

MANGROVE AREAS AS CONTESTED SPACE IN SAN JUAN, PALOMPON, LEYTE

Dove R. Villardo

Mangrove forests are considered important ecosystems as they serve as home to a number of marine organisms, such as fish and crustaceans, and as tidal breakers. As such they are useful coastal resources to human populations. In Palompon, Leyte mangrove forests also serve as home to a number of households living along the coasts. With increasing humans dwelling in this ecosystem however, problems on waste accumulation have affected marine resources in the area. This paper highlights the contrasting and contested meanings of a mangrove area to different groups and individuals both within and outside the community. On one hand are the mangrove dwellers and on the other hand are government entities, including their laws. The study specifically looks into the local perceptions of mangroves, living practices related to mangroves, adaptive strategies in mangrove dwelling, and the various ways in which the mangrove area is contested. Fieldwork was done through regular interactions with mangrove dwellers while observing their daily routines and practices. Key informant interviews with various stakeholders were likewise conducted to get their respective perceptions. The study points to the contested meanings of the mangrove area for local residents and the government and how these are asserted in their everyday interactions.

Keywords: Mangroves, mangrove dwellers, ecological anthropology, mangrove forest, contested space

Introduction

Human-environmental interaction is an important area of research in ecological anthropology. Elements of ecosystems, such as plants, animals, minerals, soils, water, and other components, provide resources for human needs and survival. Furthermore, ecosystems provide life-support functions

AghamTao, 2015, Volume 24:44-60

to humans and nonhumans (Farley et al. 2009). Mangroves, for instance, help to sustain fisheries by capturing pollutants, sediments, water runoff, and waste emissions from aquaculture, thus protecting coral reefs, sea grass beds, and other marine habitats (Farley et al. 2009). Aside from such functions, mangrove forests also serve to protect coastlines from the impacts of extreme weather events, such as storm surge and erosion (Bell & Lovelock 2013).

Studies on mangrove ecosystems (Amper 2007; Farley et al. 2009; Walters 2004) have pointed out not only the impact of mangroves on human activity but also the important role that mangroves play in the balance of other elements in the ecosystem, which is a significant factor in managing resources. As stated by Joppa (2012), declaring protected areas may cause changes in daily human activities and may disrupt some traditional practices in some adjacent areas near the boundaries. Walters (2004), in his comparison of the local management of mangrove forests in Banacon Island in Bohol and Bais Bay off Dumaguete in Negros Oriental, stated that mangrove plantations are valued for their role in protecting habitats which storms may destroy. Thus, only deadwood and stems are removed and used for their fuel needs.

In an urban ecosystem, mangroves often no longer find a place even along coastal areas. This was the case in the city of Tacloban where important infrastructure, including government buildings, commercial establishments, public schools, the airport, and a number of residential areas, are located near the coastline. Super typhoon Haiyan (Yolanda), which hit the province of Leyte, in November 2013, caused a lot of devastation, leaving thousands of people dead and significant infrastructure damage largely because of a storm surge that inundated Tacloban, the primary urban center in Leyte. The municipality of Palompon, Leyte was also hit by the super typhoon which destroyed houses, especially those made of light materials, along coastal areas. The devastating effects to lives and infrastructures highlighted the need for mangrove forests along the coasts for protection against such natural hazards as typhoons and storm surges.

As stated by Farley et al. (2009), despite the benefits they provide, mangrove ecosystems have been lost at an alarming rate around the world. According to Alongi (2002) one reason for such loss is that humans also favor coastal zones for settlement, recreation, and economic activities, which are considered in direct competition with mangroves for space. Amper (2004), in her study of mangroves on Banacon Island in Bohol, stated that people usually view the mangrove forest, from where marine and mangrove products are harvested, as a source of income—people plant mangroves mainly for economic reasons. The environmental government agencies'

perspective of mangroves however is largely ecological; they banned the cutting of mangroves in the area even if these were planted by the community folks themselves. This highlights the contrasting perspectives on mangroves of island coastal dwellers and government agencies.

