishermen (2), and boatmen (1). The interviews were analyzed using the qualitative analysis software Atlas.ti [20] to explore related themes between financing and ICM process sustainability. Atlas.ti assists the user in uncovering complex phenomena portrayed in textual and audio data. Relationships between themes were realized through textual queries and searches. Literature, principally from the fields of coastal management, community-based development, and development economics was used to expand upon field observations and interview data.

3. Study sites: Mabini and Tingloy, Batangas

The marine environment in the Batangas region is characterized by the coral reef ecosystem that covers much of the area and is home to approximately 290 species of hard corals [21] and 481 species of fish [22]. Mabini, the 4th class municipality that defines the northern shore of Maricaban Strait, is 4296 h in area with an estimated population of 37,474 [23]. The 5th class municipality of Tingloy, the municipality on Maricaban Island, has a total area of 1269h with a population of 17,028 [23]. Municipalities in the Philippines are organized into classes, first class through sixth. First class municipalities have the highest incomes, sixth class the lowest. All local governments undergo classification every four years based on their individual incomes. The IRA is then distributed to municipalities based upon their classification with first class municipalities receiving the largest share. The LGUs of Mabini and Tingloy fund their ICM efforts primarily through their IRA. Some LGUs have implemented revenue codes, which require some coastal resource users (e.g., fishermen, boatmen, and resorts) to register and pay a remittance to the municipality for their operations, thereby supplementing the funds derived from the IRA. Currently remittances paid to the municipality by these coastal resource users are distributed across governmental activities.

There are several organizations involved in coastal management activities in Mabini providing, to varying extents, financial, technical, and human resource support. Among the active stakeholders are provincial and local governments,

N. Milne, P. Christie / Ocean & Coastal Management 48 (2005) 427–449
431

resorts, resort owners' associations, NGOs, community organizations, and foreign research institutions. The devolution of authority over ICM has increasingly provided NGOs and businesses, specifically those engaged in tourism, with the opportunity to engage in local level coastal management processes [2], thereby aiding the LGU in its ICM efforts. The Haribon Foundation initiated the first ICM projects in Mabini in 1988, working with fishermen and later with resort owners to establish a marine reserve and three marine sanctuaries [23]. Cathedral Rock and Arthur's Rock marine sanctuaries were established principally through the initiative and involvement of resort owners who are likewise at the forefront of their management [6]. Resort owners are also responsible for the management of Twin Rocks marine sanctuary, which was established and initially managed by the nearby Balanoy community [4,6,9]. *Kabang Kalikasan ng Pilipinas* (KKP), or World Wide Fund for Nature (WWF)-Philippines, initiated the second major ICM project in 1997. KKP works primarily with the private sector and the LGU on a variety of conservation initiatives. Most recently, KKP is working in Mabini on the implementation of a conservation fee, an entrance fee to the MPAs in Mabini waters. Tingloy has recently decided to implement a conservation fee separate from Mabini's.

Other stakeholders active in the region are "people's organizations" (PO). *Samahang Pangkaunlaran ng San Teodoro Incorporated* (SPSTI) is an example of one PO that is involved in coastal management efforts in the area. Composed of approximately thirty individuals, SPSTI assists the conservation efforts of Haribon Foundation working primarily within the Twin Rocks sanctuary. SPSTI, along with the Anilao-Balayan Bay resort owners association (ABBROA), a vehicle through which resort owners collaborated on conservation efforts, was instrumental in facilitating the designation of the three sanctuaries in Mabini. SPSTI is also a member of *PAMANA ka sa Pilipinas*, a national alliance of MPA managers comprised mostly of small fishermen and *barangay* officials organized by the Haribon Foundation in 1999. Haribon continues to review and identify funding sources for SPSTI proposals. Though SPSTI struggles to acquire sufficient funding for their efforts [24], they have received assistance from various funding groups and visiting institutions, including: the Foundation for the Philippine Environment (FPE); the University of the Philippines—Marine Science Institute (UP-MSI); and *Tanggol Kalikasan*, a public interest environmental legal firm.

While local support for conservation initiatives in Mabini and Tingloy has ebbed and flowed, there is evidence that momentum for coastal conservation efforts continues to flourish [6]. Tingloy is particularly well known for its staunch support for the enforcement of fisheries regulations under the leadership of Mayor Antonio H. Atienza. Tingloy has also become active in developing a coastal resource management plan, implementing laws to ban illegal fishing techniques [23], and in establishing registration systems for fishing and passenger boats [25]. The Coral Conservation and Education Foundation (CCEF), previously the SULU Fund, began work in Tingloy in 1999. Working in Santo Tomas, a *barangay* in Tingloy, CCEF is involved in the implementation of a no-take MPA, Pulang Buli reef, on the northern side of Maricaban Island. Working primarily with community members,

N. Milne, P. Christie / Ocean & Coastal Management 48 (2005) 427–449
432

CCEF also assists in the implementation of the national fisheries code and supports the *bantay dagat*, the local sea patrol.

4. Financial commitments and contributions of ICM related activities

4.1. Commitments

Engaging in ICM typically requires some degree of financial commitment. In reviewing the coastal management activities that have been delegated to the LGU numerous financial obligations and opportunities became clear. Lowry et al. [2] developed a comprehensive list of management activities associated with various aspects of ICM, including: planning, protection and conservation, legislation, regulation, enforcement, taxation and revenue generation, and technical assistance. The LGU staff members typically responsible for carrying out ICM include: the Municipal Agricultural Officer (MAO), the Municipal Planning and Development Officer (MPDO), and the Tourism Officer. The LGU is responsible for providing ICM staff with the adequate human and technical resources (e.g., office materials, texts, access to workshops) necessary to carry out ICM related tasks.

The estimated investment cost of coastal resource management is approximately Php 1,420,000.00 with an operating cost of Php 500,000.00 per year [28]. A municipality's 20% Development Fund, used to support a wide array of public services (including ICM) varies depending on their annual IRA allotment. In 2001 Mabini's coastal resource management budget was approximately Php 500,000.00 (or \$9091 USD considering the current 55 Philippine Peso to 1 \$USD exchange rate) [26]. Tingloy's Environmental Development Program, which supports ICM, received an appropriation of Php 70,000.00 in 2001 [27].

