

**The Role of Rainforestation
in Forest Landscape Restoration
and Conservation
in the Island Municipality of
Pilar, Camotes, Cebu**

Guiraldo C. Fernandez, Jr.

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Introduction

Challenges to society brought about by the natural environment in the Philippines usually take the form of harsh weather conditions like strong typhoons, heavy downpours that caused flooding and landslides, prolonged dry spells, and changing weather patterns that disturb planting schedules in rural and natural resource dependent communities. To address these pressing problems, a number of initiatives have been introduced and implemented in many rural communities across the country. Hence, in the quest to make people adapt to the effects of changing weather patterns and enable people to be tough against the challenges brought about by environment-triggered catastrophes, Rainforestation (RF) was innovated and introduced by Visayas State University (VSU) in the 1990s. The RF technology was VSU's response to the challenge of addressing massive deforestation in the Philippines caused by conversion of primary forests to secondary forest cover by legal and illegal logging and the removal of secondary forest cover by the expansion of upland agriculture (Fernando 2005). In relation to the phenomenon of climate change, deforestation has been consistently pointed out as one of its causes. In fact, it is thought of as the world's second leading cause of global warming and produces about 24% of global greenhouse gas emissions. Deforestation in tropical forests adds more carbon dioxide to the atmosphere than the sum total of all cars and trucks on the world's roads (Earth day Network 2018).

Thus, to address the problem of massive deforestation throughout the Philippines, Rainforestation has been construed as a viable option in response to the said environmental challenge. To add to this, Rainforestation would also serve as an instrument or means for communities who would adopt this forest restoration technology to be more adaptive to the changing weather conditions in the country. After all, Rainforestation has also been designed to provide people a staggered income from high-value timber, high-value crops, fruit trees, spices, and medicinal crops since

it has also increased soil fertility and biodiversity in Rainforestation sites. It has helped restore soil productivity and protected the watersheds on degraded sites (Milan & Ceniza 2009). This technology found its way to Visayas State University since in the 1990s, the Philippine-German ViSCA-GTZ Applied Tropical Ecology Program started to look into possibilities of rehabilitating former forested areas to get back the ecological functions of the degraded areas needed for poverty alleviation through sustainable rural development. This program was directed at the promotion of biodiversity conservation of degraded forest ecosystems and natural resources, which led to the development of a *Closed Canopy and High Diversity Forest Farming System or Rainforestation Farming*. The directives of the program were formulated so that Rainforestation could replace the widespread slash-and-burn practices, protect the watershed and enhance biodiversity by using indigenous trees only. In 1994 the hypothesis was formulated that a farming system in the humid tropics would be increasingly more sustainable the closer it was to the species composition of the original local rainforest (Goltenboth 2005). With this, the ecological functions of a given forest ecosystem would be re-established while subsistence farmers could accumulate their fair share of income in order to sustain themselves.

Through the years, Rainforestation has been adopted by people from different walks of life. From individuals who just want to contribute something to nature's wellbeing to groups who believe in the promise that life would be more peaceful if people work with nature. Since its introduction in 1995, a number of individual and group adopters have vouched that Rainforestation is an effective conservation innovation. Fernandez and Bande (2019) have mentioned that four adopters from the Eastern and Central Visayas Regions in the Philippines have all agreed that Rainforestation is truly a means for sustainable development. The adopters have all agreed that through conservation with the use of native tree species, integration with high-value crops (i.e., yam, abaca, cacao) and fruit-bearing trees have not been very difficult.

Aside from that, Rainforestation has also served as a means to bring back biodiversity and ecosystem services such as the implementation of water supply in the area as well as the return of pollinators (insects) seed disperser (birds and bats) and birds of prey that took shelter in the native trees which have served as their natural habitat.

Moreover, Fernandez and Bande (2018) have also manifested that a collective drive by rural community members to conserve and protect what is left of the natural environment has enabled Rainforestation to thrive more than twenty years after implementation. This study also demonstrated that a conservation effort naturally succeeds when a group of people does it by heart. When a number of people put their love into what they are doing, what they do would bear much fruit and those who put their hearts into it would benefit from the fruits of their labor. This is what really happened with the community members of the Cienda San Vicente Farmers Association (CSVFA) and the Patag Rainforestation Association (PRA). By taking good care of the natural environment through Rainforestation adoption, they have been able to sustain themselves environmentally, socially, and economically through the years. Aside from that, the community did not only sustain itself in a variety of ways, but they also inspired others to do the same.

After the initial Rainforestation innovation was disseminated to the group and individual adopters in the vicinity of Baybay, Leyte and Visayas State University in the 1990s, Rainforestation was spread to the neighboring provinces and regions in the years that followed. It was adopted by the Bohol Island State University (BiSU) – Bilar Campus as early as 1996. It found its way to the island of Negros in 2004, and in 2008, Rainforestation caught the eye of an elected Municipal Council Member of the island Municipality of Pilar, Camotes group of islands, in the Province of Cebu. Since then, Rainforestation was introduced to Pilar in the hope that it could serve to restore the dwindling watershed in the municipality on which the island's supply of water depended upon (Fernandez & Bande 2019).

Chapter 1

Ecological Problems and Challenges to Pilar's Natural Resources and their Conservation

Like any other small island in the Philippines, Pilar has its share of challenges, especially environmental ones. Since Pilar has a relatively small land area (3,776 hectares), it would always be challenged by the changes brought about by development and, perhaps, population growth. Pilar's population has grown from 11,012 based on the 2007 National Census to 12,506 as reported by the 2020 National Census. Hence, one can understand that the municipality's population has grown 11.9 % in a period of 13 years. Yet, one has to also acknowledge that while Pilar's population grows in an upward direction, the land area of Pilar does not. Hence, the carrying capacity of Pilar in terms of its resources to support its growing population has to be assisted in any way possible by the residents of the island.