Low (2014) has emphasized that a socially produced and constructed space is often contested for economic or ideological reasons. Social construction involves spatial transformations of places, scenes, and actions that have particular meanings, brought about by the people's social interactions, conversations, memories, feelings, imaginings, and use. According to Yung et al. (2003), the study of place provides an integrated framework for understanding people's relationship with specific areas. They assert that places are more than geographic spaces as they carry particular meanings for particular people. These meanings may either be shared or contested, as different groups may have different ways of viewing and using the same place. An example of this was highlighted by Ogden (2011) in her study of the Florida Everglades in which she states that a symbiotic relationship exists between gladesmen culture and the landscape itself. She describes how naturalists and conservationists have coopted and even criminalized gladesmen's practices and subsistence strategies, eventually displacing them from the landscape. Nygren (2004) said that policies on restricted use of protected areas have had a number of implications on local people's livelihood options. Yung et al. (2003) stated that in contested places, local communities often look at resources as sources of livelihood, while nonlocals usually view these same resources as objects of conservation measures.

What are the contrasting and contested meanings of a mangrove area to different groups and individuals both within and outside the community? These views come from mangrove dwellers, on the one hand, and from government entities, through their laws, on the other. My study looks into the local perceptions of mangroves, residents' living practices on the use of this resource, locals' adaptive strategies pertaining to dwelling in mangrove forests, and how local actors and the state, through the local government unit (LGU), contest the different views and uses of mangrove areas.

The fieldwork for this study was done intermittently from July 2013 to December 2014. 'Hanging out' was initially done in the area in order to identify key informants and to gather some data through informal, casual conversations with residents. Since I am also a barangay councilor, I readily gained access to the community through the cooperation of my co-officials and *sitio* (site) leaders. 78-year-old Manang Iste [not her real name], was a key informant. Her family had resided in the community for almost 34 years.

Manang Iste has seven children who have already established their respective households in the mangrove area in Sitio Kapinyahan. I also interviewed three male fishers and eleven women shell gleaners who also reside in the area. Verbal informed consent from these key informants was sought at the beginning of fieldwork after having explained to them the objectives of the study. They readily narrated their experiences and allowed me to observe their daily routines. I also interviewed other community residents, including six barangay councilors and the barangay captain, as well as the barangay health worker, in Sitio Kapinyahan in Brgy. San Juan of the municipality of Palompon in Leyte province.

Sitio Kapinyahan in Barangay San Juan, Palompon, Leyte

Palompon is one of 27 coastal municipalities of the province of Leyte (Figure 1), a large island in Eastern Visayas, or Region VIII, in central Philippines. Palompon is located 124 kilometers west of Tacloban City, the provincial capital. The municipality has a total land area of 165.80 square kilometers encompassing 50 barangays, 26 of which are located along its 36-kilometer coastline bordering the Camotes Sea. Fifty-six percent of the town's total population reside in these 26 barangays. Slightly off the coast of the municipality are three islets, namely Tabuk, Gumalac, and Cabgan, which are also known as the Tres Marias Islets, located along the Makapagaw shoal. Tabuk Island was declared in the early 1990s as a marine eco-park protected under Republic Act (RA) 7586 or the National Integrated Protected Areas System (NIPAS) Law through the efforts of the local government of Palompon.



Figure 1. Palompon, Leyte [Source: Wikimedia Commons]

Fishing is a major livelihood in this largely coastal municipality. The municipality invests a substantial amount of its annual budget in its Coastal Resource Management Program (CRMP). In October 2000, Palompon was awarded by the League of Municipalities of the Philippines and the Department of Environment and Natural Resources (DENR) the best CRMP in the nonexternally funded category at the national level. This highlights the concern that Palompon has for its coastal environment, including mangrove resources.