An example of one typical ICM activity requiring financial resources is monitoring and enforcement. The *bantay dagat*, or sea patrol, originated in Cebu in the 1970s [29]. Originally it was the term used to describe the voluntary practice of sea patrol. Today *bantay dagat* are found across the country and are increasingly being compensated for their work, in the form of honoraria and other goods. The *bantay dagat* serve to educate and enforce laws regarding coastal resource use. They have proved to be a very successful enforcement strategy to curb illegal and destructive fishing practices in municipal waters [30]. The estimated investment cost for establishing a *bantay dagat* program is Php 520,000.00, with an annual operating cost of approximately Php 45-70,000.00 [28].

Today, *bantay dagat* captains in Mabini receive Php 5,000.00 a month and patrolmen receive Php 100.00 *per patrol* [31]. KKP currently pays the salaries of the *bantay dagat*. However KKP hopes that sufficient funds can be raised through the conservation fee to cover *bantay dagat* expenses in the future and thereby lessen their dependence on KKP's financial support. Additionally *bantay dagat* members are supposed to receive one sack of rice quarterly from the LGU. Members typically patrol 15–20 days a month, depending on the season. However if the weather is rough they do not go out, as the boatmen are in charge of repairing the patrol boat if

N. Milne, P. Christie / *Ocean & Coastal Management* 48 (2005) 427–449
433

it breaks and their funds are limited [31]. Tingloy has 33 volunteer *bantay dagat* members, active in patrols and apprehensions. They also receive a food allowance of Php 100.00 from KKP.

4.2. Contributions

To supplement funds provided by the LGU several municipalities in the Philippines have engaged in designing revenue-generating strategies. Promising strategies feasible through LGU legislation include various permits or licenses for the use of coastal zone waters and shoreline areas, such as port fees, fishing and aquaculture permits, and user fees for access to protected areas. Many local governments have revised their revenue codes in accordance with provisions of the LGC; and thereby increased tax rates, fees, and charges [2]. However, the extent to which LGUs are instigating or using revenues derived from coastal use fees and licenses for the maintenance of the resource base is not clear [2]. As LGUs' revenues gradually increase, they acquire larger shares of the IRA, and LGUs will be increasingly capable of engaging in ICM related tasks. However, as the cost of devolved responsibilities typically exceeds the funds available for ICM, many LGUs are left scrambling to manage the various activities within the coastal zone including the *bantay dagat*, the fishing industry, and the tourism sector.

Each marine related activity contributes to the process of ICM in a unique way; in Mabini and Tingloy the main activities today are fishing and tourism. The fishing industry has a long history in the Batangas region. Many families in the area rely upon the fishing industry for their livelihood. Though the influence of fishing has declined in recent years, fishing remains an important activity and is central to many ICM efforts in the area. According to Haribon, the number of Mabini families directly involved in fishing on a full-time basis declined from 320 families in 1980 to 203 in 1994 [32]. Similarly, in Tingloy, the number of full-time fishing families declined from 782 families in 1980 to 435 in 1994.

Fishermen in Mabini and Tingloy are required by national law to register to fish with the Philippine Coast Guard (PCG). Additionally some municipalities require fishermen to purchase a Mayor's Permit for their operation; Tingloy fishermen pay Php 300.00 annually [33]. In Mabini *banca* (small boats without motors) fishermen from outside the area must purchase an annual permit to fish in Mabini waters for Php 350.00. When fishermen are apprehended by the *bantay dagat* and are found guilty of fishing without permits in Mabini waters they are fined a penalty fee of Php 100.00. Tingloy does not have an ordinance regarding non-resident *banca* fishermen. Fishermen registration and permitting is an example of a revenue-generating strategy; however problems exist because some fishermen are apprehensive about registering to fish, as many have not had to do so in the past [34].

The role of resorts in ICM has dramatically increased, particularly in Mabini [9]. Though Tingloy has several dive sites in the area the municipality has only five resorts. Many of the resorts in Mabini are actively engaged in resource management by providing financial, technical, and human support through enforcing fishing regulations in the MPAs, participating in community organizations, and supporting

coastal-minded politicians. Their desire to protect the resources upon which the tourists depend has made them some of the strongest and most influential coastal management actors in the region [6].

The health of the tourism industry in Mabini and the increase in passenger traffic has provided additional work for boatmen operating in the area, shuttling locals and tourists between the small islands and the mainland. Today, boatmen find the majority of their passengers are dive tourists [35]. The majority of the boatmen in the area work for individual resorts and all charge the same fare; the fare goes directly to the boatmen. Boatmen typically charge Php 1,000.00 to take passengers round-trip to Tingloy from Mabini. For a dive excursion to Sombrero Island or Tingloy boatmen charge Php 700.00 for one dive and Php 1,000.00 for two [35]. During the high season it is estimated that a boatman can earn up to Php 12,000.00 but during the off-season sometimes they will not have a single trip a month, depending on the weather and the demand [35]. The boatmen pay Php 1,000.00 a year to the PCG to keep their boat registered and the *bantay dagat* monitors boat registration. Passenger boats in Tingloy pay Php 850.00 annually; it is estimated that there are 35 passenger boats in Tingloy [33].