For instance, water supply has been problematic in the dry months in recent years. However, due to the need to support themselves, people have resorted to making farms to feed themselves. Yet, the island's land area has been very limited. Hence, people tend to establish their farms in the island's watershed areas. This economic activity has indubitably resulted in the cutting of trees in the mountains

which posed a great challenge to the watersheds' well-being. Moreover, the residents of Pilar have been known to engage in both farming and fishing due to the close proximity of the distance between the seas and the mountains. With Pilar's growing population, a number of new bred fishermen have also utilized Pilar's traditional fishing grounds. This resulted in over-fishing and reduced fish catch quantity. Not only that, some people also cut mangrove trees for various uses such as firewood and charcoal since they burn very well, generate heat fast, and produce lesser smoke. This greatly affected the island's mangrove forest, which could also be attributed to the decline of the fish population in the area.

To add to that, the realm of development did not spare Pilar from its reach. Pilar has become very accessible from its neighboring cities and municipalities in recent years. Fast-moving commercial boats that traversed from Ormoc, Merida, Albuera, and Baybay in Leyte as well as that from Barangay Cawit to the town of Tudela have been very available to travelers, especially at the right price. Moreover, a roll-on-roll-off cargo ship that has the capacity to carry large vehicles has made travel to the island readily available, making it easy for travelers to visit the island. With transportation very much improved, Pilar, in one way or another, has found it difficult to cut itself from the reach of tourism which is an economic activity that can be likened to a double-edged sword.

According to Mayor Eufracio "Dodong" Maratas, he has not wished for Pilar to be a mass tourism spot. Though tourism could bring income to the Local Government Unit and the island's residents, it also has its fair share of negative effects. For the Mayor, mass tourism could very well affect the island's carrying capacity in relation to the environmental components that support life. For one, many people coming to the island eventually need an additional supply of water for consumption. With this, the already scarce water supply could become more scarce due to the demand for mass tourism.



A swimming pool inside a luxurious resort in Barangay Moabog, Pilar, would surely require a large volume of water from Pilar's scarce water resources

Aside from that, development means business coming to the island which also draws a large volume of visitors to the municipality. This could result in the establishment of additional infrastructures, which also pose a challenge to the island's natural environment. Yet, if one speaks of development, it is not only the business infrastructures that would pose considerable threats to nature. The establishment of more houses on the islands also led to the said problem since it is also tantamount to more people destined to also use the island's scarce resources.



An aerial view of Pilar from Google Earth taken in September 2003



An aerial view of Pilar from Google Earth taken in May, 2017

The two aerial images of Ponson island where the Municipality of Pilar is located, show the impact of development on the island municipality for a period of 14 years, from 2003 to 2017. The aerial photographs suggest that there is a significant improvement in terms of infrastructure. These years, however, are the years that Mayor Eufracio Maratas has served as an elected municipal official. Hence, when Mayor Maratas has expressed that his major concern in his municipality has something to do with the island's carrying capacity in relation to the island's population growth and development, the mayor has seriously meant what he has been



saying since he has been living in the island all the years that he served as an elected municipal official.

An aerial photo taken in September 2003 shows the mountains of Pilar devoid of the much-needed trees to support its watershed

As people strive to make a living, Pilar's Municipal officials have come to a realization that there is a tendency for people to encroach on the watershed areas of the island for economic activities, particularly agriculture. As Fernando (2005) has consistently emphasized, upland agriculture has been one of the drivers of deforestation in the Philippines. This also holds true in Pilar. As people strive to survive, they tend to make farms in the mountains, especially when the seas are rough. As mentioned earlier, the close proximity of the distance between the mountains and the seas has enabled a number of the island's residents to be fishermen who double as farmers or vice-versa. Domestication of animals as an alternative livelihood has also posed a greater challenge to the watershed's wellbeing. Yet, the challenges posed to nature have not stopped there. The mangrove and marine ecosystems have also been challenged since the degrees of utilization in relation to mangrove and marine resources have also increased because of development and population growth.

As Mayor Maratas' administration and the Local Government Unit (LGU) of Pilar realized the need to face the above-mentioned challenges to nature, the LGU initiated means to address the pressing challenges. One of the instruments used to address the challenges to nature in his island municipality is Rainforestation. With Rainforestation coming to the shores of Pilar, the Pilar LGU has taken the opportunity to make use of Rainforestation to address the pressing environmental problems of the islands. With Rainforestation's tenet of making use of Philippine native and endemic trees in rehabilitating denuded lands in Pilar's watershed and mangrove areas, hope was found in the conversation innovation's potential to address the environmental challenges that have confronted his island municipality.

Nevertheless, rehabilitating a denuded and over-exploited watershed and mangrove forests of an island is not an easy feat to accomplish. That is why the Local Government Unit (LGU) of Pilar sought help from the community

members, non-government organizations, and other stakeholders to help and assist in addressing and facing the island's environmental challenges head-on. With strong partnership and connection with Visayas State University (VSU) and the Environmental Leadership and Training Initiative (ELTI), the LGU led by the then Councilor Maratas has devoted all his years in service to address said environmental challenges with Rainforestation as a means to address said environmental challenges.

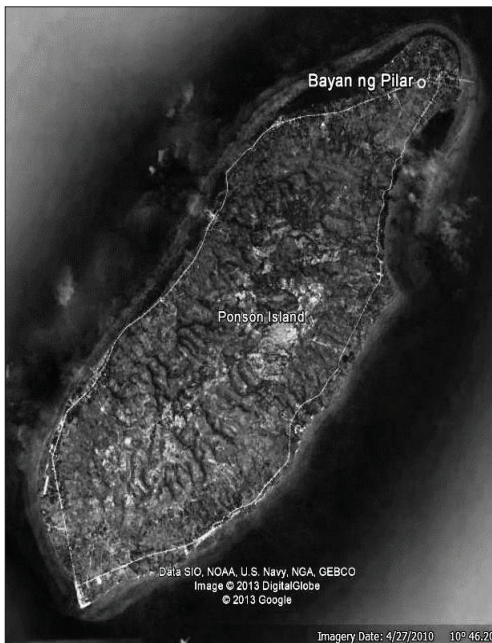
Ecological Make-up of Pilar and the Island Municipality's Political Ecology for the Past Decades and how it Influenced the Conservation Efforts of the Terrestrial and Marine Ecosystems in the Island Municipality

Political ecology is a field that focuses on power relations as well as the co-production of nature and society in environmental studies. The status of influential players (e.g., governments, corporations, environmental organizations) and what is taken for granted in leading discourses appear to be challenged by contributions to this particular field of study (Benjaminsen & Svarstad 2018). Yet, in understanding the political ecology of the Island Municipality of Pilar, this study understands it from the lens of Zimmerer and Bassett (2003) where it strives to engage both the ecological and political dimensions of environmental issues in a more balanced and integrated manner.