San Juan is one of the coastal barangays north of Palompon's *poblacion* (center). It is accessible by land transportation and has the longest beach front in Palompon, attracting a number of local residents as well as those from the neighboring towns of Matag-ob, Villaba, and Isabel. Barangay San Juan has a *sitio* (site) named Kapinyahan, which has a mangrove area of about two to three hectares in area located some 30 to 40 meters from the national road (see Figure 2).

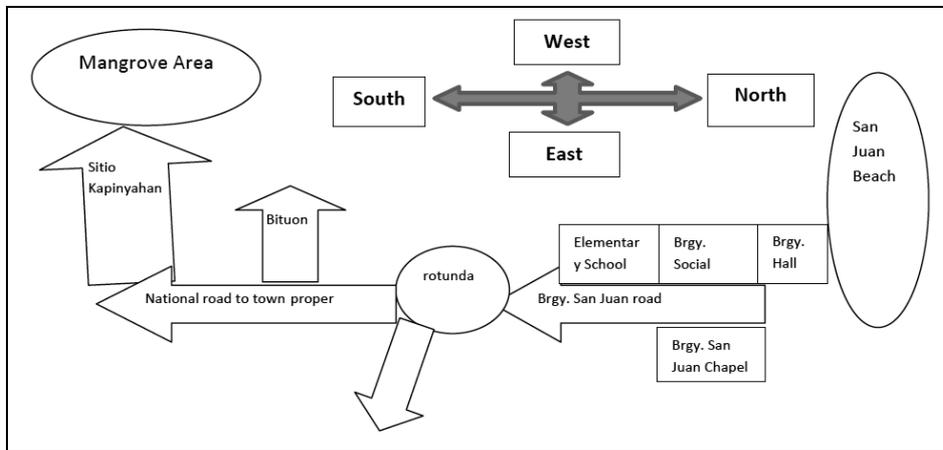


Figure 2. Barangay San Juan, Palompon, Leyte

Sitio Kapinyahan is divided into two portions: the upper and the lower. Those in the upper portion of the community live near the national road in privately owned lots with concrete houses far from the mangrove area. Most of these families have at least one member working abroad. In other words, these households are relatively well-off compared with those living in the lower portion of the sitio. Houses in the lower portion are smaller, each occupying a space averaging about 10x12 square feet, and are mostly built

near or within the mangrove area. The houses are made of light materials. The house structure is usually braced by a live mangrove tree, which forms part of the house. Most of the houses are elevated at one to five meters from the ground to prevent seawater from entering the interior. According to the records of the barangay health worker, there are 41 households in the mangrove area. There are some small *sari-sari* stores in the area, which are common also in other communities, selling affordable goods on retail, including condiments and other needs of the residents. There is a chapel in the community which is primarily used for religious activities as well as for sitio meetings. There is also a vacant space in the community where people hold political meetings and social gatherings. The place is muddy and the soil sodden with seawater during high tide, but the ground also gets dry, although spongy, during the low tide.

According to the Municipal Environmental Resources Office, there are five mangrove species found in Palompon: *Sonneratia alba*, *Avicennia marina*, *Rhizophora stylosa*, *Rhizophora mucronata*, and *Rhizophora apiculata*. The common species in Sitio Kapinyahan is the *bakhaw* (*Rhizophora mucronata*). According to residents, super typhoon Yolanda in 2013 uprooted some of the trees and destroyed most of the houses. Right after the storm, however, residents began rebuilding their houses still within the mangrove area as the mangrove forest had served as their home for a number of years.

The mangrove forest area is a highly contested space, with local and nonlocal claimants and stakeholders investing it with divergent uses and meanings: as a protected area, a dwelling place, and as an important source of livelihood, income, and leisure. Meanwhile the interplay between human activity and the environment also affects the mangroves.

