

Chapter 4

Seasonal Ritual and the Regulation of Fishing in Batanes Province, Philippines

Maria F. Mangahas

Abstract The *mataw* fishers of Batanes, the ten small northernmost islands of the Philippine archipelago, engage in the seasonal capture of Flying fish (Exocoetidae) and Dorado (*Coryphaena hippurus*), known locally as the ‘fish of summer’ (*among nu rayon*), that enter the coastal waters in the summer months of March through May. Each fisher is identified by the ‘*vanua*’ or ‘port’ to which he belongs. The *vanua* is a specific spatial location, but also a particular organized group led by the fisher chosen to make the ‘first fishing trip’, to perform ritual and implement the rules of the group. In addition, the ritual schedule governs the use of other gears, thereby regulating fishing activities on traditional grounds. This has potential implications for the stocks of both migratory and demersal species, in terms of closed season, fishing quotas, protected areas, and control over gear use. Via the performance of seasonal rites, which also organize the fishers into a cooperative association with their ‘clean *vanua*’, the fish are coaxed to fulfill the fishers’ subsistence needs and the ancestral spirits (*añitu*) are called on to bring luck and forestall tragedy. Tension and creative negotiation exists between the values and practices of the *vanuas* inherited from the ancestors and the modern values and ideas that accompany newly introduced technologies and the market.

Keywords Batanes • Fishing rituals • Ritual technology • Marine resource management

4.1 Introduction

Batanes, the smallest province of the Philippines, is made up of ten small islands. Only three, Itbayat, Sabtang and Batan, are inhabited. Batanes Province is located north of the main island of Luzon, from which it is separated by the Balintang

M.F. Mangahas (✉)

Department of Anthropology, University of the Philippines, Diliman,
Quezon City 1101, Philippines
e-mail: maria.mangahas@up.edu.ph

Channel (Fig. 4.1). The population numbers around 18,000, of whom approximately 65% live on Batan Island, where Basco, the provincial capital, is located. There is little population increase, owing to a high rate of out-migration of young Ivatans (the people of Batanes), who leave for work or study, and then often settle permanently elsewhere in the Philippines.

Batanes is isolated by the dangerous waters of the Balintang Channel. They have protected it from aggressive fishers from elsewhere in the Philippines, so the province has been less vulnerable to the destructive fishing and resource depletion by outsiders that have so damaged other fisheries throughout the country (Aprieto 1995). Further, the fish catch satisfies only local demand, and has not entered significantly into external markets. Local consumption of fresh fish has expanded since the introduction of electricity, in the late-1990s, which enabled many households to own refrigerators. The fisheries of Batanes are now under pressure from local technological innovation

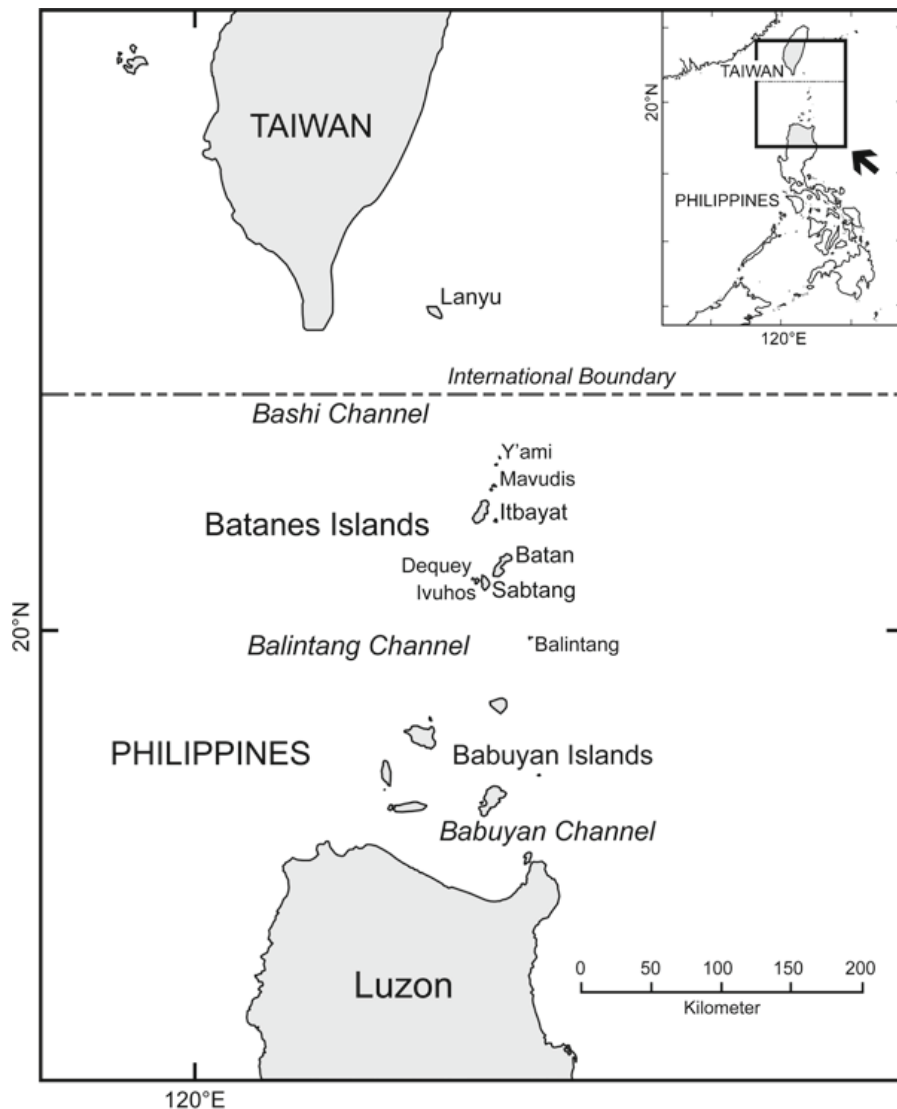


Fig. 4.1 Location of Batanes Province, Philippines

and modernization, including mechanization, drift- and trawl net technologies (Hornedo 2000), and fishing based on compressor-assisted diving.

The Ivatans share mainstream Filipino culture. Christianity was introduced by Dominican missionaries, the first of whom arrived in 1686. *Reduccion*, or the forced reorganization of settlements from scattered hilltops to the lowlands ‘under the church bells’, and planning of towns around the plaza, church and town hall was implemented in Batanes under Spanish colonial rule.¹ Despite geographical isolation, the difficulties of transport and the rural context of daily life, Batanes now has all the amenities of modern life (Tarrobago 2003).

Ivatans are typically root crop farmers, with the white yam or *uvi* (*Dioscorea alata*), a plant of cultural significance (Datar 1999) grown for both subsistence and pig feed. Households also obtain cash by cultivating such crops as garlic, and by raising cattle. The main sources of wage employment are government offices and agencies, stores and private enterprise, mostly in Basco. Income is derived from tourism, mainly in summer.

Fishing is important in Batanes, particularly in summer, when the weather is generally fair and the seas calm, and also because the seasonal migratory fish, Flying fish and Dorado, enter nearshore waters. Farmer-fishers intent on seizing this seasonal opportunity then set aside or delegate farm tasks, to focus on fishing. Mataw fishers (those who catch Dorado) may even move their families for the duration of the fishing season to temporary houses in their fields that are closer to their ‘port’, or vanua.