Public-private partnerships (PPP), an affiliation between the public and private sector for the purpose of delivering a project or service traditionally provided by the public sector, are becoming increasingly popular as a means to finance and implement ICM activities. Several studies have been conducted in the region on diver's willingness to pay (WTP) an entrance fee to dive in the MPAs in the area. Based on data from 1994, approximately 22,870 divers visited the Mabini area that year with the majority being Filipinos from Manila between 30 and 40 years of age [32]. These affluent professionals are interested in marine conservation, with 87% reporting a willingness to participate in marine conservation projects and 97% willing to pay a divers fee to support coastal management activities [34]. Therefore the LGU of Mabini and KKP have recently established a conservation (or diver fee) fee for divers in Mabini waters. Through a municipal ordinance drafted by the LGU, the LGU mandates scuba divers to pay either a daily rate of Php 50.00 or purchase an annual pass for Php 1,000.00. The ordinance specifies that 85% of the diver's fee will be deposited into a trust fund to be used solely for the operations of the *bantay dagat* and other coastal management activities in the area [34]. The remaining 15% will go to the LGU. A Coastal Resource Management Board, composed of representatives from the diving community, resort owners, boat operators, NGOs, fishermen, academe, and the LGU, was established to oversee disbursements. Tingloy is also in the process of drafting a similar ordinance. With many of the dive sites located in Tingloy waters they have much to gain from the implementation of such a fee.

5. Results and discussion

Several observations were made by key-informants regarding the financing of ICM projects in the Philippines, and specifically in Mabini and Tingloy. The

N. Milne, P. Christie / Ocean & Coastal Management 48 (2005) 427–449
435

majority of the informants perceived that financing for ICM is insufficient to carry out the needed tasks. However their observations oftentimes point to larger financial or institutional problems. The informants' perceptions can be grouped under two fundamental causes. The first cause is the failure of ICM to be a priority of the LGU and other agencies and institutions within the communities. When ICM is not prioritized by the LGU, informants comment that ICM efforts were understaffed and under-funded, disagreement emerged over who was responsible for ICM, and external financial sources comprised the majority of funds for ICM.

Inadequate fiscal administration can lead to the mismanagement of funds, further derailing ICM efforts. Inadequate fiscal administration is the second cause behind the perceived lack of funds for ICM in Mabini and Tingloy. When funds are mismanaged, coastal stakeholders are generally concerned that funds are being redirected away from their intended use and not benefiting local ICM efforts and communities.

5.1. Prioritizing ICM

Prioritizing ICM is essential to ensure the health and longevity of coastal resources and the livelihoods dependent upon them. The long-term sustainability of ICM depends on LGUs asserting their role in ICM. However, NGOs, POs, private businesses, and external institutions will continue to play an important role in ICM in the area.

Many informants from Mabini and Tingloy mentioned that there are insufficient funds for ICM, which prohibits effective and sustained resource management. The multitude of tasks administered by the LGU oftentimes leaves ICM activities underfunded. Without a commitment to ICM and consistent LGU planning for ICM projects, the effects of ICM will not be realized. *Bantay dagat* programs, which exist in many coastal municipalities, frequently suffer from insufficient funding. The LGU in Tingloy cannot supply their *bantay dagat* with adequate funds for their monitoring efforts.

Interviewer: How are coastal management activities funded?

LGU staff, Tingloy: We get assistance from the annual budget, which is really not enough. For the *bantay dagat* we had appropriated them Php 50,000.00 for this year and an additional Php 50,000.00 from the supplemental budget. So now we have a total of Php 100,000.00 for our *bantay dagat*. We don't have a direct budget for coastal management but just through the *bantay dagat* program.

Interviewer: So in terms of coastal management your only activity is the *bantay dagat*?

LGU staff, Tingloy: Yes and KKP is helping (by providing funds for the *bantay dagat*) but the allocation of money is still our problem; we still don't have a fixed coastal management budget.

The lack of a fixed budget allows governments to spend funds needed for ICM elsewhere. A commitment to ICM on behalf of the LGU, coupled with transparency in the dissemination of funds may facilitate fiscal administration around ICM

N. Milne, P. Christie / Ocean & Coastal Management 48 (2005) 427–449

436

activities. The following *bantay dagat* member in Mabini feels strongly about the positive work they do for ICM in the area. Referring to the new conservation or diver's fee, the following informant suggests that earmarking funds for ICM activities, such as the *bantay dagat*, may facilitate the channeling of adequate funds to ICM programs.

Bantay Dagat member, Mabini: Since *bantay dagats* are really the ones who are working, we should also get a bigger share [of the conservation fee]. And besides we want to use our budget for our activities because sometimes the LGU would even use our budget for other activities instead of it going to us (the *bantay dagat*). Frequently, many *bantay dagat* members mention the need for monthly honoraria. *Bantay Dagat member, Mabini:* The MAO as well as members of the *bantay dagat* wants us (*bantay dagat*) to be at least casual employees, not just volunteers so that we can get monthly honorariums. What is important to us is to have a monthly income.

Interviewer: Are the *bantay dagat* members given honorariums?

Bantay Dagat member, Mabini: Food allowances only, but this is not regular. We are only given it if we have patrol or duty.

Interviewer: Would you like to have honorariums?

Bantay Dagat member, Mabini: If the LGU will support us, of course I want that. Because you know the *bantay dagat* is hard work and is a dangerous job. In our organization (*bantay dagat*) yes of course we need funding. Especially with the *bantay dagat*, we cannot move without money.

Interviewer: Do you get paid as a member of the *bantay dagat*?

Fisherman and Bantay Dagat member: Yes. But it's just from the KKP, we don't get anything from the LGU, we are only given a sack of rice and that's quarterly, the last time we were given that was last December. And I don't know when we will be given it again. We were wondering why it takes them so long to give us the sack of rice. That's why some of our [*bantay dagat*] members are now looking for other jobs. You know what, KKP gave money to the LGU supposedly for the *bantay dagat*, for our gas and maintenance of the boat, but we never received it. Ten years ago few LGUs were engaged in ICM let alone allocating budgets for ICM programs. Today, while many more LGUs apportion budgets to ICM, one practitioner notes that there is room for expansion.

ICM practitioner: When they devolved [ICM] functions in 1991 I don't think they (the central government) had a sense of the magnitude of the job, so it (the LGC) is largely an unfunded mandate. But when you think about it, even in the late 1980s when the law was drafted, people weren't talking about coastal management. Maybe they had some community-based activities but not in the way that we're talking about it today now the government must provide it as a basic service. Before LGUs weren't prioritizing ICM in their budgets at all and very few allocated. But over the course of the last 6 years many more are allocating some

N. Milne, P. Christie / Ocean & Coastal Management 48 (2005) 427–449
437

budget. It is still not adequate to fund coastal management but it's a step in the right direction.