Local perceptions of mangroves

All the people from Sitio Kapinyahan whom I interviewed for this study stated that mangrove forests are very important to the environment. They shared that they benefit from the marine resources that are available in the mangrove area, such as fish, shells, and other marine organisms. Mangroves protect them from the direct heat of the sun. As stated by one resident, “*Kani jud ang bakhawan dako jud nig tabang namu diri sukad ma sukad nag hatag ni ug mga pagkaon sa amua labi na jud kasilongan na siya sa mga isda ug hasta namu nga nag puyo diring dapita.*” (The mangroves have really helped us a lot ever since. It has given food as well as shade both for us and the fish living here.)

Local residents underline the importance of mangroves as “*grasya sa kinaiyahan*” (‘nature’s blessings’) and they take action to protect the area from outsiders who threaten to cut the mangrove trees for commercial purposes. Some residents plant mangrove propagules in their free time, with no thought that such is beneficial to the environment. Manang Iste shares, “*Nagtanom sad ko og bakhaw kanang panahon nga muadto ko para manginhas para naa sad koy lingaw.*” (I planted mangrove propagules when I went to the mangrove area to gather shellfish, just to while away my time.) According to her, nobody has told her to do this; she plants mangroves ‘for fun’. As she puts it, “*Amo lang kinabuang ang pagtanum anang tungki samtang pa ingon mi sa pagpanginhas.*” (It was just for fun that we planted mangrove propagules on our way to gather shellfish.) This echoes Amper’s (2004) study about Banacon Island which cites how an ordinary fisherman decided to plant mangrove propagules on the tidal flat near where he lived, without expecting any huge positive results to come out of it. The areas covered with mangroves later became a 200-hectare forest when other members of the village followed his suggestion to afforest the area with mangroves.

Meanwhile, government officials in San Juan, Palompon have started to enforce strict rules with regard to mangrove cutting. According to one resident of Sitio Kapinyahan, they were told by the local police that they should not cut any of the mangrove trees in the area. The police cited RA 7161 or the Revised Forestry Code of the Philippines, which prohibits cutting any species of mangrove trees. One informant states, “*Diri sa pagatpatan gina-dili sa amu ang pag putul aning mga pagatpat labi na jud ning mga tulid nga klase kay mao ni gi pangtanum sa mga pulis ka-apil pa gani mi ani sa pag tanum.*” (We are prohibited from cutting mangrove trees in this area especially those with upright trunks because these have been planted by the police together with us residents.)

Some local residents however surreptitiously cut trees, in moderation. According to one, while pretending to catch fish or gather shellfish, some secretly collect mangrove stems and trunks for firewood. Many of them, based on my observation, do not cut the mangrove trees; they cut only the branches and stems or gather some that are considered deadwood. This validates the observation by Joppa (2012) that the benefits of living near forest resources are often significant in a country or a community heavily dependent on firewood and charcoal for fuel. An informant cites the economic advantage and high quality of using dry mangrove wood compared to other commercial fuel, “*Gamit jud mi aning mga laya nga pagatpat kay sa mag palit kag gas pirmi para makahaling di pajud ni dali ma ugdaw ang baga makaluto gud nag inasal ang ka init.*” (We often use dried mangroves

instead of buying gas to make fire for cooking. It has a steady flame and heat that it can even roast a whole pig.)



Figures 3 - 4. Dry mangrove branches utilized for cooking in the households

Living in the mangrove forest of Sitio Kapinyahan

Mangrove dwellers in Kapinyan come from the different barangays of Palompon, as well as from other neighboring towns. Aside from being a steady source of household food, informants said that the mangrove area provides them with an amount of security in terms of income, which they did not enjoy in the places from where they come. They said that their lives in their places of origin were difficult and the future there seemed bleak. These ideas reflect the observation that the main reason usually given by people for living in or near a protected area is their easy access to natural resources in the ecosystem for their subsistence needs Joppa (2012).

Some people in Kapinyahan started building their houses in the mangrove forest area beginning in the late 1980s. The local government unit of the barangay at that time allowed them to do so under the condition that no trees would be cut and that they would help in protecting the mangrove forest. Inhabitants in the area erected their houses in clusters to maximize the residential space assigned to them by the local government. They braced their houses on available trunks of live mangrove trees as natural structural posts, beams, or support (Figures 5-6), which also ensured that no tree would be cut.