In Batanes, mataw fishing or angling for Dorado is typically done by a lone fisher from a small boat, known locally as a *tataya*, that is rowed and powered by a small sail (Photo 4.1). Mataw fishing involves first catching the Flying fish used



Photo 4.1 A mataw fishing boat coming ashore, Batanes Province, Philippines

¹The Spanish administration lasted in Batanes for two centuries, from the arrival of Dominican missionaries, in 1686, to the Philippine Revolution, in 1898.

as live bait for Dorado. Scoop net fishing (*sumuho*) with a light for Flying fish involves at least three crewmembers and a slightly larger boat.² Using similar methods, fishing in summer for Flying fish and Dorado is also done off Sabtang and Itbayat islands, and in Lanyu (Hsu 1982). However, off Sabtang it is usually done from mechanized and larger boats than off Batan Island. Mataw fishers still go to sea in small rowing boats and use their traditional technology, whereas almost all *sumuho* fishers either now use motorized boats, or have abandoned the scoop net and switched to daytime fishing with drift nets, a technology introduced in the late-1980s.³ Thus only the mataw fishers now continue fishing as prescribed by ‘ancestral tradition’. Many other fishing techniques are used in Batanes, including fishing with nets, the ‘flying net’, diving with a spear gun, different kinds of hook-and-line methods, gill nets, and trawl nets (Hornedo 2000; Yamada 1967). Since the 1980s, the number of mechanized boats has increased greatly.⁴

Ivatans are famous for their resiliency toward typhoons, Batanes typically being affected by up to six a year between June and October (Blolong 1996). Given their isolation from the mainland and the natural hazards and challenges that must be faced, Tarrobagao (2003:14) remarked that the Ivatans

... are a hardworking people who have learned to depend on themselves because they cannot count on help from the mainland, especially in months of bad weather. This sort of autonomy has also resulted in a culture of co-operatisation (*sic*). After a devastating typhoon, for example, the people of the community convene to take stock of the damage and work out a system of house repairs. All families have to send at least one member to help out. Voluntary communal labor is not limited to disaster response; it is also applicable to other community affairs such as house building, clearing of croplands, planting and harvesting.

That spirit of cooperation extends to the pre-existing traditions for the seasonal fisheries for Flying fish and Dorado, which functions in addition to manage near-shore fisheries.

The pre-existing coastal resource management system examined here is practiced by the fishers in Batan Island. However, the culture of fishing and the traditional seasonal activities and practices are shared among the islands in this area of the ‘Bashiic’ languages (Yamada 1997). Nevertheless in many areas there are local variations, and transformation and extinction of the traditional ways of fishing has occurred. This culture area also includes Pongso no Tao (the island of Lanyu, also known as Orchid Island or Botel Tobago, across the Bashi Channel and a part of Taiwan), whose inhabitants are said to have come from Batanes.⁵

²Until motors were introduced in the 1980s, these were rowed.

³In the 1990s, large numbers of Flying fish would be caught and the price would fall dramatically at the height of the season.

⁴This observation is based on the work being done in a boat builder’s workshop in Basco, in 1997, most of which was to convert rowing boats to accommodate inboard motors.

⁵According to comparisons of genetic markers the Yami of Lanyu are closer to the people of central Philippines than to the indigenous people of Taiwan (Datar 1999).

In Batanes from March until May mataw fishers focus on Flying fish (Exocoetidae) and the large golden Dorado (*Coryphaena hippurus*) or Dolphinfish (*Coryphaena hippurus*), two species of migratory pelagic fish that enter nearshore waters in significant numbers at this season. The arrival of these ‘fish of summer’ (*among nu rayon*) signals the start of the ‘summer’ (*rayon*) season. Attending closely to these signs and to the behavior of the fish, groups of fishers have long engaged in night fishing with lights for Flying fish, a technique called *sumuho*, or in angling for Dorado by day, a technique known as *mataw*. ‘Mataw’ refers to the specialized fishing method of catching Flying fish and subsequently using this as live bait for catching Dorado. The term ‘mataw’ also refers to fisherman who practice this method of fishing, which entails a commitment to go to sea to fish everyday for the entire three-month season.

Historical and ethnographic records (Gonzalez 1966) indicate that these seasonal fishing methods date back several centuries. And in recent years the mataw fishers have drawn on their status as users of traditional fishing methods to enforce regulations on their fishing grounds, in some cases gaining a measure of official recognition from local government as well as from sectoral organizations of fishers of the prior rights of the mataw vis-à-vis such competing new gears as ‘drift nets’ (gillnets). The mataw fishers of a *vanua* or ‘port’ regard their group as a cooperative institution, since it has formal associations, an elected leadership, ‘laws’, regulations, including sanctions, and prohibitions covering a clearly bounded season of fishing.

How the resource rights and management functions of the mataw traditions in Batanes Province operate is the focus of this chapter. Although the extent of pre-existing marine resource management systems is still being studied in the Philippines, it appears that the mataw system is one of the few that remains extant. Two other models are examined briefly in this chapter as comparisons; that of the Tagbanua people of Palawan Island, and the vastly different approach demonstrated by long-distance migrations of Visayan fishers. The mataw tradition comprises a third model. First I examine its ritual traditions and demonstrate how they function to form a fisheries social unit. This is followed by an analysis of the leadership and community regulations of the seasonal fishing activities. I conclude by examining change in this specialized fishery, focusing on gear type and marketing.

4.2 Indigenous or ‘Pre-existing’ Marine Resources Property Rights Regimes in the Philippines

In the 1990s, mataw fishing in Batanes seemed to be the only extant example of indigenous coastal resource management in the Philippines (Mangahas 1994). However, at a 2001 workshop on ‘Marine and Coastal Resources and Community-Based Property Rights’ it was observed that at least three types of local property rights regimes for marine and coastal resources are known to have been used in the Philippines among fishers and coastal communities

(Aguilar 2001).⁶ All of those long antedate the community-based coastal resource management initiatives of local government, non-government organizations, or people's organizations, which began in the 1980s (Alcala 1996).

Those three models can be considered pre-existing, as they represent long-standing and even pre-colonial patterns of fishing and maritime movement in the archipelago. Generally, they denote operational informal laws and norms on access to resources that are not within the State's framework and rhetoric. Moreover, although the Local Government Code of 1991 provides for local legislative powers over municipal waters (defined as 15 km from the shoreline), as was noted in the same workshop, for most fisheries and fishing grounds the community dependent on the resources is not the same as the *barangay*.⁷

4.2.1 *The Tagbanua Model*

The celebrated case of the Tagbanua of Coron in northern Palawan represents one such model. For centuries, the indigenous Tagbanua made a living by diving for sea cucumber, and procuring valued commodities, like bird's nests. Tagbanua custom respected certain coral reefs regarded as the abode of large octopii and spirits, and which they were forbidden to approach (PAFID 2000). Also sacred are several lakes, to which they prohibit access by outsiders. They have also controlled and maintained clan rights over caves where bird's nests are gathered. Among their documented conservation practices is the passage of laws by the elders, such as that against gathering giant clams (*Tridacna sp.*) or cutting trees. The sanctions include corporal punishment (lashing) and use of bamboo stocks (Dalabajan 2001; Sampang 2005). Little had changed in the lives of the Tagbanua until mid-century: "Three factors explain how such equilibrium was made possible: a low population to resource base; an economy that functioned basically for subsistence and not exchange; and cultural norms that made it taboo to indiscriminately exploit the forest and coastal resource" (Dalabajan 2001:175).