Key-informants expressed diverse views when asked who should be responsible for funding ICM. Few respondents felt that it was the responsibility of their stakeholder group to finance ICM activities. However informants from the LGUs typically recognized their role at the forefront of ICM activities. The LGC, as previously stated, mandates authority over ICM to the LGU who is therefore responsible for sourcing and distributing the necessary funds to ICM activities. Moreover, some respondents recognize the transient nature of many NGO projects and the need for LGUs to assume responsibility for funding ICM efforts, as they are a permanent institution in the region.

Interviewer: Who do you think is responsible for financing coastal management?

LGU staff, Tingloy: Well you know it should be the LGU.

Interviewer: Why?

LGU staff, Tingloy: Because that is their jurisdiction, which is part of their responsibility. While NGOs really help a lot in financing coastal management activities it's not going to be sustainable, simply because you know they will soon end their projects and leave. You cannot say that NGOs will really be here forever. And so when they leave then it will be the LGU that will take over. Public-private partnerships recognize that both the public and private sectors have certain advantages relative to the other in the performance of specific tasks. By allowing each sector to do what it does best, public services and infrastructure can be provided in the most economically efficient manner. Some informants feel that outside institutions should assist LGUs in managing ICM funds.

Interviewer: Do you think it is more appropriate for the public or private sector to handle the funds for ICM?

LGU staff, Tingloy: If ever the LGU will handle the financing mechanisms, I think they will also need an NGO who will help them or guide them.

Interviewer: Whom do you think should pay for and conduct ICM?

Barangay official: Well I think the LGU can manage the funds. But when speaking of money it is really difficult to handle that.

Some informants stressed the importance of engaging the LGU in ICM through revenue-generating strategies. Ensuring the municipality receives benefits from revenue-generating strategies such as the diver fee in Mabini. The following practitioners comment on the limited role that outside organizations should play in regards to ICM. ICM practitioner One stresses the need for a prominent LGU role while implementing accountability mechanisms in regards to the conservation fee established in Mabini.

ICM Practitioner 1: [Engaging the private sector in managing ICM funds] is not a bad idea. But even NGOs can be just as corrupt as another organization. But if monies were managed in trust funds with certain protocols, then it would have to be an outside organization [managing the funds]. You need accountability. You

N. Milne, P. Christie / Ocean & Coastal Management 48 (2005) 427–449
438

need more than one person from more than one organization at the table because you need counterbalance. However, unless there is some benefit to the municipality they're going to lose interest, so you need to guarantee that some of the funds are going to be helping the municipality in some way to keep staff paid. You don't want to take mandates away from the LGU; they have to provide coastal management as a basic service like they do anything else. So we need to help governments do a better job but not take away the job nor the benefits from doing it. (B)ecause otherwise they are still dependent every day of the year on an NGO or academe. Not to say that they (external organizations) won't always need to be there, but it's a matter of how you share the ownership. If you take too much of the ownership away from the municipality I think we'll be weakening the institutional framework for this (ICM).

The following practitioner comments on the availability and credibility of NGOs in carrying out ICM related tasks.

ICM practitioner 2: Sometimes it's easier to gravitate to the private sector and let them do it (ICM). But I think that in the long-term that may not be the most sustainable thing in all cases. Local and municipal governments can operate quite well and there's often not a private sector alternative in many areas. There are a lot of places where the private sector is more corrupt, or has more biases, than the LGU does. Especially when you get to some of the smaller organizations, I'd gravitate more towards the government.

And in some instances informants believe that other coastal stakeholders should directly pay for the costs of ICM. In the following quotes a fisherman and a boatman feel that the tourism industry should be responsible for the costs of ICM.

Interviewer: Who do you think is ultimately responsible for paying for coastal management?

Fisherman, Mabini: I think the resorts because they are the ones who have all the visitors.

Interviewer: Who do you think is responsible for paying for coastal management?

Boatman, Mabini: Tourists because they are the ones who come here to dive so they should be the ones paying.

Another derailing factor for ICM is the lack of fundraising experience at the LGU and community levels. Many LGU officials, and NGO and PO employees charged with conducting ICM are not familiar with the ICM process, knowledgeable about grant writing and sourcing funds from external sources, or aware of the revenue-generating strategies available to supplement current budgets and how to implement them. Oftentimes NGOs can play an important role in assisting POs, LGUs, and others in these efforts. The following quotes are illustrative of this need in the Mabini-based people's organization, SPSTI.

Interviewer: Does SPSTI have difficulty acquiring funding?

Bantay Dagat member, Mabini: Yes because we don't know any funding agency where their programs are focused on conservation. We don't have any brochures

N. Milne, P. Christie / Ocean & Coastal Management 48 (2005) 427–449

439

for these kinds of funding agencies but we want to make another proposal. I think there are a lot of ways [to acquire funding] but I think we should also have to study about it. Right now SPSTI hasn't thought of a way to do it. But we don't want our organization to be just sleeping.

In the Philippines, increasing numbers of NGOs assume a variety of functions traditionally performed by the state [36]. NGOs are expected to translate between the state and local concerns as well as exert pressure on public officials for better performance and greater accountability [37]. The passage of the LGC reaffirmed the role of NGOs as legitimate representatives of popular interests [9]. The presence of NGOs in a community does not necessarily imply that the LGU has not prioritized ICM. However some respondents feel that external NGO assistance is critical to the ICM process. The following quotes illustrate the beneficial role NGOs can play in Mabini and Tingloy.

Interviewer: Which of your funding sources right now would you consider to be sustainable or secure?

LGU official, Tingloy: For example with KKP, if ever their project here will end, I don't think the LGU can sustain it since we are only counting on our IRA and the majority of the IRA goes into the salaries of the employees. So right now I can say KKP is the one who can really help us, but I can also say that it is still not enough. If NGOs will not help our local government to finance coastal management we really can't afford it.