According to the barangay captain, some of the settlers did not adhere to the rules that were imposed by the officials on the residents in the area: *“Naa jud gihapon mga gahig ulo dili maminaw sa mga patakaran sa pag puyo dinha sa pagatpatan.”* (There are really those who are hardheaded; they do not follow the rules on living within the mangrove area.) For example, there

were some settlers who illegally built their houses on areas assigned to them by the barangay. Aside from these violators, there are also some people in Palompon who illegally cut and sell mangrove timber to bakery owners who use them as fuel for baking bread and pastries. Some residents recall that nonresidents who go to the mangrove area have been doing this for years. According to them, they could not guard the mangrove area 24 hours a day, and outsiders often cut mangrove trees at night when the residents are asleep. These illegal cutters usually go to the mangrove area using a nonmotorized boat and cut the trees using a manual chainsaw. As one resident said, “*Mga tungang gabie na nila buhaton aron way makakita sa ila gibuhat sa ingon ana wa gyud maka badlong nila.*” (They usually do it at midnight so that no one will see what they are doing and no one can reprimand them.)



Figures 5 - 6. Live mangrove trunks brace houses as posts or beams

Residents of Palompon also traditionally go to the mangrove area to harvest some shellfish and other marine organisms that could be consumed as food. According to Manang Iste, some of these residents have decided to live in the mangrove forest in order to have direct access to the abundant resources found in the area. The same is true for herself, she said, “*Bisag ako na lang usa, mabuhi ra gihapon ko kay naa ra may makuha sa pagatpatan para kaon ug sugnod.*” (Even if I live alone, I still survive since I can readily get food and firewood from the mangrove area.)

Residents in the mangrove area are also primarily engaged in fishing activities for both household consumption and for income generation. Most of them own a small non-motorized boat and fish in the vicinity of the

mangrove area using hook and line and mesh nets. The few who have motorized boats go farther out to sea, often reaching the coastal waters off the Tres Marias Islets on Makapagaw shoal, where there is a perceived abundance of marine resources, which is still jurisdictionally part of Palompon. Those who do not own a boat glean for shellfish on the tidal flats during low tide, mainly for subsistence. Men and women, both young and old, gather these resources with their bare hands, collecting them in small woven baskets.

Aside from fishing, some of the men are employed in part-time construction work mostly as laborers or helpers. There are also others who drive the *pot-pot* (non-motorized tricycle), a common mode of transportation in the barangay, to augment the household income. According to some of my informants, they pay a rental or “boundary” fee ranging from ₱35 to ₱50 a day to the tricycle owner. Some of the women occasionally work as house helpers or babysitters in nearby households to earn additional income for the family.

Besides economic activities, leisure time is also spent by residents under the shade of mangrove trees. They usually gather at the vacant space near Manang Iste’s house and spend the day conversing and exchanging stories. The mangrove area also serves as a playground for children, who amuse themselves by toying with tiny shellfish and other marine species crawling on or hiding under the spongy surface of the wetland. The children also help their families by gleaning resources in the mangrove area.



Figures 7-8. Children playing with the small crabs abundant in the mangrove area.

In sum, living in the mangrove forest has enabled residents to survive life’s uncertainties, gaining from the benefits derived from the access to the

resources found therein, particularly in terms of livelihood opportunities and related domestic activities.

With increasing numbers of humans dwelling in this ecosystem, there have been growing problems on waste accumulation in the place, however. Waste disposal is one of the key problems in the mangrove area. The types of waste range from human organic waste to inorganic waste from plastics and nonbiodegradable packaging of various kinds of consumer products. Most residents defecate in the mangrove forest, while others throw their waste in most indecorous ways. Seawater, during high tide, seeps or drains into makeshift septic outlets, posing serious environmental problems and health risks. As one informant said: "*Naa mi ari C.R. pero panahon sa ta-ob sa dagat maabtan nya mugawas ang hugaw mabaw raman gud ang kubkub ana*" (We have a toilet, but during high tide, the seawater reaches the shallow hole and the waste flows back up.)