To better understand Pilar's political ecology, it is very important to understand that the terrestrial ecosystem resources in the island are primarily viewed as utilized and are in ever-changing interaction with human activities. Though citizens were not allowed to title lands in the island due to the Philippine Government's declaration putting the whole island into a protected mangrove area during the Marcos era in the 1970s (Borlasa 2012), a large portion of the mountains of Pilar was heavily logged and exploited. According to Mayor Eufrazio Maratas in an interview sometime in 2018, one of

the reasons that he gave premium to the care for the environment in the island was that he was alarmed at the rate where limited, scarce resources were being utilized. He continued that that was the reason why he opted to chair the Committee on the environment while he was still a Municipal Councilor and continued to support environmental conservation initiatives when he became Vice-Mayor and eventually Municipal Mayor.

The Mayor may have sounded to romanticize the need to protect and conserve the remaining natural resources in the island. Yet, there are grains of truth in what he has previously stated. Looking at an aerial photo of Ponson Island (the island in the Camotes group of islands where the Municipality of Pilar is situated), it is very discernible that its mountains have undergone degrees of exploitation through the years. Said aerial image shows patches of brown on the island's mountain areas which signified the absence of trees or vegetation.



The aerial view of the Municipality of Pilar (Ponson Island) taken by the Data SIO, NOAA, USA Navy, NGA, GEBCO. Brown patches in the mountain area manifests the absence of trees or absence of vegetation



A closer image of the very close proximity between the mountains and the sea as viewed upon entry to the port of Pilar



A closer image of the very close proximity between the mountains and the sea as viewed from the mountain top of the Municipality of Pilar during a field work by this researcher with the team from the Institute of Tropical Ecology and Environmental Management from Visayas State University

With this, the Pilar LGU, with the support of some community members and municipal officials, has decided that it has to do something about it. The way people use the resources found in nature is quite unique because of the close proximity between the seas and the mountains. Hence, the people that he would govern would indubitably have that penchant to utilize both the resources of the mountains and the seas. It is in this sense that an understanding of the relations between the natural environment and society has to be seriously understood from a geographical perspective (Zimmerer & Basset 2003).

Environmental Governance

For the Pilar LGU to succeed in conserving what are left in the natural environment in the island municipality, the administration has to incorporate such conservation measures in the realm of governance, environmental governance to be specific. On the one hand, governance is a concept generally used to describe how power and authority are exercised and distributed, how decisions are made, and to what extent citizens are able to participate in decision-making processes. Hence, governance is about making choices, decisions and trade-offs, and it deals with economic, political and administrative aspects. Governance is the exercise of power or authority by political leaders for the well-being of their citizens or subjects (Bevir 2013).

On the other hand, environmental governance refers to the discrete area of policy and research, particularly concerning the expansion of theoretical knowledge regarding environmental justice and sustainability. The decentralization of decision-making powers from governments downwards toward local institutions, NGOs and communities, is an important feature of the environmental governance approach because it is intended to improve accountability, accessibility, and a voice for local people and their representatives. However, the mechanisms for decentralization vary, as does the level of success. As a result, a series of indicators for 'good

governance' has evolved. The term 'good governance' is typically attributed to a package of public sector reforms designed to elicit positive, lasting changes in accordance with key governance principles (Savage et al 2020).

Furthermore, environmental governance is synonymous with interventions aiming at changes in environment-related incentives, knowledge, institutions, decision-making, and behaviors. More specifically, "environmental governance" is construed to refer to the set of regulatory processes, mechanisms and organizations through which political actors influence environmental actions and outcomes. Key to different forms of environmental governance are the political, economic relationships that institutions embody and how these relationships shape identities, actions, and outcomes (Lemos & Agrawal 2006).

Decentralization of Decision-Making Powers through Rainforestation as Adopted by Local Institutions with the Support of Visayas State University

In the municipality of Pilar, one of the things that the Local Government Unit (LGU) had been actively involved with had focused on improving the municipality's governance. Improving governance had positively affected how the projects were implemented and the participation of the people had improved the transparency in people's utilization of whatever natural resources were available at the municipality. This included the development of policies like the ten (10) year water master plan that the government made, a five (5) year forest land use plan and a ten (10) year comprehensive land-use plan. Another thing that the government focused on was the increase in water supply on the island. This was the reason why the municipal government, spearheaded by its mayor and officials, made five water development projects. One of these projects was still in the process of being implemented in Barangay Dapdap while the other four were already implemented and were located in Barangays,

Esperanza, Lanao, Moabog and Villahermosa. Hence, in order to set the tone and start working on to achieve the municipality's vision, the local officials did not just focus on people and infrastructure. The Local Government Unit of Pilar also took the cudgels of rehabilitating its watersheds and sought the aid of technology or forest restoration innovation referred to as Rainforestation.

In 2009, Rainforestation was introduced by the **Visayas State University (VSU)** through the **Institute of Tropical Ecology and Environmental Management (ITEEM)**. VSU helped the local government, including its constituents in encouraging the people to actively participate and take initiatives in caring for the environment. Rainforestation was a sustainable forest restoration system used as a strategy for the rehabilitation of the municipality's watershed. Since the introduction of Rainforestation in Pilar, a Rainforestation tree nursery and many demonstration plots had been established throughout the island and it had been adopted by farmer co-operators in the implementation of forest restoration projects. Trainings were conducted about Rainforestation participated by farmers wherein they were taught the basics of Rainforestation methods, such as the seedling and nursery preparation of Philippine native tree species.