In 1998, the Tagbanua claim for their Ancestral Domain, under the Indigenous People's Rights Act⁸, including 22,400 ha of land and water (*teeb sorobleyen* or

⁶A fourth potential model represented by the customary practices of equity sharing among participants in the fish corrals in Bolinao, Pangasinan, which were awarded as fishing concessions by local government, is no longer in operation (S. Rodriguez, personal communication), see (Rodriguez 1997).

⁷The *barangay* is the smallest unit of local government in the Philippine system.

⁸This act passed in 1997 recognizes entitlements of 'indigenous peoples' in the Philippines over ancestral domain 'since time immemorial', including their rights to decide on the development of natural resources. It is seen as a milestone but also controversial, even among indigenous peoples and advocates of indigenous people's rights. (For a discussion of some dilemmas regarding the Tagbanua case, see Perez 2004.)

‘inherited seas’) was awarded by the Department of Environment and Natural Resources (PAFID 2000). However, this landmark achievement remains a continuing struggle, since the Tagbanua cannot fully monitor their large sea area against many threats. The problem is non-recognition by local government, and the proliferation of strangers: outside fishers, migrant families and their networks, and tourists and associated beach resorts. Powerful forces that wish to extract rent from the area are unhappy about the claim. The local government, which is not Tagbanua but dominated by migrants, feels excluded by a ‘mere’ cultural minority (see Sampang and Aguilar 2008; Perez 2004). Continued migration into some of the islands by fishers from the Visayas is facilitated by their social connections. Moreover, these new fishers (*dayo*) violate both the Tagbanua and national laws, aided by their supply network and market links that enable them to use such illegal fishing methods as blast fishing and sodium cyanide, as well as other destructive techniques.

4.2.2 *The Visayan Fishers’ Model*

The Tagbanua model leads directly to the second model of a pre-existing pattern of access and rights to marine resources, which I term the ‘Visayan fishers’ model. This model emphasizes the mobility and interconnectedness of fishers across seas and islands. Migration is part of everyday life and an adaptive strategy as fishermen move and settle, following the marine resources that constitute their livelihood. It begins with a first small ‘wave’ of migrants who establish their base (*tumandok*) by settling on an island. Succeeding migrants or ‘visitors’ (*pangayaw* or *dayo*) may also settle more or less permanently in the same place. But newcomers, whether temporary visitors or settlers, cannot enter the area without first establishing a relationship with a local host. Such ties benefit both the host, who provides lodging and other facilities, and the sojourning fisher, by allowing access to resources (whether using small- or large-scale fishing gear), so long as there is no direct competition with the host (Zayas 1994; Palis 2001). A market for particular marine commodities motivates the sojourning fishers to explore or ‘raid’ (*pangayaw*) perceived frontiers, where the locals are either unaware of or lack access to newer fishing techniques that would enable them to harvest the same resource for themselves. Also probably they are not aware of the market value of these resources, or are unable to contact potential buyers and enter the market directly. The sojourning fishers return to their places of origin with either the end of the fishing season or of opportunities for profitable fishing.

Meantime, local fishers would have acquired some of the new fishing techniques from the ‘visitors’. Eventually, migrant fishers would no longer be able to continue sojourning, either because they would be competing with the locals or as a result of resource depletion. They would have to move on, unless they decided to settle and integrate further with the community, or even switch to other livelihoods, like farming or animal husbandry. As resources become limited, exclusion would have set in, and relatively new settlers would have fewer rights and privileges than those with

an ‘established’ status and therefore a longer-term commitment to the place. Only after one or two generations would the new migrants eventually have been able to shed their ‘second class’ status in the community.

In short, as Zayas (1994:126) puts it, sojourning fishers adopt ‘maritime slash-and-burn’ as a survival strategy. Population growth and poverty, together with novel fishing gears and the ability to cross seas and connect with other islands, impelled and continues to push Visayan fishers with limited opportunities in their places of origin to seek new frontiers. Basically, they gamble on establishing a new relationship with a host community, discovering new places to fish, and maneuvering to gain a niche against local fishers, at least in the short-term, by bringing in more advanced or specialized technologies.

This is the history of settlement of many islands, especially since the Second World War. It is a strategy that is vulnerable to overfishing and leads to rapid change in many fisheries. With increasing pressure on the fisheries, grounds become relocated increasingly seawards. Based on informal rules, nearshore fishing areas should be allocated for local subsistence needs, and worked only by small-scale fishers and always for the benefit of local residents. Areas farther seaward are perceived as where large-scale gears owned by the wealthy and powerful should operate, as should fishers coming from distant places. Along some coastlines, enclaves of fishers specialized in specific fishing methods may also develop and grow to enable a better support system, especially for those using more risky or illegal fishing techniques, such as compressors (Castillo 2009) or blast fishing (Galvez 1989).

In this fashion, Visayan fishers, especially those from Eastern Visayas or the islands of Cebu, Samar, Leyte, and Bohol, have moved around continuously, and extended their range to Mindanao, Palawan and Luzon, migrating from place-to-place to discover and extract as yet locally underutilized coastal resources. National and international demand for particular marine products, the exhaustion of a resource, and the quest for a living, keep fishers in constant motion and impel innovation, intensification and a high turnover of fishing gear technology.

4.2.3 The Mataw Fishers of Batanes Province

A third model of a pre-existing system of property rights and access in the Philippines is exemplified by the mataw fishing groups of Batanes. In contrast with the ‘Visayan model’, the context of fishing in Batanes differs by being protected by the dangerous waters of the Balintang Channel. This effectively excluded aggressive fishers from other parts of the Philippines.⁹

⁹However, there is competition with commercial fishers coming from Taiwan, who use more advanced technologies and large boats.

4.2.3.1 The Vanua as Meaningful Unit of Organization

The coastlines of the Batanes islands are fronted by either cliffs with shingle beaches and boulders, or by reef flats against which strong waves break (Photo 4.2). As a result, there are only a few places where boats can be safely launched and landed. Such places are called *vanua* in Ivatan, which the Ivatans translate into English as ‘port’.

At present, four such ports are used by mataw fishers during the summer, and all are on the *valugan* side (approximately the eastern side) of Batan Island.¹⁰ They have ancient names and attached stories and legends about ancestral fishers, including some about a mythical original fisher who introduced mataw fishing and tested all the *vanuas* of the island (Mangahas 2008a, b).