Interviewer: Do you consider external funding to be a sustainable financing mechanism?

LGU official, Tingloy: Of course not because they will soon end their project and leave. But you know KKP is really helping us and they also teach us how we are going to sustain their projects if they leave. And also Sulu Fund (now CCEF) is establishing a marine sanctuary at Pulang Buli.

The following government official comments on LGU dependency on external funding sources, particularly when IRA shares are small.

Interviewer: Have you had trouble securing funding for ICM efforts?

LGU official, Tingloy: Yes because of our small income. We are just a 5th class municipality so our IRA is really small. But you know, even if our IRA is small, KKP is really helping us a lot. They are the ones who gave us the patrol boat for our *bantay dagat* and also one for our MFARMC. They are the one's who helped us open our eyes to coastal management.

People's organizations play an important role in community organizing and citizen empowerment in the Philippines. In Mabini and Tingloy several POs are active in coastal management. The Mabini-based PO Friends of Balayan Bay (FOBB) provides valuable support for ICM efforts.

Interviewer: Does FOBB provide assistance to the *bantay dagat*?

Bantay Dagat, Mabini: They are the ones who give us uniforms and if we have seminars or trainings they provide the place, like they would give their resort

N. Milne, P. Christie / Ocean & Coastal Management 48 (2005) 427–449
440

(Planet Dive) as the venue for free. So far we already have had three seminars in their place.

In the end, it is important for ICM to have the support of both internal and external funding sources. As the following practitioner notes, it might be unrealistic to expect ICM to be carried out solely by internally generated resources.

Interviewer: How would you define “sustainable financing”?

ICM practitioner: As the ability to utilize internal and external sources of funding on a regular basis. I wouldn’t just limit it to something that is internally generated is what I’m trying to say. I’d look at it as a patchwork of financing mechanisms that go together and make it all work. I don’t think that any one source can carry it all the time.

Some coastal LGUs have become accustomed to external organizations coming into their communities and giving “dole outs” of financial, technical, and human resources without expecting matching or counterpart funds from the municipality. Such systems shift the responsibility for ICM outside the local community and institutions. However, these interviews have shown that the municipalities of Mabini and Tingloy realize that with the passage of the LGC they are increasingly responsible for conducting ICM.

5.2. Improving fiscal administration

To facilitate sustained ICM processes it may be necessary to increase LGU capacity to plan and budget for ICM. The ability of an LGU to conduct ICM is frequently contingent upon their ability to provide sufficient funds for ICM staff both within (i.e., MAO) and outside (i.e., *bantay dagat*) of the LGU. Institutional training in financial management may be needed to further ensure that funds targeted for or received from ICM initiatives are effectively utilized. Specific areas in which financial management may aid ICM are: financial planning, budget formulation and implementation, accounting, financial reporting and internal evaluation [38]. Increasing and improving fiscal administrative capabilities can result in: (1) successful revenue-generating mechanisms, (2) funds channeled to appropriate or designated uses, and (3) sufficient returns to the community. Devolution brought increased fiscal responsibilities to local governments, including increased powers of taxation. However the extent to which LGUs have employed these revenue-generating strategies is varied, as is the amount of funds collected.

Interviewer: Does Tingloy receive revenues from the tourism industry?

LGU official, Tingloy: None so far. I think so far we only received money from building permits and you only get the building permit once. We really have a lot of dive sites here compared to Mabini because we have 19 dive sites and Mabini only has 9. We have five resorts now, two of those are owned by Filipinos.

Interviewer: And do they pay taxes to Tingloy?

LGU official, Tingloy: Yes, but not much.

N. Milne, P. Christie / Ocean & Coastal Management 48 (2005) 427–449

441

ICM practitioner: The fee generation mechanisms like we have here [in Cebu] generate revenues by collecting fees from divers. But you can't do that everywhere, so I think we are still a ways away [from implementing these revenue-generating mechanisms]. [In some areas] they collect fees from fishermen licenses, which you know will undoubtedly be small anyway. It's just hard to generate some of the funding. Some LGUs are starting to get the sense that their waters are valuable. Previously no value has been attached but now they are seeing if they place a value they can recoup some of that. I think it depends on the specific municipality. If you have a rural community with a lot of poor fishermen and you charge them a week's or a month's wages to have a license, that's not going to work.

Even in municipalities that have ordinances on fees and licenses, many LGUs are not able to fund enforcement efforts.

Interviewer: Do the boatmen that bring tourists over from Mabini pay a fee in Tingloy?

LGU official, Tingloy: No.

Interviewer: Is it possible to charge them a docking or entrance fee?

LGU official, Tingloy: I think we already have an ordinance that says every boat that comes in should pay but it is not implemented. If ever we are going to implement that we are just going to implement it with the conservation fee. The problem is that the LGU can't provide the salaries for the people who are going to collect the fees.

The majority of the tourists to Batangas stay at resorts in Mabini and rely on Mabini boatmen for transportation to and from dive sites and other tourism destinations in the area, even when diving in Tingloy waters. Therefore much of the revenue from tourism remains in Mabini. Additionally, most resorts in Mabini pay businesses taxes to the municipality, which increases their IRA in the short term, and in the long term it increases their chances of becoming a higher-class municipality. Given that the majority of the dive sites are in Tingloy, the opportunity to collect fees from Mabini boatmen entering their waters seems feasible. The following quotes further illustrate the challenges to revenue-generating strategies in Tingloy.

Interviewer: Is Tingloy successful in generating revenues from the tourism industry?

LGU official, Tingloy: No, the truth is we don't get any revenues from divers. It is only Mabini who benefits from them, because divers pay the resorts in Mabini before coming here. The only revenue we get is from permits that the resorts get from the Municipality, the building permit or mayor's permit.

Designing and implementing a revenue-generating strategy is a new concept for many coastal municipalities and it will take time before many of these systems are functioning effectively. The following informant notes the difficulties associated with engaging the community in the design of a revenue-generating strategy.