Adaptive strategies

Most of the houses built on the mangrove tidal flat are raised about one to five meters off the surface, depending on the high-tide level of the sea. Residents do this to prevent seawater from entering their homes. Their houses are also made of light materials to lessen the pressure on the tidal flat. As mentioned earlier, their houses are braced by live mangrove trunks, which serve as a natural structural support. Constructing houses under the shade of a big mangrove tree is also common; this ensures good ventilation of their homes. They engirdle the stilts that support their houses with a fish net that encloses the lower portion of their houses. The net blocks garbage from accumulating under their houses. During low tide, they remove the garbage caught in the mesh nets. (Garbage emits a foul smell when left entangled in the nets over time, which, residents say, may become a health risk.)

Many of my informants said that they have adapted to the conditions of the mangrove ecosystem. They have similarly learned how to cope with the risks of living in such an environment. For example, residents in the area have learned how to brace themselves for the onslaught of typhoons and natural disasters. So as to be ready for the impact of strong winds and waves, mangrove residents try to improve the stability of their houses by securing them with rope to wooden pegs buried in the ground or around mangrove trees. They pack necessary items, such as food and clothes, should the need to evacuate arise. When they received news that super typhoon Yolanda (Haiyan) was expected to hit Leyte, for example, many of the mangrove residents evacuated to the barangay elementary school as advised by the local government through the information disseminated by the barangay officials.

The typhoon still damaged their property, but only minimally and not to an extent as devastating as that in places where there were no mangroves that protected the coastal areas.



Figures 9 (left) Nets placed to prevent garbage from collecting under houses. **Figure 10** (right), A house elevated a meter from the ground.

In sum, living in a mangrove forest requires adaptation to an unconventional environment for human habitation. On the other hand, human habitation in such an ecosystem, when left unregulated, has consequent negative impacts on the environment that, in turn, affects the lives of those who live in and are dependent on this very same ecosystem or what Frake (1962) describes as a network of interdependent relationships between and among humans, the other organisms of the biotic community, and the constituents of the physical environment. It likewise validates the adaptive capacity of humans in a given ecosystem which forms part of, and is also formed by, their culture.

Mangrove areas as contested space

Protected areas are a commonly contested space, particularly since about 70 percent of these worldwide are inhabited and regularly used by the people (Nygren 2004). The mangrove area in the Palompon case is considered a contested space due to the contrasting viewpoints of the local residents and the local government, specifically on the actors' differentiated rights and claims on the resource.

Local settlers believe that they have the right to live in the mangrove forest and utilize the resources found therein because they are constituents of the barangay and have been residents of the site for a long period. About 80 percent of the settlers in Sitio Kapinyahan believe that they have the right to

claim a portion of the forest as home. Although most residents have not actively asserted this “claim” or “right” and have not resisted against government plans of relocation, they have stayed in the place in spite of the advice of the LGU that they vacate the area. The local government views the claim of mangrove residents as invalid; thus, the latter’s occupation of the site is illegal.

The LGU cites the Revised Forestry Code of the Philippines or Presidential Decree No. 705 as the basis for its plan to evict the mangrove settlers. One provision states that

[s]trips of mangrove forest bordering numerous islands which protect the shoreline, the shoreline roads, and even coastal communities from the destructive force of the sea during high winds and typhoons shall be maintained and shall not be alienated. Such strips must be kept from artificial obstruction so that flood water will flow unimpeded to the sea to avoid flooding or inundation of cultivated areas in the upstream. All mangrove swamps set aside for coast-protection purposes shall not be subject to clear-cutting operation. (PD 705, Chapter III, D, Section 43)

Furthermore, DENR Administrative Order (DAO) No. 18 of the Department of Environment and Natural Resources (DENR), dated February 1, 1990, states that

[t]o sustain optimum productivity, it shall be the policy of the government to conserve, protect, rehabilitate and develop the remaining mangrove resources of the country...stop the wanton exploitation of mangrove resources and enhance the replenishment of the denuded areas through natural or artificial means (DAO 18, Section 1).