Non-Government Organizations (NGO) and the Establishment of People's Organization: Rufford and the Environmental Leadership and Training Initiatives

Key players in the realm of environmental governance in the Municipality of Pilar are the Non-Government Organizations, the Environmental Leadership and Training Initiatives (ELTI), Rufford Foundation, and Rare.

The Environmental Leadership and Training Initiative (ELTI) has been very instrumental in the conservation initiatives of the island municipality. For one, the then Councilor Maratas learned the ins and outs of conservation through Rainforestation with his engagements with ELTI. From the trainings that the then Councilor

Maratas attended, both locally and internationally, and the technical support from ELTI coursed through Visayas State University (VSU), ELTI's support to the island's conservation efforts has been very crucial. ELTI's involvement in Pilar's conservation initiatives runs through the years of Mayor Maratas' public life, from his being a councilor to his being Vice-Mayor, and eventually to his being Mayor.



Dr. Marlito Bande of VSU's Institute of Tropical Ecology and Environmental Management (ITEEM). Mayor Eufrazio Maratas of the Municipality of Pilar, and Ms, Lyra Kyle Chiu, ELTI Philippine Program Assistant

Moreover, ELTI, being committed to the island's conservation efforts and the people working from the ground, would be more than willing to continue its support and commitment to Pilar's conservation initiatives. With ELTI's partnership with Visayas State University, as well as ELTI and VSU's commitment to Pilar, the conservation activities in Pilar would continue even beyond politics and other social challenges.

Aside from ELTI, **Rufford Foundation** had been instrumental in the implementation of Rainforestation in

Pilar, especially during the early years of the then Councilor Maratas’ life in public service. With small and generous grants from Rufford, the then councilor Maratas was able to start Implementing terrestrial conservation initiatives on the island. Moreover, in the realm of Pilar’s marine resources, **Rare** had also been very helpful in the thrust of its conservation. It supported the Pilar LGU and its residents to protect the island’s mangrove areas and rehabilitate Pilar’s traditional fishing grounds. With that said, areas had been rehabilitated and had since given economic benefits to its residents and environmental benefits to the island.



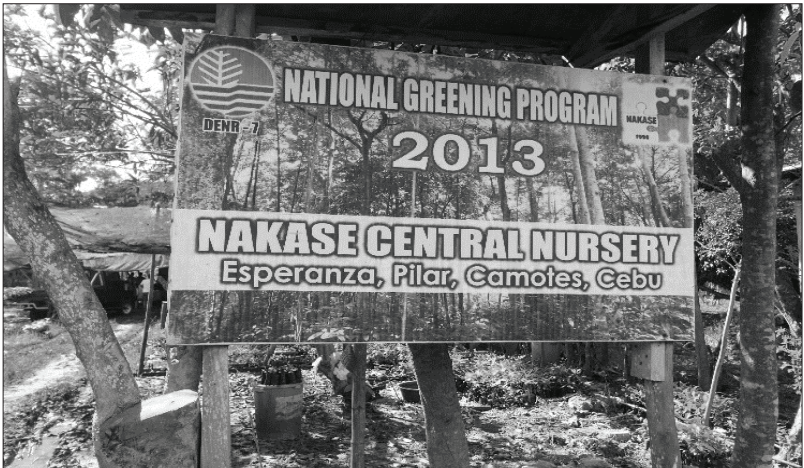
Logo of Rufford foundation

Logo of Rare

In the thrust to implement Rainforestation on the island, the Local Government Unit supported and involved two People’s organizations in the Rainforestation project. With this, the Can-ugkay Rainforestation Farmers Organization (CaRFA) and the Nakahiusang Katawhan sa Esperanza (NAKASE) were tapped to help implement the project in the island.



The tree nursery of the Can-ugkay Rainforestation Farmers' Association (CaRFA) was implemented and made possible through a grant from Rufford Foundation with the initiative made by the then Councilor Eufrazio Maratas, Jr., Chair Committee on the Environment of the Municipality of Pilar



The native tree nursery of the Nagkahiusang Katawhan sa Esperanza (NAKASE). NAKASE has played an important role in the large-scale forest restoration efforts of the island since the organization was tapped in the implementation of the National Greening Program (NGP) of the Department of Environment and Natural Resources

The conservation of the natural environment is very important because it enables people to enjoy free use of resources like water, food, protection and other needs of sustenance. Thus, on the part of the local government, there is a need for an environmental protection program to prevent further injury/damage aside from water which is a crucial resource, especially during dry seasons or “huwaw” (drought). The focus then is not only on the protection of the mangrove but also on the terrestrial forest. This is very relevant since it is a fact that protecting the forest is, in a way, a measure to protect the seas. This is the essence of the notion of the “Ridge to Reef” conservation or Forest Landscape Restoration (FLR) where Rainforestation played a significant role in the Municipality of Pilar.

In recent years, a number of studies have already revealed that there is a very close connection between the mountains and the seas. In fact, one of the United Nations Development Program (UNDP) priority projects is the implementation of “A Ridge to Reef Approach in Protecting Biodiversity and Ecosystems” (Barbados and the OECS & United Nations Development Program, 2014). This finds similarity through the International Coral Reef Initiative (ICRI) recognition of the importance of engaging sectors for watershed conservation and coral reef management, emphasizing sea-land connectivity (Okunishi 2014).

Moreover, Comeros-Raynal et al. (2017) have also observed that watershed characteristics, water quality and resource harvesting are primary drivers of coral reef health, yet they have also observed that prioritizing management for its stressor and qualifying thresholds that maximize the resilience of coral reefs have remained difficult. This triggered their study on the connection of trees and watershed conservation as a means to also protect the seas in order to come up with relevant data to address this concern. A number of similar studies, such as Carlson et al. (2018), which views Land-based sources of pollution as a critical threat to coral reefs and understand “ridge-to-reef” changes as urgently needed to improve management and coral survival in the

Anthropocene, Kim Falinski's dissertation (2016) that delves on the study of the negative effects of sediments to the coral reef ecosystem and in the process affected basic ecosystem services to the society, Peterson et al.'s study (2013) that examines on the conservation gap analysis and identity of high biodiversity areas and 'climate vulnerable' forest and marine areas that must be conserved whilst balancing the needs for commercial development and other land uses in a community as well as other related researches have been conducted to fully understand and advocate for the prioritization of the care of both the mountains and the seas.