N. Milne, P. Christie / Ocean & Coastal Management 48 (2005) 427–449
442

ICM practitioner: [Designing a mechanism] is tricky of course because that's where everybody wants to have a say and everybody has a different opinion. So it is a real bottleneck, coming up with a mechanism, and a system for collection and allocation, that everybody agrees upon and actually works.

Many ICM practitioners feel that sufficient funds for ICM exist; the problem is accessing those funds. Some informants suggest that political interference can result in the mismanagement of funds. Others feel that due to political reasons their coastal management plans are ignored, or rejected by LGUs. Therefore they do not receive adequate funds to carry out their ICM activities. The following ICM practitioner comments on the consequences of political interference in ICM.

ICM practitioner: Even congressmen have enormous pockets of funds. If the congressmen for instance can contribute to that (ICM) instead of well usually it is just used for politics. You can't escape some of these pressures. That's the problem; a lot of the monies are allocated for political reasons.

Several respondents mentioned that oftentimes it is faster and easier to source funds through the private sector rather than the LGU. The following respondent mentioned the possibility of funds being corrupted when handled by the LGU.

Interviewer: Who is more effective in conducting ICM, the LGU or the private sector?

Bantay Dagat member, Mabini (1): The problem with the LGU is when you ask for a budget it would take a very long time for you to get your money, unlike the private sector, you can get money easily. You just write a report, give it to them and you will get a budget. So I think private is better.

Interviewer: Who do you think should be managing the money for ICM?

Bantay Dagat member, Mabini (2): That is difficult, if we talk about money and it would be better if the NGOs will handle the money. If the people need something, NGOs are more accessible in terms of money. It would be difficult if the government handled it. We cannot trust them because there is the possibility of corruption.

Several informants perceived that financial payments are not fed back into the community. Channeling taxes and fees paid for coastal resource use back into ICM programs can facilitate improvements in coastal environments and increase stakeholder motivation and participation in coastal management activities. Furthermore, when community members realize economic gains from coastal resources they are less likely to undermine the revenue-generating mechanism and ICM activities in general [8]. A comment made by one Mabini resort owner illustrates this opinion.

Interviewer: In your opinion, does the government have enough money to pay for ICM activities?

Resort owner, Mabini: Yes, if they want to.

Interviewer: Do you know if all the resorts are paying their taxes to the LGU?

N. Milne, P. Christie / Ocean & Coastal Management 48 (2005) 427–449

443

Resort owner, Mabini: I can certainly say no. I don't think so. There might be somebody (laughing)

Interviewer: Do you think more resorts would be willing to pay their taxes if they knew their money was going to support coastal management?

Resort owner: Oh, 100%yok 98%. If the government can show something tangible, that our taxes are being put to good use. You know, all these projects, somebody gets a kick back out of it. A kick back is being used; oftentimes it's for elections.

The following ICM practitioner further emphasizes the value in showing coastal communities their taxes and fees are being used to improve coastal resources and habitats.

Interviewer: Have you seen any sustainable, long-lasting revenue-generating mechanisms?

ICM practitioner: I haven't seen too many. I think a factor that can contribute to sustainability is that there is a share returning to the community. That it's something that is known, you know, how much was generated and there is a transparency of course in the accounting of that. I think if you share those revenues and make it fairly immediate that will be sustainable. Make it something that works locally, has a share, and is transparent. Oftentimes when stakeholders do not see benefits from their involvement in ICM related activities they withdraw from the process.

ICM practitioner: A [financing] mechanism that works is not easy to corrupt and people are directly involved as stakeholders. It's important to see some actual benefits. Because if a municipal government collects good revenues and they don't allocate it to certain activities or people and events that feed into that system then ultimately [the revenue-generating mechanism] won't improve coastal management. Also the people the mechanism depends upon will lose interest and stop doing it.

Tingloy is in the process of establishing a conservation (or diver) fee similar to Mabini's. When these interviews were conducted Mabini and Tingloy were debating participating jointly in the conservation fee. The following LGU official discusses the difficulties inherent in designing revenue-generating mechanisms, such as: concern over the institution(s) responsible for managing the funds, the financial allocation scheme, and the activities that the funds will support.

LGU official, Tingloy: When we did a public hearing about the user fees with people (fishers and divers), the concern really of the divers is that they are not sure if they want the LGU to handle the funds and we have to admit that it (inconsistent spending on coastal management) really happens in the government. That's why we ended up with a sharing of 15% going to the LGU and 85% going to the conservation account. That's what the NGOs and divers want because if there will be a 50–50 share they are not sure if it will go to conservation or more towards infrastructure. Like here in Tingloy our problem is really the lack (or poor quality) of a circumferential road, water, sanitation and electricity, especially

N. Milne, P. Christie / Ocean & Coastal Management 48 (2005) 427–449
444

now that we are promoting tourism. That is why we (LGU) are really pushing for a bigger share but the divers are really not into it because they want a bigger share for the conservation.

Willingness-to-pay (WTP) surveys were conducted with divers in Mabini to determine, in part, how much divers would be willing to pay for entrance to MPAs in Batangas. Oftentimes divers responses to WTP surveys are contingent upon their monies being used to support further conservation work. In this case, the LGU of Tingloy desires a greater share of the conservation fee to engage in development projects such as road repair, and the installation of electric and sanitation facilities. The LGU sees these activities as paramount to the success of tourism in Tingloy. Infrastructure and other development projects are oftentimes seen as antithetical to conservation activities. However the lack of sanitation and sound inland planning could have negative impacts on coastal environments, particularly through pollution and runoff. Therefore, WTP respondents should be educated *not only* on the environmental qualities of an area, but also the political, economic, and cultural environments to make fully informed decisions regarding the use of their funds.