As the fishers point out, only four *vanuas* (referred to here as Chanpa-n, Manichit, Maratay, and Diora), among those around Batan Island still retain their traditional significance. They say that the rites to ‘make the *vanua*’ (*mayvanuvanua*), performed at the onset of the summer fishing season in the four *vanuas*, ensure that the fishers will be safe and the fishing good. This they contrast with the other *vanuas*, where fishers do not get together (or no longer do¹¹) to perform rites, and



Photo 4.2 The coastal environment of a *vanua*, Batanes Province, Philippines

¹⁰People in Mahatao, Batan Island, orient themselves by at least four ‘sides’ of the island: *valugan*, *dichud* (meaning ‘at the back of’ Mt. Iraya, to the north of Batan Island), *kajbo* (‘down below’, south part of the island, where the Barangay of Imnajbu is found), and *kadpidan* (‘the other side’ or ‘the side crossed over to’, which is on the western side).

¹¹Ritual practice died out for the *vanua* at Itbud (part of Uyugan) in the 1970s. Since that time the *vanua* has been modified by road construction, including removal of a venerated stone.

which are therefore regarded as being more ‘accident-prone’. This, despite the sea on the eastern (*valugan*) side of Batan Island being somewhat rougher and more challenging during the summer. However, it is on that side of the island during the summer that many Flying fish are pursued by Dorado.

The towns of Basco, Mahatao, Ivana and Uyugan, on Batan Island, are located on the coast and close to river mouths, in the lowlands on the approximately the western side of the island. In the late-eighteenth century they were planned by the Dominicans and the people resettled (Hornedo 2000). So it may indeed be that the use of the four vanuas, which are all on the opposite side of the island, goes back through generations of fishers, as is believed by the present day fishers. There are some ancient settlements on the eastern side of the island, such as the archaeological site of Racuaydi (meaning ‘large town’) (Mijares 2001).

Thus, in addition to being places where fishers can access both land and sea, vanuas should also be appreciated as ancient or ancestral places. They are points in the landscape and seascape impregnated with the words and deeds of the ancestral fishers in times long passed, who used exactly the same places to go to and return from the sea. Being ‘vanua of the ancestors’, is expressed in the ritual words spoken during the rites before a fishing season begins.¹² This profound connection links the present day mataw community with very first fisher who performed the first sacrificial rites at the vanua and who left ‘instructions’ (*vidin*) on what is to be done each season. Each succeeding generation must either carefully reproduce the ritual words and acts of the ancestors, or risk grave misfortune, because if the spirits (*añitu*) are not appeased with the sacrificial offering they would contrive somehow to receive their ‘share’ of life. By performing the traditional rites the fishers sharing a vanua transform themselves into a collective, and embark on a socially complex power-laden negotiation with the fish and the spirits.

A vanua can have as few as five boats or as many as 30, as in Chanpa-n, the largest. However, the precise number fluctuates from year-to-year. A vanua is fairly open in terms of membership. For example, a fisher can stop fishing for a season or longer, or transfer to another vanua for various reasons, such as the need to be nearer his farm or to a temporary field house (*pañisanan*) in which he and his family would stay during the fishing season. Or a fisher from another island marrying into and settling in the area may also become a new member of the vanua. At this time they would realize that the practices are not the same across all vanuas. Some have different ‘beliefs’ (others none at all) and may ‘make the vanua’ slightly differently.

The vanua of fishers using traditional technologies to catch seasonal Dorado and Flying fish is also their home base and source of identification. Each fisher is identified at sea by the vanua to which he belongs. Mataw fishers keep watch to see which boats the fish ‘are going to’. When they return with their catch they remark on who

¹²The words spoken by the lead fisherman during the rites at the beginning of the season explicitly invite the fish to a particular vanua: ‘come to our vanua’, the fish are called, it is ‘the most beautiful vanua’ (see Mangahas, 2008a, b).

attracted many fish to his boat, or who caught the fish that went to someone else, and similar comments. Over gin they relate how “... the fishers of Diora were catching many over there by the end of the bay, while the Lead Fisher of Maratay did not catch a single one ...”, and so forth. As they compare each other’s ‘luck’, there is a constant informal monitoring of individual fisher’s success rates, as well as how the fishers identified with different vanuas are faring. Thus competition exists not only among fishers, but also among vanuas.

4.2.3.2 Inside the Vanua: Leadership, ‘Laws’ and Ritual Regulation of Seasonal Fishing Activities

The Lead Fisher is the focal point of a vanua as a group of fishers. As the first to go to sea and begin the season, the Lead Fisher has both a great responsibility to perform well and also the authority to do whatever he deems necessary to assure the collective success and welfare of the group throughout the season. The Lead Fisher is chosen based on his reputation as a ‘good fisher’ (Mangahas 2004). My informants explained that a Lead Fisher heads and is responsible for the vanua, just as the mayor is for a town, or as a ‘king’ for his followers and his kingdom, or as a father for his sons. Today the Lead Fisher of a vanua is called ‘President’, and the four vanuas on the eastern side of Batan Island have become formalized with written lists of the currently active members. An important officer is the Treasurer or Secretary, who maintains the records of dues paid by members. Some vanuas also have a ‘Runner’, or ‘Information Officer’, or a ‘Sergeant-at-Arms’, whose duty is to notify members of meetings and enforce orders from the President.

The main activity of the organization is the ‘making of the vanua’, at the beginning of the Summer fishing season. Just like members of a cooperative work project (*payuhwan*), the fishers of a vanua get together on an auspicious day (e.g., March 1) to ‘construct the port’ or ‘make the vanua’ before the fishing season can begin (Table 4.1). As in cooperative work, every member of the vanua should be present, or represented by a proxy if unable to attend. The actual ‘work’ is performing the sacrificial rite and distributing the meat of the sacrificed animal (a domesticated pig purchased specifically for this purpose) among those present.

Then on another carefully chosen date, the Lead Fisher makes the first fishing trip to ‘inaugurate the vanua’ (*umdinaw nu vanua*). The date is chosen based on the

Table 4.1 Sequence of ritual operations in *mataw* fishing

Operation	Meaning	Date
<i>Mayvanuvanua</i>	Making the port	March 1
<i>Umdinaw nu Vanua</i>	First fishing trip	March 5
<i>Maynamunamu</i>	Cleaning	April 14
<i>Kapaychava nu Vanua</i>	Dismantling the Vanua	After first week of May

pilaton, akin to an almanac listing the signs of the zodiac and auspicious dates.¹³ Once these protocols have been observed and good portents seen, the other mataw fishers in the group follow in fishing. They are seriously committed to the activity, and fish for Dorado every day until the end of the season. By mid- or late-May, at a specific date (for example, May 15), the vanua is supposed to be ‘dismantled’ (*kavahen vanua*) by the Lead Fisher. By late-May the rainy season has set in, signaling the end of summer. Each fisher follows the Lead Fisher in scheduling the distribution of dried Dorado among his share partners (e.g. May 23) (Photo 4.3).

The image conveyed by the term ‘making the vanua’ is that of making, building or constructing something. However, this rite does not make any visible change in the landscape. Instead it sets the vanua apart as a sacred or sensitive place, where careless behavior is not appropriate. It is transformed into a kind of liminal or transitional area between land and sea, supercharged by taboos.

‘Making the vanua’ puts together the fishers as a cooperating unit (*‘payuhwan’*) for the duration of the season, or until the vanua is ‘taken apart’, during which the ritual speech would explicitly state that each fisher is now ‘on his own’. For the mataw fishers, making the vanua is an integral part of the technology of fishing (Mangahas 2006) without which fishers believe they would have less success and also be vulnerable to misfortune. To fish is like inviting and taking part in hosting enigmatic visitors who come from afar and who are very sensitive (they easily ‘get offended’).