Care for the Watersheds as a Means to Ensure Water Supply and Care for the Seas

Given the above-mentioned facts, the Pilar LGU realized that it had to address the upstream and downstream conflict in the use of resources. The municipal officials realized that since a number of their constituents were fishermen who also doubled as farmers when the seas were rough, they had foreseen that there would be issues related to lack of livelihood that would eventually trickle down to unsustainable agriculture methods that would indubitably result to deforestation and biodiversity loss, soil degradation, and water shortage during the dry season. The LGU had seriously considered the interplay and engagement of the biophysical and the social worlds. Pilar LGU had seemed to follow Zimmerer and Basset's (2003) view of the natural environment not simply as a stage or arena in which struggles over resource access and control took place. The LGU seemed to have considered nature, or biophysical processes, to play an active role in shaping human-environmental dynamics.

The Pilar LGU then commissioned the Nakahiusang Katawhan sa Esperanza (NAKASE) to provide the Local Government Unit (LGU) with a supply of seedlings with a fee. This enabled the LGU to purchase native tree seedlings for conservation and reforestation efforts while at the same

time enabling NAKASE to earn its keep and financially sustain the organization. Nevertheless, according to Mayor Maratas, when he chaired the Committee on the Environment in the Municipal Council during the years when he was still a councilor, funds for environment conservation-related activities were very scarce. With this, he applied for a small grant from Rufford to reforest a significant part of the island which Rufford generously responded and funded the proposal.

With funds from Rufford, Rainforestation initiatives were made possible. It eventually enabled Rainforestation to become an instrument in mainstreaming water, soil, and biodiversity, leading to a bigger constituency for advocacy, including youth and children. With all these happening, the scenario was, in a way, manifesting that human-environmental interactions had taken one to the realm of the politics and culture of representations of “nature” and the narratives that had given the people involved an occasion to make sense of what had transpired with their efforts, and in the process, lead them to arrive at a sense of meaning. Diverse environmental processes had interacted with social processes creating different scales of mutual relations that affected local resource use patterns. Nevertheless, participation in natural resource conservation that was strongly mediated by non-local actions like that of a Non-Government Organization might, in the process, reveal that said conservation encounters could shape landscapes and livelihoods in a variety of ways (Zimmerer & Bassett 2003).



Women and children are actively involved in tree planting activity in the watershed area of Pilar, Camotes. Photo by Mayor Eufracio Maratas

Going back to the conservation initiatives on the island, Rainforestation had also helped provide strategic direction for an integrated approach to natural resource management on the island where Rainforestation adoption had paved the way to the institutionalization of capacitated stakeholders and promoted a number of community members' participation that resulted to upstream and downstream collaboration among the stakeholders.

Yet, one of the problems with terrestrial conservation in Pilar was that the local government had not established the boundary for the watershed. This boundary would have been very important since terrestrial and marine ecosystems supply the foundation for human well-being and livelihood through the food, water, timber and other goods and services they provide. Determining such boundaries would have limited community members' degrees of utilization of the natural resources of the island.



A pep talk after a tree planting activity while a marine guard inspects part of mangrove forest on the island. Photo by Mayor Eufracio Maratas

Community Involvement

One difficulty encountered by the government was the negative outlook of the residents towards the programs about the environment especially those individuals who owned private lands. Every time the government created programs

related to conservation, people had the penchant not to cooperate because of fear that their property might be taken away by the government. Another thing was that on the part of the government, the focus was more on conservation and sustainability development of the environment. However, the people wanted income-generating projects that would give them something in return. This contradicted the government's agenda where it aimed for the improvement of human quality of life standards.

With the help of ELTI and Visayas State University, the LGU of Pilar was able to find a compromise in relation to the needs of the community members and the implementation of environmental conservation projects. With Rainforestation, conservation initiatives on the island were implemented and gained acceptance by the people since Rainforestation became a catalyst for farmers' association to initiate livelihood projects such as a tree nursery and honeybee keeping by the farmer-cooperator group. This did not stop the farmer cooperators from being active in conservation initiatives since they had found mechanisms to balance both conservation and income-generating initiatives.



Bee Keeping in Rainforestation farmers' cooperators at Pilar, Camotes, Cebu. Photo by Mayor Eufracio Maratas.

After implementing livelihood initiatives side by side with conservation, The LGU initiated the Sustaining

Watershed Rehabilitation and Management through Rainforestation (SWARM-Rainforestation) Project in partnership with Visayas State University's Institute of Tropical Ecology and Environmental Management (VSU-ITEEM). The project was again funded by the Rufford Small Grants and had served as a spring board for the massive implementation of Rainforestation to the island as early as 2011-2012.



Mayor Maratas in one of the Rainforestation watershed rehabilitation site in Pilar. Photo by Mayor Eufracio Maratas

The National Greening Program (NGP) of DENR

In 2013, the Department of Environment and Natural Resources issued a memorandum that led to the use of Rainforestation in the implementation of the National Greening Program (NGP) by a community-based people's organization named Nagkahiusang Katawhan Sa Esperanza (**NAKASE**). This enabled said people's organization to implement the NGP on the island with the use of Philippine native tree species thereby planting a total area of **520 hectares from 2013-to 2015**. This accomplishment dramatically changed the landscape of Pilar, thereby infusing new hope for the trees to thrive and survive. This would greatly improve tree covers in the island's degraded mountains and also gave hope for the watershed areas to be rehabilitated after years of gross exploitation.

Pilar's Mangrove Ecosystem

As an island municipality, it is very understandable to construe that many of the residents of Pilar are fisherfolks. However, as narrated by Borlasa (2012), fish yields have significantly declined in recent years. As a result, the then Mayor Jesus Fernandez, Sr. established the Municipal Marine Park in 2005. The establishment of the marine protected area (MPA) had made life for the Pilaranons difficult since the MPA's establishment prohibited them from fishing within and near the mangrove areas of the island. As a result, the fishermen had to sail much further from the shores to fish which made life even harder since the seas of Pilar and the Camotes group of islands had a penchant for being rough for the most part of the year. Worst, violators of the law were punished or fined. To address the problem, the Local Government Unit introduced alternative means of livelihood by distributing domestic animals such as cows, goats, and other livestock for home consumption and selling in the neighboring cities of Ormoc and Baybay where prices were a bit higher compared to those in Pilar.