5.3. A role for revenue-generating strategies

Revenue-generating mechanisms are increasingly used as a means to increase the funds available for coastal management efforts. Examples of revenue-generating mechanisms include: taxes, fees, surcharges, levies, and the sales of goods and services. LGU participation in revenue-generating strategies has the potential to dramatically increase internal revenue sources for ICM if the strategies are recognized and adhered to by coastal stakeholders. The CRMP of the Department of Environment and Natural Resources (DENR), Bureau of Fisheries and Aquatic Resources (BFAR), and United States Agency for International Development (USAID), have identified four main purposes behind the establishment of revenue-generating strategies: (1) to set tangible and easily measurable values on municipal water use zones and the resources found in the coastal zone, (2) to regulate and limit the extraction of resources, (3) to provide the community, assuming funds are fed back to them, with an obvious economic incentive to protect and manage their coastal waters and resources, and (4) to generate funds for the continued implementation of ICM [39]. While these purposes are quite distinct from one another, the combined benefits that may accrue from revenue-generating strategies have the potential to allow local governments to self-sustain coastal management efforts.

Regardless of the strategy pursued, consideration should be given to various factors to optimize strategy success including: (1) education on fiscal planning for ICM, (2) linking the strategy to resource management, (3) community awareness and participation, and (4) ensuring funds address local coastal issues. Numerous examples of successful revenue-generating strategies have been implemented within the Philippines and elsewhere in the Asia-Pacific region. Coastal planners, or those responsible for the creation, implementation, and enforcement of revenue-generating

N. Milne, P. Christie / Ocean & Coastal Management 48 (2005) 427–449
445

strategies, might benefit from site visits to communities where ICM is being conducted with funds generated from such financing mechanisms. Visits could provide agencies and community members with valuable information regarding the design and implementation of such strategies and assist in establishing communication networks within the region.

The second factor concerns linking the revenue-generating strategy to resource management. Oftentimes this link between the financial strategy and its purpose is unclear, leaving managers with insufficient funds to cover resource management needs. The cost of management activities, or the estimated annual cost of ICM, should be considered when designing a revenue-generating strategy to ensure sufficient funds are generated. Frequently supplemental funds are needed but if managers are able to estimate revenues they can plan ahead and begin sourcing the remaining funds before they are required.

Thirdly, community participation has been identified as a key element to ICM process sustainability [7]; in this case, participation could involve aiding in the design of the financing mechanism or being educated on its purpose. Stakeholders that will be subject to the charges should be familiar with the revenue-generating mechanism, understand its purpose, and be aware of collection procedure. Experts emphasize that participation from resource users and others involved in ICM should be solicited and encouraged from project conception [40], garnering support and ensuring the users understand why it is important and how the funds will be used. Public meetings, during which the agency and the resource users discuss the strategy's importance, the fee amount, and how the funds will be managed, may facilitate community participation, or compliance with, the revenue-generating strategy. Holding these meetings may save on enforcement funds in the long run, as a community of resource users that is willing to comply with the new legislation may require less policing than a community that feels taxes and fees have been forced upon them.

And lastly, several respondents mentioned the need to link financing mechanisms back to local coastal issues in tangible ways. Resource users will also be more likely to comply with a revenue-generating strategy if they feel their payments are being managed effectively, with measurable returns on their lives. Research in the Philippines has shown that participation in ICM increases if resource users see positive economic returns [8]. If coastal and marine resources are managed properly, resource users should see improved economic returns through increases in fish catch, aquaculture production, tourism, and the like.

According to Chua [41], "sustainable financing does not only imply the generation of financing mechanisms but also includes the policy and investment environments, which are crucial parts of the mechanism." What constitutes a sustainable financing mechanism is rarely the mechanism itself; meaning there is typically not one mechanism, such as entrance fees or fishing permits, that in itself is a sustainable financing mechanism. Like the broader ICM process, for a system to be sustainable it relies on a collection of causes and conditions, which when combined form a system that will persist throughout time. The causes and conditions, identified through this research, necessary to support a revenue generating strategy should be considered when designing and implementing revenue-generating mechanisms.

N. Milne, P. Christie / Ocean & Coastal Management 48 (2005) 427–449
446

Creating a sustainable, long-lasting financing system for ICM may require changes to current fiscal administrative procedures and the types of financing mechanisms utilized by municipalities.

6. Conclusion

As ICM is a relatively new task for many LGUs, those in charge of managing coastal resources at the local level may or may not have a complete understanding of how to best manage and conserve coastal zone resources. Confusion and uncertainty in regards to ICM exists on many levels. For example, some LGU officials are not aware of the activities related to ICM and their associated costs. Additionally, even when costs are known some LGUs lack the financial capabilities to adequately plan for and execute ICM activities. Many coastal community members feel that municipalities do not prioritize ICM and in some instances do not have the administrative capacity to financially sustain ICM related activities. The ICM process is further derailed when coastal resource users do not comply with ICM related mandates, particularly those measures designed to increase funds for ICM. Revenue-generating mechanisms are being utilized by conservation institutions around the world as a means to fund conservation efforts over the long-term. However, when it comes to establishing revenue-generating strategies and a subsequent plan for managing the associated funds, many coastal managers at the LGU level lack the expertise or the resources to do so effectively. It is important to remember that revenue-generating strategies do not by themselves increase the funds available for ICM unless provisions have been made to channel monies from those strategies directly into ICM efforts. Identifying, securing, and distributing funds to facilitate coastal resource management and conservation will continue to be a priority for coastal managers in the years to come.

Acknowledgements

This research was made possible with the financial support of the David and Lucile Packard Foundation (Grant no. 2000-14652) and National Science Foundation (Grant no. DGE-0132132). The opinions expressed herein are those of the author and do not necessarily reflect the views of the David and Lucile Packard Foundation or National Science Foundation. The authors would like to thank Rose–Liza Eisma–Osorio, Vlad Kaczynski, Roy Olsen de Leon, Esperanza Tabara, and Wednesday Gay Gauden.

References

[1] Christie P, White AT. Trends in development of coastal area management in tropical countries: from central to community orientation. *Coastal Management* 1997;25:155–81.