Photo 4.3 Distributing the catch to a landowner at the end of the season, Batanes Province, Philippines

¹³The book is copied by hand in ordinary notebooks and consulted often.

Meanwhile, the ancestral spirits expect ‘payment’ for the vanua, which is therefore given in advance of the season during the ‘making of the vanua’. Observing the ritual contract calls for cooperation and conformity among the fishers so that the fish and spirits will favor their vanua with ‘good luck’.

During the summer fishing season, traditional prohibitions (*dagen*) regulate certain types of behavior. These dictate the etiquette for the proper way of fishing, of handling the catch, of eating or distributing the catch and time when it should be done, among other things. This etiquette is followed by the fishers, those closely associated with them and visitors to the vanua during the fishing season. The objective of these prohibitions is to maintain social harmony, order and cooperation so the vanua can be made and kept ‘clean and attractive to the fish’.¹⁴

Some of these prohibitions are relevant to marine resource management, as they may relate to equity or to the sharing of opportunities, whereas others may promote conservation indirectly. For example, one of the traditional prohibitions was an individual catch quota. Formerly, mataw fishers were limited to taking nine Dorado per trip. Should a fisher have already caught his quota yet wish to continue fishing, he should first return to shore to unload his catch before resuming fishing.¹⁵

Often controversial for the fishers wishing to use new gear types in the area are prohibitions giving exclusive access rights during the season to the fishers using traditional methods of mataw and *sumuho*. After the ‘making of the vanua’ it is forbidden to fish for demersal species using hooks and lines with sinkers, or to dive and fish with spear guns. Even swimming in the vanua or gathering shellfish along the shore is forbidden. All of these effectively implement an extended closed season for all fishing, except for the ‘fish of summer’.¹⁶ This is said to have had a beneficial effect on other marine resources, which had more time to grow and also regenerate. For example, lobsters caught in the vanua after the summer season were observed by fishers to have grown “quite large”.

The logic of these prohibitions is that should fishers start paying more attention to other species after the seasonal fish have been called and invited to the vanua, then the seasonal fish might go away. If at mid-season the catch rate of many fishers shows a marked decline, it is thought to indicate that the vanua may have become ‘dirty’ because some prohibitions had not been followed. Fishers might overhear how a particular person was seen fishing improperly at the beginning of the season, or friends of a mataw fisher experiencing bad luck might wonder why bad luck occurs every time a particular visitor arrives. After informal discussions it might be agreed that traditional prohibitions have been violated. As penance a fisher may

¹⁴Related to this is that envy, resentment, arrogance, and non-cooperativeness are regarded as negative emotions and attitudes that also can affect fishing adversely.

¹⁵It seems that the quota was rarely attained, since I never saw more than seven Dorado caught during one fishing trip.

¹⁶Or practically half the year, from mid-October to mid-May, would be the off season, since diving is not usually done during the ‘winter’.

respond to the social pressure of being perceived ‘guilty’ of transgressions by not fishing for a few days. Persons generally perceived to have ‘upset the proper order of things’ are advised informally to cease what they are doing. The Lead Fisher must perform a cleansing rite for the vanua. With that, collective anxiety is finally dispelled, and normalcy returns.

Even fishers using other gears are aware of the Mataws’ normally unwritten ‘laws’ (*abtas*). However, some, like that at the vanua of Manichit, are written. There they possess a document written in Ivatan in 1940, and signed by the membership. Fishers in the vanua attached their signatures to a revised version prepared in 1960. The document states that the date for ‘dismantling the vanua’ will be determined by the Lead Fisher. The laws include penalties for failure to attend meetings, for those who steal or tamper with other fishers’ gear, or who do not respect the date for ‘dismantling the vanua’. Although other vanuas lack written rules, the traditional prohibitions are generally consistent and well known across the vanuas. Sometimes, modification of the rules can be made as appropriate to changed conditions, based on the previous season’s experiences. This is done during the ‘making of the vanua’. This could be regarded as sanctifying the new rules by presenting them to the ancestral spirits for acceptance. The test is whether the season turns out to be marked by success or misfortune.

The regulatory aspects of ritual can be seen as a vital element of the pre-existing system in terms of resource management. Such functions are apparent today, as they are the source of tension between users of different gears types. Recently, some prohibitions became the nexus of serious gear conflicts. Such conflicts sometimes reach beyond the vanua, and may be then resolved in larger political arenas. An example is the way in which one of the four vanuas became organized as a chapter of a sectoral organization of the fishers of Basco. In 1989 the Valugan Port Chapter of the Basco Fishermen–Farmers’ Association (BFFA) passed a formal resolution to ban the use of drift nets in Valugan Bay, and to uphold the authority of the Lead Fisher. The resolution stated that fishers must “follow all instructions, or directions given or made by the Lead Fisher who was designated to make the first fishing trip (*mandinaw no vanua*) pursuant to traditional fishing practices in the area”. The excerpts of the minutes signed by the President of the Valugan Port Chapter and the President of the Basco Fishermen–Farmers’ Association BFFA comprise an interesting record of the negotiation between traditional and novel technologies and the final gear conflict resolution (Mangahas 2006) (Box 4.1).

The prohibited area covered by this resolution includes not only the vanua passage but also the entire fishing space enclosed by prominent points at either end of the bay, and even ‘beyond’ (according to rule #2). Essentially, it applies to all the fishers of the vanua Chanpa-n, wherever they fish.¹⁷

¹⁷Chanpa-n, facing Valugan Bay, is the largest *vanua* in terms of numbers of fishers, and the boats include traditional small *tatayas* as well as larger motorized boats. Mananiy Bay is the fishing ground for fishers from three vanuas (Manichit, Maratay, Diora).

Box 4.1 A Resolution Prescribing Rules and Regulations Governing Fishing Operations within the Tudaw-Achip Fishing Grounds at Valugan, Basco, Batanes, and Prescribing Penalties for Violation Thereof: Excerpt from the Minutes of Basco Fishermen–Farmers’ Association meeting held on March 12, 1989 at Port Valugan (Chan-paan)

WHEREAS the Basco Fishermen–Farmers’ Association is committed to preserve harmony among all fishermen fishing in the Rudaw-Achip fishing grounds and thus maintain peace and unity conducive to progress and development; and WHEREAS it has been observed that there are some fishermen who disregard the rights and welfare of other fishermen most particularly those engaged in dorado fishing;

NOW THEREFORE, be it resolved as it is hereby bodily resolved;

1. That no fisherman or group of fishermen are allowed to catch flying fish with nets in areas where other fishermen particularly the “mataw” are catching flying fish for dorado (arayo) bait within the areas between Rudaw and Achip.
2. That no fisherman or group of fishermen are allowed to fish with nets beyond the area designated by the group/association before May 15 of every year. Any person found violating this regulation shall be penalized with a fine of one hundred (100.00) pesos.
3. That all fishermen fishing in the area shall follow all instructions, or directions given or made by the leading fisherman who was designated to make the first fishing trip (mandinaw no vanua) pursuant to traditional fishing practices in the area.
4. That any person caught or found vandalizing any fishing banca, banca accessories and other fishing gears or equipments shall be penalized by a fine of one hundred (100.00) pesos or to change the damaged equipment or both fine or changing of the damaged equipment at the discretion of the BFFA officers.