Mangrove areas have also been defined as a protected area by virtue of the NIPAS Act of 1992. The Act states that a protected area shall be “managed to enhance biological diversity and protected against destructive human exploitation” (NIPAS Act, 1992, Section 4, No. 2).” Aside from the mangrove area itself, there is also a designated buffer zone of at least 50 meters fronting seas, oceans, and other bodies of water, as specified in DAO 18. The interpretation of this policy by those in the LGUs is that these areas should be a “no-build zone.” After super typhoon Yolanda hit the province of Leyte, national and local government units gave an ultimatum to communities along the coastline to vacate such areas within the buffer zone.

The barangay captain of Barangay San Juan said that it would be better for the residents to be relocated to a safer place. Officials of the municipality of Palompon also share this idea on relocation. However, the barangay captain and residents cited the challenges they face in convincing mangrove settlers to relocate elsewhere, among which are the lack of funds to carry out the relocation and the unavailability of a suitable relocation site for those who will be affected. The barangay captain has thus allowed the mangrove dwellers to remain in their current area, but this time under strict conditions that residents follow the rules on the use of the space and its resources. One resident added, "*Dugay na man ang plano sa gobyerno ana nga i-relocate mi sa lain lugar, pero tungod sa kwarta tingali mao hangtod karon wapa naa pa gihapon mi ari.*" (The government has long planned to relocate us to another place, but lack of funds may have been the reason why we are still here.)

The land where the mangrove dwellers' houses are built is considered a protected area. The residents are aware that they neither have any right to claim this land nor to have the land titled because the mangrove area is considered a public domain that is under the jurisdiction of the government. They are also aware that the local government unit of Barangay San Juan is just allowing them to reside in the mangrove area, at least for the moment, for humanitarian reasons so as not to displace them. Further, they are also aware that the government has set forth some rules and regulations to be followed including the noncutting of mangroves in line with RA 7161, as well as the proper disposal of garbage in line with the Clean Water Act, or RA 9275.

However, some of the residents asserted that since the mangrove area is a "public domain," they should be allowed to live in the place since they are constituents of the barangay. Some, however, are open to the idea of relocation provided the site would be accessible to the sources of their livelihood. The municipal LGU, together with the barangay council, had a discussion with the Sitio Kapinyahan mangrove dwellers on 15 February 2015 and offered them a relocation site in Barangay Cangmoya, four barangays away and located away from the coast. The relocation site will have ready-made houses for them but is located ten kilometers from Sitio Kapinyahan where most of their livelihood activities are located. Residents said in interviews that they might accept the offer, but still have plans of going back to Sitio Kapinyahan. One of the reasons cited was that the relocation site is too far and would entail higher transportation costs for their commute to current work places and schools. Most importantly, they said that their subsistence strategies, including coastal and marine economic activities, significantly revolve in and around Sitio Kapinyahan; they believe they cannot carry out these activities in Barangay Cangmoya. According to

them, their knowledge and skills are more on fishing and related coastal activities, like gleaning shellfish. This explains, according to them, why they would still go back to Kapinyahan should the LGU succeed in relocating them elsewhere.

The mangrove settlers also assert that the mangrove area has already been their home for a number of years and that they have not caused any major harm to the resource. However, barangay officials pointed out that even if the residents have not cut the mangrove trees and in fact have helped in the planting of more propagules in the area, their disposal of human wastes and garbage into the ecosystem remains a major concern. The residents responded to this concern by promising to clean up the areas near and around their houses. The LGU, nonetheless, maintained that the settlers need to be relocated. As of publication, everything seemed at a stalemate: The LGU has not carried out any demolition of the houses and the mangrove residents have not organized any confrontational opposition against relocation.