N. Milne, P. Christie / Ocean & Coastal Management 48 (2005) 427–449
447

- [2] Lowry K, White AT, Courtney C. National and local agency roles in coastal management activities in the Philippines. *Ocean and Coastal Management*, this issue, [doi:10.1016/j.ocecoaman.2005.04.008](https://doi.org/10.1016/j.ocecoaman.2005.04.008).
- [3] Local Government Code. Republic Act Number 7160, 1991.
- [4] Christie P, White AT, Stockwell B, Jadloc RC. Links between environmental condition and integrated coastal management sustainability. *Silliman Journal* 2003;44(1):285–323.
- [5] Eisma RV, Christie P, Hershman M. Legal issues affecting sustainability of integrated coastal management in the Philippines *Ocean and Coastal Management*, this issue, [doi:10.1016/j.ocecoaman.2005.04.009](https://doi.org/10.1016/j.ocecoaman.2005.04.009).
- [6] Oracion EG. The dynamics of stakeholder participation in marine protected area development: a case study in Batangas, Philippines. *Silliman Journal* 2003;44(1):95–137.
- [7] Pollnac RB, Thiele MT, Eisma RV, Gaudan WG, Tabara E, Dinoy NJ, Avellana Jr R. Factors influencing the sustainability of integrated coastal management projects in the Philippines. *Silliman Journal* 2003;44(1):37–74.
- [8] Pomeroy RS, Oracion EG, Pollnac RB, Caballes DA. Economic benefits and integrated coastal management sustainability in the Philippines. *Ocean and Coastal Management*, this issue, [doi:10.1016/j.ocecoaman.2005.04.010](https://doi.org/10.1016/j.ocecoaman.2005.04.010).
- [9] Sievanen L. The implications of decentralization for integrated coastal management sustainability in the Philippines. *Silliman Journal* 2003;44(1):230–64.
- [10] Department of Environment and Natural Resources. Proposed National Coastal Resource Management Policy for the Philippines. Draft Report, no date.
- [11] Christie P. Is ICM sustainable? *Ocean and Coastal Management*, this issue, [doi:10.1016/j.ocecoaman.2005.04.002](https://doi.org/10.1016/j.ocecoaman.2005.04.002).
- [12] Dahuri R, Dutton IM. Integrated coastal and marine management efforts enters a new era in Indonesia. *Integrated Coastal Zone Management* 2000;1:11–6.
- [13] Coastal Resource Management Project (CRMP) staff. Personal communication, Cebu: 2002.
- [14] Fisheries Code. Republic Act Number 8550, 1998.
- [15] Magno C. The devolution of agricultural and health services. Social Watch, 2001. http://www.socwatch.org.uy/en/informelmpreso/pdfs/articled2001_phi.pdf.
- [16] Department of Environment and Natural Resources, Bureau of Fisheries and Aquatic Resources of the Department of Agriculture, and Department of the Interior and Local Government. Philippine coastal guidebook No. 2: legal and jurisdictional framework for coastal management. Coastal Resource Management Project of the Department of Environment and Natural Resources, Cebu City, Philippines: 2001. 170p.
- [17] Manasan RG. Fiscal decentralization: the case of the Philippines. World Bank. <http://www.world-bank.org/wbi/publicfinance/documents/ASEM/manasan.pdf>, no date.
- [18] United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). Local government in Asia and the Pacific—The Philippines. UNESCAP. <http://www.unescap.org/huset/lgstudy/country/Philippines/Philippines.html>, no date.
- [19] Christensen J. Fiscal accountability concerns come to conservation. *New York Times*, 5 November, 2002.
- [20] Sage Publications. Atlas.ti Scientific Software Development (2002–2005). <http://www.scolari.co.uk/frame.html?http://www.scolari.co.uk/atlasti/atlasti.htm>.
- [21] Fenner D. Reef corals of Anilao, Batangas, Philippines. Report for World Wide Fund for Nature-Philippines, Quezon City, Philippines: 2001.
- [22] White AT, Christie P, Apurado J, Meneses AT, White EE, Tesch S. Coral reef monitoring for conservation in Mabini and Tingloy, Batangas, Philippines. Cebu City, Philippines: Coastal Conservation and Education Foundation; 2001.
- [23] National Statistics Office. Population census. 2000, www.census.gov.ph/census2000/index.html.
- [24] SPSTI member. Personal communication, Mabini: 2002.

- [25] Local government official 1. Personal communication, Tingloy: 2002.
- [26] Fisheries and aquatic resources management council member. Personal communication, Mabini: 2002.
- [27] Local government official. Personal communication, Tingloy: 2002.
N. Milne, P. Christie / Ocean & Coastal Management 48 (2005) 427–449
448
- [28] Proceedings of the sixth policy forum of the program and policy advocacy group, Dumaguete City, Philippines: 2000. p. 12–14.
- [29] Philippine sustainable development network foundation, Inc. (2004), <http://www.sdvillage.ph/community.htm>.
- [30] Boatman. Personal communication, Mabini: 2002.
- [31] *Bantay Dagat* member. Personal communication, 2002.
- [32] Haribon foundation for the conservation of natural resources (1994). Unpublished data.
- [33] Local government official 3. Personal communication, Tingloy: 2002.
- [34] World Wide Fund (WWF) for Nature-Philippines. Contingent valuation in estimating entrance fees for divers at Mabini–Tingloy sites. Quezon City, Philippines: 2001.
- [35] Courtney CA, White AT. Integrated coastal management in the Philippines: testing new paradigms. *Coastal Management* 2000;28:39–54.
- [36] Silliman, N. Organizing for democracy: NGOs, civil society, and the Philippine State, Honolulu, University of Hawai'i Press; 1998.
- [37] National government official. Personal communication, Manila: 2002.
- [38] Schiavo-Campo S. Governance, corruption, and public financial management, Asian Development Bank. Manila, Philippines; 1999. 251p.
- [39] Coastal Resource Management Project (CRMP), www.oneocean.org.
- [40] White AT, Salamanca A, Courtney CA. Experience with marine protected area planning and management in the Philippines. *Coastal Management* 2002;30:1–26.
- [41] Chua ET. Developing sustainable financing mechanisms for coastal and marine environmental management. GEF/UNDP/IMO Regional Programme on Partnerships in Environmental Management for the Seas of East Asia. Quezon City, Philippines: 2001