(sgd.) President, Valugan Port Chapter

(sgd.) President, BFFA

In 1993 there occurred in one vanua a serious case of theft of a gillnet and sabotage of a mataw fishing boat. The gillnet was owned by an outsider, but it was being used by a recognized Lead Fisher of the vanua, who was fishing with the only boat of its size in the Bay that season. Emotion and anger ran high among fishers of both his vanua and others. The situation was also brought to the attention of the police, and was finally resolved through a Municipal Ordinance passed by the local government of Mahatao to ‘regulate the preservation of cultural and traditional methods of capturing Dorado and other migratory fishes within the municipal waters of Mananiy Bay’ (Box 4.2) (Mangahas 2006).

Box 4.2 Excerpts from Ordinance No. 03-03, Regulatory Ordinance for the Preservation of Cultural and Traditional Method of Fishing during the Months of March, April and May

“Sec. 3. It is strictly prohibited for any “matao” to use gill nets or any method other than the traditional way of catching flying fishes which are being used as baits for the migratory dorados on both sides of the restricted area indicated herein.

Sec. 4. Any fishers aside from “mataos” are prohibited to cast their gill nets intended for flying fishes inside the area herein described from Dispo Creek running perpendicular to an intersecting area between Mangavato and Pandangan pts. Gill net restrictions on this area shall be from the month of March, April and May. All other months are not covered by this restriction.

Sec. 5. Penal provision – Violation of this ordinance shall be subject to the following:

(a) First offense – P500.00

(b) Second offense – P1,000.00

(c) Third offense – P2,500.00 or imprisonment of 3 months upon discretion of the court

These records demonstrate concrete attempts to codify the traditional regulations in legal forms that would also be recognized and upheld by larger political structures, including the State¹⁸. It can be seen that the principles of equitable access to resources and of pre-existing customary rights are invoked in order to secure the limited access rule.

However, in practice the pre-existing system is also open to modification and compromise, to the point of potentially having no value for resource management. Although remaining consistent with the traditional form, fishers can be very creative in instituting new policies that can radically subvert the original intention, reflecting the changing concerns and priorities of the membership. For example, simply modifying the words spoken in ‘making the vanua’ can legitimize the use of other non-traditional gears for catching the ‘fish of summer’. Similarly, the leadership structure can be reorganized. An example of that is provided by the vanua of Chanpa-n (also known as the Valugan Port Chapter of the Basco Fishermen–Farmers’ Association). By 1997 (10 years after the earlier resolution, described above), driftnet fishing was allowed at the vanua. The vanua’s ‘Lead Fisher for Flying fish’ now represented both the traditional sumuho fishers and the new drift net fishers. This Leader would be going to sea during the daytime instead of at night (i.e., he

¹⁸Municipal governments have this power under the Local Government Code of 1991 and the Fisheries Code of 1998 ([Republic Act 8850](#)).

would be using drift nets). After using drift nets, these fishers on their motorized boats would proceed to trolling for Dorado, thereby competing directly with the mataw fishers using oar-and-sail-powered smaller boats. As a compromise arrangement the drift net fishers were to give free bait to the mataw fisheries. The changes were probably reached with many of the vanua membership themselves also being interested in investing in and making use of new gears. If such a technology innovator was chosen as Lead Fisher, then he would have a powerful mandate to institute precedents on the fishing grounds.

The problem with modern technologies is that they cannot simply be set aside and discontinued, even if the riskiness of the undertaking is proven by experience. For example, many fishers from Chanpa-n remarked that the Flying fish catch has declined markedly in recent years, since many fishers switched to drift nets.¹⁹ However, those who switched to drift netting had no option but to commit to the shift to try to recoup their investment in mechanization and gear, despite diminished returns.

In conjunction with this many fishers are becoming market-oriented, with a market for the catch especially among salaried employees and visitors in Basco. The seasonal fish is eyed for the monetary income that it represents, instead of a traditional class of rare goods that have value as a subsistence food as well as currency for many kinds of exchanges. The trend toward modernizing gear technologies and commercialization comes directly into conflict with the traditional prohibitions connected to the regulation of activities within the seasons, specifically the taboos against selling the catch during the season. Such prohibitions are explicitly in opposition to the market – forbidding sale of the substantial part of the catch for the duration of the fishing season. For those engaged in traditional mataw fishing, the real context of their engagement with the ‘fish of summer’ is a community economy founded on the value of dried fillets of Dorado as currency.

4.2.3.3 The Fishing Schedule and the Community Economy

The Dominican missionaries who came to Batanes centuries ago complained that they could not buy fish during the summer: ‘There is very little fish and that is seasonal, and they did not want to sell it to us *because they believe that if they gave us fresh fish they could not catch more fish* so that the only fish we obtained was so dry and smoked that it was very difficult to eat. This is what follows from having been sent by God to a land characterized by an abundance of stones ...’ (Llorente 1983:200, emphasis added). This demonstrates the time depth of the practices of seasonal fishing. It is noteworthy that the Dominicans’ complaint also states the

¹⁹The first drift nets were introduced in 1987, and large catches were being made when I was in the field in the summer of 1992. At that time still relatively few motorized boats were using drift nets. However, drift net catches had declined significantly when I returned in 1997).

explicit reason why they could not buy fresh fish: were the fishers to sell the fish of summer ‘they could not catch more fish’.

The maximization of cash income from market sales is not the economic incentive for mataw fishers. Rather, it is the value of Dorado to pay for many kinds of arrangements in support of other livelihood activities of the fisherman–farmer and his household. The seasonally abundant Dorado should not be sold prior to the end of the season, because the mataw fishers have entered into contracts for shares of the entire season’s catch, and such contracts cannot be fulfilled until the end of the season. Hence the customary prohibition on consuming freshly caught fish is appropriate. Moreover, Dorado is also an item of reciprocity and sharing. Traditionally among mataw fishers only some parts of a fresh Dorado can be consumed immediately, shared or sold.²⁰ However, the main pieces, i.e. the fillets, must be dried in a specific way. But even the fillets should not be moved about before the end of the season.²¹ Dried and smoked as they hang over the mataw’s kitchen hearth, fillets are accumulated until the end of the season, and then distributed among the share partners during a special the sharing-out event (*payatay*). This occasion demonstrates how the Dorado fillets are used as a ‘community currency’ (DeMeulenaere and Lietaer 2003). For example, one day’s field labor is equivalent in value to one dried Dorado fillet, and that is how mataw fishers would contract labor for weeding their fields during the summer fishing season. According to pre-arranged shares contracts, a ‘share’ of Dorado could pay for using a boat, or (if the mataw owns his own boat) for plowing and preparing a field for planting. Or it could also be exchanged for a set amount of cash given by the share partner before the season begins (like an investment). Nowadays some groups of mataw fishers use more complex sharing arrangements than in former times. The shares system has become more elaborate, notably among the mataws in Mahatao, where catch shares can be exchanged for use of land (Mangahas 2003).