A glimpse of Pilar's Marine Protected Areas (MPA) with healthy mangrove forest discernible upon entry to the island

Moreover, the establishment of the Naukban Lagoon Nature park boosted the newly implemented eco-tourism activities in the island since the establishment of the marine protected areas (MPAs) was able to restore and enhance the quality of the waters and biodiversity composition in the vicinity of the protected areas. Sightings of black tip sharks were one of the evidences of this improvement. Moreover,

the Naukban Lagoon park also served as a wildlife research and rescue center that focused on conducting scientific research into proper strategies in conservation, disseminating these strategies to the involved communities, and its establishment as a Municipal Marine Protected Area (MMPA). At the same time, it also adopted ECOGOV2, a project of the provincial government that aimed to strengthen the capacities of local government units (LGU) in addressing threats to local resources through Resolution no. 46, series of 2005 (Borlasa 2012).



Part of the Naukban Lagoon Nature Park in Pilar, Camotes island



Mayor Maratas inside the Mangrove forest in Pilar, Camotes, Cebu

Under the National Integrated Protected Area System or NIPAS Act of 1992, Pilar became a component of the Camotes Islands Mangrove Swamp Forest Reserve Protected Area. Following the Philippine Fisheries Code of 1998, the local government of Pilar took responsibility for the protection and proper utilization of the fishery and aquatic resources of the municipality.

Demonstration Farms

After engaging with people's organizations, the Local Government Unit also encouraged individual citizens to take part in Rainforestation conservation. As an alumnus of the Environmental Leadership and Training Initiative (ELTI), Mayor Maratas conducted a re-echo on Rainforestation, where he was able to convert two public school teachers to invest themselves in the environment conservation initiatives of the island municipality. The first individual to respond to the call for conservation was Mr. Romeo Gutang of Dapdap Elementary School.

Mr. Gutang is a school teacher at Dadap Elementary School in Pilar, Camotes. As an educator for very young pupils, Mr. Gutang has realized that one of the ways to encourage people to care for Mother Nature is to start the advocacy for nature conservation by starting it himself. In 2012, he succeeded in involving the pupils, and, later on, the parents to start creating a forest out of a piece of a rocky land scarcely planted with very old and almost unproductive coconut trees. At present, the result of his efforts is discernible on Camotes Island. Yet, said efforts were met with challenges from the start both caused by humans and nature (Fernandez & Bande 2019).



Mr. Gutang posed with his pupils and seedlings before a tree planting activity in 2012. Photo by Mr. Romeo Gutang



Mr. Gutang's pupils tree planting activity in 2012. Photo by Mr. Romeo Gutang.

The reason behind Mr. Romeo Gutang's involvement in Rainforestation was simply his desire to do something to conserve the environment in his newfound home. Mr. Gutang's observation when he started to get himself involved in environment-related conservation efforts was that the average citizen of Pilar simply did not give priority or give due importance to the natural environment. As an elementary school teacher, his vision was simply to set an example to his young pupils so that he could give life to what he was preaching in the classroom in relation to the aspect of environment conservation. Hence, by starting to plant native tree species in a rocky and almost unproductive land planted with very old coconut trees, he was able to convince his pupils and his pupils' parents to join him in his efforts to make a forest out of Philippine native tree species (Fernandez & Bande 2019).



*Mr. Gutang posed beside a kalumpit tree (*Terminalia microcarpa*) inside a man-made mini forest planted by him and his students in 2012. This photo was taken by Guiraldo Fernandez, Jr. during a visit by the research team from the Department of Liberal Arts and Behavioral Sciences of Visayas State University in 2019.*

Yet, Mr. Gutang also recounted that while the trees were very young, he used to care for the trees himself so that they would survive and grow. Nevertheless, in order to hit two birds in one stone, he also planted high-value crops such as root crops, a variety of vegetables, and banana plants that enabled him to enjoy the fruits of his labor at some points. Moreover, Mr. Gutang also added that during the times that he had a surplus of his harvest from his personal consumption, he used to sell some of his products to the other members of the community which enabled him to also enjoy little extra income. For Mr. Gutang, Rainforestation adoption had been very tasking through the years. Nevertheless, Mr. Gutang also categorically asserted that it was very much worth it and it would be sustainable if an adopter would find ways to make the best out of it.

At present, Mr. Gutang is working on another lot for Rainforestation conservation. The lot is not his. Yet, the owner of the lot willingly allowed Mr. Gutang to restore it using the Rainforestation conservation strategy since he has already seen the beauty of conservation through the planting of native tree species. Nevertheless, if Mr. Gutang found it hard to get support from people in the past, this time around is already very different. The land owner of the new site has given Mr. Gutang all the support he can get in order for the young trees to survive and thrive so that the area will become a mini forest in years to come. This support from the land owner is indubitably coming from the fact that he has seen Mr. Gutang's passion for nature conservation. Aside from that, Mr. Gutang has already proven to the community of Pilar that conservation through Rainforestation may be tedious and difficult. Yet, his example has manifested that it is not impossible and is very doable even for an ordinary citizen on the island like him.



Mr. Gutang at his new Rainforestation demonstration site

The second individual to respond to the call of Mayor Maratas was a public secondary school teacher of Pilar National High School, Mr. William Cabonegro. Just like Mr. Gutang, Mr. Cabonegro also responded to the call of Mayor Maratas to be actively engaged in the island's environment conservation projects. Though Mr. Cabonegro has the same passion for nature conservation as that of Mr. Gutang, their methods in the realm of conservation have differed a little. Mr. Cabonegro has believed that the best way to encourage native tree species conservation is to show the students that it would not be impossible to implement. With this, he started to plant native trees in a vacant area inside Pilar National High School. For Mr. Cabonegro, his native tree demonstration site would be the best audio-visual aid for students to appreciate.