Conclusion

This paper has illustrated how the mangrove area has been socially produced by the mangrove dwellers through their economic activities, including fishing, gleaning, and gathering mangrove timber for fuel; by the social relationships within, between, and among households residing in the area; by varying views about the environment and the rights and claims resulting from the use of the resource and residence in the site; and by innovations in building houses and the use of implements to carry out important livelihood strategies in the area. Over time, the mangrove area has been socially reconstructed as a space situated in the complex of resource use and the regulation of rights and claims which are contested by different players and stakeholders, foremost of which, in this case, are the mangrove dwellers and the representatives of the local government unit. Each party asserts its position on the issue, yet each recognizes and understands the contrary position of the other, and both, at least for the moment, are negotiating ways to reconcile their differences. Mangrove dwellers assert that human-environment interactions in this case are symbiotic as humans take care of the mangrove forest – through local policing efforts, mangrove planting, and noncutting of trees – while simultaneously benefitting from the use of the resources. The local government unit of Barangay San Juan recognizes both the need to protect the mangroves and the need of its constituents to live in a site that would not adversely affect their livelihood, but the LGU's opinion differs substantially from that of residents on the insistence of the people on their right to live in the contested area. Although there have not been direct

confrontations, local residents and government have invoked their respective rights to the place from contrary perspectives. Whose interests and perspectives will prevail remains to be seen.

References

- Alongi, Daniel M. (2002). Present state and future of the world's mangrove forests. *Environmental Conservation*, 29(3): 331-349.
- Amper, Zona Hidegarde S. (2004). Indigenous development amid national development: The case of mangrove reforestation in Banacon Island, Getafe, Bohol. *Philippine Quarterly of Culture and Society*, 32: 237-258.
- Bell, Justine and Cathrine Lovelock. (2013). Insuring mangrove forest for their role in mitigating coastal erosion and storm surge: An Australian case study. *Society of Wetland Scientists*, 33: 279-289.
- Farley, Joshua, David Batker, Isabel dela Torre, and Tom Hudspeth. (2009). Conserving mangrove ecosystem in the Philippines: Transcending disciplinary and institutional borders. *Environmental Management*, 45: 39-51.
- Frake, Charles. (1962). Cultural Ecology and Ethnography. *American Anthropologist*, 64 (1): 53-59.
- Joppa, Lucas. (2012). Population change in and around protected areas. *Journal of Ecological Anthropology*, 15(1): 58-63.
- Low, Setha. (2014). 'Spatializing culture: An engaged anthropological approach to space and place.' In J.J. Gieseking & W. Mangold, with C.I. Katz, S. Low, & S. Saegert (eds.), *People, place and space reader* (34-38). New York: Routledge.
- Municipality of Palompon, Leyte. *About Palompon*. (Retrieved on 16 December 2014 from <http://www.palompon-leyte.gov.ph/index.php>)
- Nygren, Anja. (2004). Contested lands and incompatible images: The political ecology of struggles over resources in Nicaragua's Indio-Maiz Reserve. *Society and Natural Resources*, 17: 189-205.
- Ogden, Laura A. (2011). *Swamplife: People, gators, and mangroves entangled in the Everglades*. Minneapolis, MN: University of Minnesota Press.

- Walters, Bradley B. (2004). Local management of forests in the Philippines: Successful conservation or efficient resource exploitation? *Human Ecology*, 32(2): 177-191.
- Yung, Laurie, Wayne A. Freimund and Jill M. Belsky (2003). The politics of place: Understanding meaning, common ground and political difference on the Rocky Mountain Front. *Forest Science*, 49(6): 855-866.

Dove R. Villardo is a candidate for the degree of Master of Arts in Anthropology, University of San Carlos where he teaches as a part-time instructor. His research interest is in environmental anthropology, specifically marine and coastal ecologies. He works as a community empowerment facilitator of the Department of Social Welfare and Development of Region 7.
Email: malayangibon25@gmail.com