For all those arrangements the fishing schedule also formally coordinates the proper time for consumption and distribution of the catch. The prohibitions ensure that the obligations of fishers to honor exchange contracts for their catch, to reciprocate favors using it, and to celebrate and share within their social network, are met before the fish can become a commodity and marketed. In this way the local economy based on the circulation of a locally produced value is protected, and becomes incorporated into an entire season as the emphasized unit of time.

²⁰These include ‘eggs’ (*pya*), ‘liver’ (*atay*), ‘stomach’ (*vitnel*), thinned flesh from the fillet (*hathat*), *sindang* or a strip of dark flesh from the center of the fillet, ‘ear’ (*tadiña*), and ‘bones’. Such pieces are the daily fare of the mataws and their households during the fishing season. They are also sent to share partners and given to friends. If not consumed, all can also be dried, except the fresh *hathat*, which is usually consumed raw as *lataven* (ceviche) immediately after fishing.

²¹Other traditional injunctions are that the fish cannot be put in a bag or a box (the only way of carrying Dorado is by a bamboo pole balanced on the shoulder). Neither can it be put in a bottle, sent by airplane, or loaded on any vehicle with wheels until the season is over, lest the fish become ‘offended’ and go away.

Filleted and dried, Dorado has great exchange value. Many would consider the catch too valuable to be consumed immediately. Dried Dorado is not only an edible item, but something appropriate for sharing with kin and friends; it has traditional value as a uniquely Ivatan product that ideally should flow to as many relevant people as possible (as one woman expressed it to me, ‘so that they can also taste some Dorado’). Further, as something with a relatively long ‘shelf life’ (until the next summer fishing season), it has symbolic value as an item of stored wealth (‘kept in a box above the hearth’), and also connotes subsistence and food security (as with the yam, *uvi*). In short, it stands for much more than a mere commodity.

In Mahatao, during the late-1990s, on rare occasions some mataw fishers either gave away or sold some of their fresh catch. However, it was done discretely, and then only to selected persons who would be careful not to display the gift or purchase. In contrast, in Basco it is apparent that the customary rule is not always being observed, because some fishers openly sold their catch immediately after landing it. The mataw fishers could do this because they had made different production arrangements, such as buying their bait instead of contracting to exchange a share of Dorado. For example, it could be that these fishers relied on cash income from either farming or remittances instead of contracting with share partners to organize inputs and livelihood arrangements during the fishing for the season. In theory, they could act increasingly individually. Without share obligations to fulfill, they would not need to fish continuously for the duration of the season, and could fish intermittently or as ‘weekend mataws’, instead of ‘genuine mataws’, who are committed to fish daily for the entire season.

The creation of wealth in the form of dried fish accrues to individual mataw fishers depending on their ‘luck’. However, it is also a collective project. The ‘fish of summer’ are enticed to come to the vanua by the solidarity of the community, expressed as the ‘cleanness’ of the vanua. These enigmatic fish apparently favor particular individuals, and through time some mataws have become recognized as ‘master fishers’ (*sagal*) through their ability to catch many fish. One who is *masagal*, or a good fisher, has many good qualities, being ‘popular’ with fish as well as people, is characteristically generous, and shows leadership potential. Naturally, the person chosen to be Lead Fisher must be such a person, good in fishing as well as a man for others. This is a fisher suited to going from the vanua to call and seek favor with fish and spirits (Mangahas 2003). The group chooses its leader for his personal qualities that would be likely to attract good fortune and ensure the safety of the membership. Within this total economy the ecological units are not individual fishers, but collectives of organized and ‘cooperating’ fishers – i.e. the vanuas – engaged more in ‘negotiating with’ than ‘extracting resources from’ nature to ensure a continuing living for the entire community.

4.3 Conclusion

Three pre-existing systems of marine property rights or privileges in the Philippines have been identified and described briefly in the chapter. However, whether or not these models provide examples of resource management for the long-term is another question.

There are problems of enforcement, and generally the models are oriented more toward rights to subsistence, livelihood and equity of access than toward management. The idea of subsistence and the right to survive is embedded in all three models.

Population growth, migration, technology, the commoditization of nature and access to markets are among the principal driving forces that determine whether any pre-existing system would be stable or dynamic, or perhaps a tragedy waiting to happen. An extractive cycle such as that historically employed among Visayan fishers could not be sustained, as the escalation represented by an ever more rapid innovation and expansion of fishing effort inevitably leads to exhaustion of a resource and therefore to its collapse.

The Tagbanua have engaged in fishing for trade for many generations, and developed a customary legal system over their ancestral territory and resources. The Visayan strategy of mobility is one of riding on change and being at its forefront, based on a search for new resources, with the awareness that they will inevitably be exhausted and could only be exploited by them (as outsiders) while frontiers remain unregulated.

Owing to geographical constraints Batanes is a fishery for insiders only. Very high fisher mobility and population pressures are not significant factors, unlike other parts of the Philippines. However, Batanes Province is not immune to technological intensification and market-oriented extraction focusing on the short- over the long-term. Nevertheless, the capture of Dorado and Flying fish within a traditional mode of livelihood linked with particular parts of the landscape, and with the steps, words and actions of the ancestors, remains strong in parts of the province.

The Dorado and Flying fish resources that are the focus in the regulation of summer fishing in Batanes are actually migratory species that cannot be 'managed' at this level. The seasonal traditions should therefore be appreciated as having an unintended impact on other fisheries, such as those for demersal species. The seasonal rites and prohibitions may serve to coordinate activities in complex adaptive fashion; closed seasons, fishing quotas, protected areas, and control over the activity of other gears are among the recognizable methods used. Other factors may underlie the continuing existence of the system of marine resource rights and management among mataw fishers in Batanes and account for its continued viability in some parts of the province (specifically the east side of Batan Island).

Built into the fishing schedule are the priorities of the traditional system. By making clear demarcations of time, space and people, the rite to 'make the vanua' initiates a cooperative approach to fishing. As a technological system, mataw fishing turns individual fishing into a collective activity in a manner entirely consistent with other traditional cooperative institutions in Ivatan culture. Following tradition, each fishing group of four vanuas on the east side of the island begins and delimits the season with a series of rites that regulate the behavior of people in relation to their landing sites and fishing grounds. The orientation of individual fishers is firstly toward sustaining other livelihood activities, rather than a market context. The system is based on cooperation rather than competition, with 'cooperation' referring to the observance of traditional prohibitions. In the cultural construction of fishing, 'the fish of summer' would then empathize with the human condition and give themselves to the group of fishers from the 'clean' vanua. Like the Tagbanua

regard for their landscape with its forbidden areas, the traditional subsistence activities in Batanes invest their landscape with power. However, it should be noted in the modern context this is also seen as a fading and even obsolete power, from the perspective of those fishers interested in new technologies.

Vanuas are decentralized and run on democratic principles. As organized groups these have successfully resolved both local and external gear conflicts. By invoking tradition, some groups have managed to hold out and defend their fishing grounds against other forms of fishing during the summer (in Mahatao and in Basco). Some laws have been formally codified in the process. However, there is still much flexibility and creativity in the making of vanua policies.

Lastly, there is more than one currency in Batanes. The value of Dorado in exchange means that fishers have more autonomy to be self-sufficient and to make production arrangements within a community economy, apart from or complementary to the market economy.