After more than five years of planting, the trees have already grown tall and have given profound changes in the vicinity. One of the positive changes is that the area is already a bit colder compared to the times when the trees were not yet around. Aside from that, sounds and singing of birds could already be heard in the area. At present, the area has already

become a favorite place for students to hang around, especially during noon time. According to Mr. Cabonegro, he is very happy that his native tree demonstration site has made an impact, however little it may be, on the experiences of the students in the school where he teaches. Mr. Cabonegro then hopes that his little work could inspire students to also do the same.



Mr. Cabonegro inside his mini forest at the Pilar National High School Campus



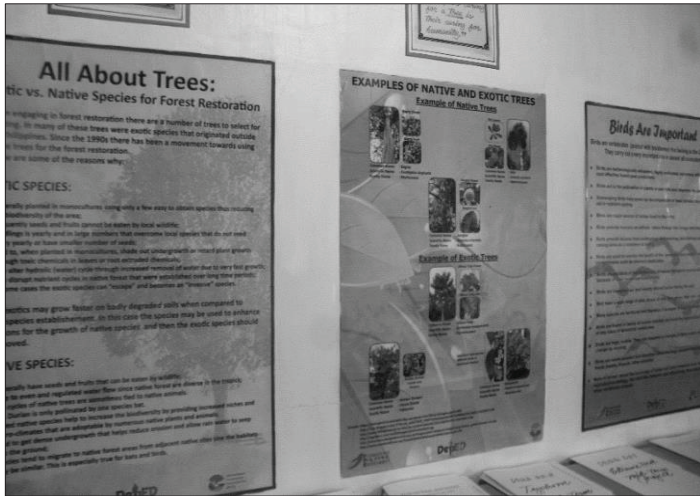
Mr. Cabonegro's native tree demonstration site

Just very recently, the Pilar National High School had required its graduating students to plant trees upon graduation. This initiative has been part of Pilar National High School's support of the government's National Greening Program (NGP). As a result of this, Mr. Cabonegro has been very much involved in encouraging his students to plant native tree species in the major roadsides of the island municipality, a strategy which he tried to initiate a few years back that had somehow produced results in some parts of the island.



*Magtalisay Trees (*Terninalia foetidissima* Griff) planted just beside the main roads of Pilar*

Convincing his students to contribute to the environmental conservation efforts of Pilar was not a problem for Mr. Cabonegro. As an educator, Mr. Cabonegro utilized his Rainforestation demonstration site as a living audio-visual aid for his students. With the students' experience, while hanging out inside the native tree demonstration site, it would not be very foreign to the students' minds when Mr. Cabonegro talked about the importance of native trees to bring back biodiversity and ecosystem services lost years back. In the process, Mr. Cabonegro is walking his talk because his students were able to see the benefits of the presence of native trees up close and personal. It was a sort of putting words into action.



Mr. Cabonegro’s visual aids on native trees and biodiversity in support of his Rainforestation demonstration site which serve as live visual aid available to his students



A sign board of Pilar National High School’s support for the government’s National Greening Program in Pilar

Looking into the efforts of Mr. Cabonegro, one could decipher that it only takes faith in what one is doing in order to move others to do the same. By living by example, Mr. Cabonegro has enabled to disseminate the message of the significance of conservation with the use of native trees, at least, to the students of Pilar National High School.

Chapter 2

The Socioecological Framework of Forest Landscape Restoration (FLR) in Pilar, Camotes, Cebu

The social life of the people of Pilar has been greatly influenced by its neighboring municipalities in the Camotes group of islands as well Ormoc City in Leyte, including the towns of Merida, Albuera, Baybay and the towns within the vicinity. As mentioned by Borlasa (2012), a survey in 1954 showed that farming, fishing, and merchandising were the top three occupations of the Pilaranons. Looking at farming, fishing, and merchandising as the top three occupations the citizens of Pilar were engaged in through the years, it can be construed that the mountains of Pilar had already been farmed.



Corn field in the mountains of Barangay Biasong in Pilar. Photo by Dr. Marlito Bande

Considering the island municipality's limited land area, an existing challenge of the island's watershed just cannot be set aside. In many instances in the Philippines, upland agriculture had been the main cause of deforestation (Fernando 2005).

According to a foreign non-government organization worker who happened to visit Pilar, the island's soil quality was poorly suited for farming and increased erosion and loss of fertility of the land are pushing more and more people to look into fishing or other forms of livelihood to sustain themselves. At present, 27% of the households in Pilar rely on fishing as their main source of income (Bianchessi 2015).

Aside from that, the mangrove areas in the islands had indubitably been used without limit for years, considering that a number of the island's residents take fishing as their main means of making a living. With that, other sea products such as shells which had significant roles in the balance that exists in nature, had also been heavily harvested. Worst, a number of people had also created "amatongs" which meant "miracle holes." These were artificially constructed holes with diameters as big as 2 meters that were filled with wood and rocks that aggregate young and old fish. The holes were managed and, therefore, effectively perceived as owned by individuals who looked after them for a year or so and harvested the fish every 3-6 months on average (Bianchessi 2015). This was not good for the environment and it was only through concerted efforts of the Municipal Officials that the said problem was addressed.

At present, Pilar is very much known for its being a supplier of cows, carabaos, and goats for meat to either Danao City and Ormoc City as well as suppliers of native chicken to the said localities. This means of making a living also posed a big challenge to the remaining forest covers and watershed areas of the island. For one, the island has a history of prolonged dry spells and drought. Hence, when the grasses become brown during the dry season, backyard livestock raisers often make use of leaves from trees, especially the young trees, thereby killing some of the trees in the process.

This problem has been very difficult to address since livestock raising has already been part of the Pilranon way of life. Hence, delving into such an issue entails detailed planning that would arrive at a win-win solution --- a win for the people since livestock raising is part of their main means of making a living and a win for the natural environment since Mother Nature's wellbeing has been indubitably construed as a significant factor in supporting life on earth.