Acknowledgements Research in Batanes in October-November 1991 and in the summer of 1992 was supported by a research grant from the Center for Integrative and Development Studies, University of the Philippines, Diliman. A pre-doctoral grant from the Wenner-Gren Foundation for Anthropological Research supported fieldwork in Batanes in the Summer of 1997.

References

- Aguilar, R. (2001, June). *Ang Karagatang Ninuno ng Tagbanua-Calamianen: Isang Ulat at Pagpapakilala (The ancestral sea of the Calamian-Tagbanua: A Report and Introduction)*. Paper presented at the Marine and coastal resources and community-based property rights: A Philippine workshop, Anilao, Mabini and Batangas.
- Alcala, A. C. (1996). Foreword. In E. M. Ferrer, L. Polotan-dela Cruz, & M. Agoncillo-Domingo (Eds.), *Seeds of hope: A collection of case studies on community-based coastal resources management in the Philippines* (pp. i–ii). Quezon City: College of Social Work and Community Development, University of the Philippines, and NGO Technical Working Group for Fisheries Reform and Advocacy.
- Aprieto, V. L. (1995). *Philippine tuna fisheries: Yellowfin and skipjack*. Quezon City: University of the Philippines Press.
- Blolong, R. R. (1996). The Ivatan cultural adaptation to typhoons: A portrait of a self-reliant community from the indigenous development perspective. *Aghamtao: Journal of the Anthropological Association of the Philippines*, 8, 13–24.
- Castillo, R. C. (2009). *Way laing panginabuhì (There is no other livelihood): Negotiating danger and survival in the life world of a community of compressor fishers*. M.A. Thesis, University of the Philippines-Diliman.
- Dalabajan, D. (2001). The healing of a Tagbanua ancestral homeland. In E. M. Ferrer, L. Polotan-dela Cruz, & G. F. Newkirk (Eds.), *Hope takes root: Community-based coastal resources management stories from Southeast Asia* (pp. 169–193). Quezon City: CBCRM Resource Center.
- Datar, F. A. (1999). *Uvi: Ang Bigas ng Ivatan, Hanggang Kailan?* Professorial Chair Paper. CSSP Publications. Quezon City: College of Social Sciences and Philosophy, University of the Philippines-Diliman.
- DeMeulenaere, S., & Lietaer, B. (2003). Sustaining cultural vitality in a globalizing world: The Balinese example. *International Journal of Social Economics*, 30(9). http://www.appropriate-economics.org/materials/sustaining_cultural_vitality.pdf. Accessed 20 April 2009.

- Galvez, R. E. (1989). *Blast fishing and government response in Lingayen Gulf*. Quezon City: Institute of Social Work and Community Development, University of the Philippines-Diliman.
- Gonzalez, P. J. (1966). *The Batanes Islands*. Manila: University of Santo Tomas Press.
- Hornedo, F. H. (2000). *Taming the wind: Ethno-cultural history on the Ivatan of the Batanes Islands*. Manila: University of Santo Tomas Publishing House.
- Hsu, Y.-C. (1982). *Yami fishing practices: Migratory fish*. Taipei: Southern Materials Center Inc.
- Llorente, A. M. M. (1983). *A blending of cultures: The Batanes 1686–1898*. Manila: Historical Conservation Society.
- Mangahas, M. F. (1994). *Indigenous coastal resource management: The case of mataw fishing in Batanes*. U.P. Assessments on the State of the Nation Occasional Papers Series No.94-001. Quezon City: University of the Philippines, Center for Integrative and Development Studies.
- Mangahas, M. F. (2003, Oct). *Luck and leadership: traditional mataw 'firstfishers' in Batanes as 'men of power'*. Paper presented at the Philippine Political Science Association Conference, Davao City.
- Mangahas, M. F. (2004). Fishing and performing fair shares. *AghamTao*, 10, 51–81.
- Mangahas, M. F. (2006, June). *'Gear conflicts' and changing seascapes in Batanes, Philippines*. Paper presented at the 11th Conference of the International Association for the Study of Common Property, Bali.
- Mangahas, M. F. (2008a, Oct). *A history of mataw fishing in Batanes, Philippines*. Paper presented at the CAPAS-IIAS Workshop on "Timescapes of Islands in the Asia-Pacific Region: Environmental History and Time Horizons of Management", Taipei.
- Mangahas, M. F. (2008b). Making the vanua: collective fishing technology in Batanes and an Austronesian archetype of society. *Philippine Studies*, 56(4), 379–412.
- Mijares, A. S. B. (2001). Settlement in stones: The Racuaydi site. *National Museum Paper*, 11, 106–115.
- PAFID (Philippine Association for Intercultural Development). (2000). Mapping the ancestral lands and waters of the Calamian Tagbanua of Coron, Northern Palawan. In P. L. Bennagen & A. Royo (Eds.), *Mapping the earth, mapping life*. Quezon City: Legal Rights and Natural Resources Center, Inc – Kasama sa Kalikasan (LRC-KSK/Friends of the Earth-Philippines).
- Palis, M. P. (2001). *Tumandok/Pangayaw: Identity, power and resource utilization in a Visayan Island*. M.A. Thesis, Ateneo de Manila University.
- Perez, P. (2004). An exercise in reflexivity. *AghamTao*, 10, 120–134.
- Republic Act No. 8550. *An Act Providing for the Development, Management and Conservation of the Fisheries and Aquatic Resources, Integrating All Laws Pertinent Thereto and for Other Purposes*. (February 17, 1998) <http://daweab.da.gov.ph/FishCode/ra8550a.html>. Accessed 20 April 2009.
- Rodriguez, S. (1997). *The Barangen fishing concession in Bolinao: An ethnographic study of a customary marine tenure system*. M.A. Thesis, University of the Philippines-Diliman.
- Sampang, A. G. (2005). *Ethnoicthyology and conservation practices of the Calamian Tagbanua in Coron Island, Palawan, Philippines*. M.S. thesis, University of the Philippines-Los Baños.
- Sampang, A. G., & Aguilar, R. (2008, Oct). *Sacred areas in Coron Island, Palawan: Lessons learned from the Calamian Tagbanwa*. Paper presented at the 30th UGAT National Conference, "Performing Heritage", San Fernando, Pampanga.
- Tarrobago, A. (2003). *Bringing ICT to farmers and fisherfolk of Batanes, Philippines*. ICT Education Case Study, Asian South Pacific Bureau of Adult Education. 2009:http://portal.unesco.org/education/es/file_download.php/d7ed63b4b7b26e52734bbbf19aebf9a0ICT+Philippines+Case+Study.pdf. Accessed 11 April.
- Yamada, Y. (1967). Fishing economy of the Itbayat, Batanes, Philippines with special reference to its vocabulary. *Asian Studies*, 5(1), 137–219.
- Yamada, Y. (1997). *A Bibliography of the Bashiic languages and cultures*. Quezon City: CSSP Publications/University of the Philippines.
- Zayas, C. N. (1994). Pangayaw and tumandok in the maritime world of the Visayan Islands. In I. Ushijima & C. N. Zayas (Eds.), *Fishers of the Visayas* (pp. 75–127). Quezon City: CSSP Publications/University of the Philippines Press.