A cow pastured at the watershed area of Pilar, Camotes, Cebu

As mentioned in the earlier part of this study, small-scale livestock raising was even enhanced during the time of Mayor Jett Fernandez when he and his Vice-Mayor Eufrazio Maratas worked hard and succeeded in implementing the Pilar Municipal Marine Park as a protected area. As a way of filling up the void of the fisherfolks who were affected by the marine protected areas of the island, Mayor Fernandez and Vice Mayor Maratas made it possible to give the affected fisherfolks alternative livelihood by providing them supplies of livestock to propagate while rehabilitating Pilar's mangrove areas and fish sanctuaries.

Education had also greatly influenced many of the town folks' way of life. Immediately after the Second World War,

Pilaranons continued to send their children to the primary, then later, the elementary school on the island, while parents who could afford High School sent their children to San Francisco, a town from another island in the Camotes group of islands, as well as to Ormoc City, Merida, and Baybay, particularly, VAC and later on VSU, in the Province of Leyte. Those who had more resources sent their children to the nearby Danao, Cebu City, for both High School and College education and even as far as the schools in Manila (Borlasa 2012).

At present, Pilar is governed by very well-educated government officials who have graduated from prestigious Universities in Cebu and other parts of the Philippines. Moreover, many of the residents of Pilar also have better access to universities that have brought influences of modernity from cities and other places where higher institutions of learning have been present when they return to their beloved hometown. Said influences have also paved the way for Rainforestation to come to the shores of Pilar. In the early 2000s, a group of students from Visayas State University came to Pilar for a series of environmental-related activities, which caught the eye of a young Municipal Councilor who used to Chair the Committee of the Environment in the Municipal Council. From there, said Municipal Councilor had been very supportive of environment-conservation activities for years to come.

Forest Landscape Restoration (FLR)

According to Robin Chazdon (2019), in many forests regions in the world, social and biophysical systems are in a degradative cycle. Threatened and endangered species are at risk of local extinction due to continued deforestation, while ecosystem services and productivity are severely reduced. Deforestation has greatly contributed to the loss of biodiversity and timber stock. For one, monoculture plantation forestry had failed to deliver ecosystem services and other societal benefits, while conservation in protected

areas had also failed to prevent deforestation and biodiversity loss outside of the protected area itself. Moreover, a number of forest ecosystem restoration have also failed to provide benefits for local people. Hence, a holistic approach that would strive to balance improvement in ecological integrity, livelihoods, human wellbeing, and landscape functions in deforested or degraded landscapes had to be established. This paved the way for the birth of forest landscape restoration (FLR) (Chazdon 2019).

Forest Landscape Restoration (FLR) is currently defined as a process that aims to regain ecological functionality and enhance human wellbeing in deforested or degraded landscapes. As a process, FLR is not an end in itself but a means of regaining, improving, and maintaining vital ecological and social functions in the long-term, leading to a more resilient and sustainable landscapes (Besseau et al 2018). FLR is in line with the United Nations Sustainable Development goals where it puts emphasis on people-centered functions in landscapes rather than an eco-centric goal of forest restoration. The landscape approach addresses tradeoffs in land use and outcomes and engages multiple stakeholder groups where it is deemed to be a departure from the sectoral view of land use that builds on the complementarity functions and activities within a landscape (Chazdon 2019). Hence, as summarized by Chazdon (2019), the core principles of Forest Landscape Restoration (FLR) are mainly focused on landscapes by restoring multiple landscape functions, it engages diverse stakeholders and supports participatory governance by tailor fitting such to local context using a variety of approaches, and it maintains and enhances natural ecosystems by managing adaptability for long-term resilience.

Governance in Line with Forest Landscapes Restoration (FLR)

As mentioned in the earlier part of this study, The Local Government Unit (LGU) of Pilar, led by Mayor Maratas

implemented the environmental conservation initiatives in the island municipality in accordance with the core principles of Forest Landscapes Restoration (FLR). Mayor Maratas and the Pilar LGU implemented this type of governance through the years where the mayor served as an elected municipal official in the island municipality of Pilar. From being a member of the Municipal Council, Chairing the Committee of the Environment, to being a Vice Mayor and eventually becoming Mayor, Mayor Maratas worked with people and institutions in the implementation of the municipality's environmental conservation projects in the belief that the end results of said efforts would pave the way for the wellbeing of the natural environment. This would in turn, enable the environment to serve the best interests of the citizens of the island municipality.

Pilar LGU's brand of environmental governance focused on landscapes by restoring multiple landscape functions. As already mentioned in the earlier part of this study, there had been two major areas where environmental conservation initiatives were implemented on the island – the terrestrial ecosystems and the marine ecosystems. Unlike the Marine Ecosystem that had already been given focus by the Local Government Unit of Pilar and foreign non-government organizations (i.e., Rare) even during Mayor Maratas' early years in public service, the focus on the conservation of the island's terrestrial ecosystems was given due attention only in later years. It was only in 2009 that it made a noise in the realm of the island municipality's conservation efforts through the implementation of Rainforestation introduced by Visayas State University. Nevertheless, as Mayor Maratas had recounted, one of his main concerns in his home island was the well-being of its watershed areas which were already over-exploited because of upland agriculture accompanied by backyard livestock raising.

In addressing such concern, the LGU of Pilar just did what was stipulated in the first core principle of Forest Landscapes Restoration (FLR) – focus on landscapes by restoring multiple landscape functions. In doing this, The

LGU officials and personnel took no time wasted in restoring the quality of the mountains of Pilar by taking the lead in planting native tree species in degraded areas. In doing so, the quality of the well-being of the island's watershed would be enhanced while at the same time enabling the vegetation in the island's mountains to thrive, thereby contributing to the much-needed ecosystem services on the island, such as lowering the temperatures in the vicinity because of the presence of trees.

Moreover, the thrust to enable others to plant more trees has also awakened the people that planting trees is not merely for the purpose of making trees thrive but also for the purpose of improving the well-being of the mountains of the island so that the island's watershed could sustain its carrying capacity in relation to Pilar's total population. This also provides people with opportunities to appreciate the goodness and beauty of Mother Nature by arriving at a realization that trees are instrumental in making a positive difference in the surroundings of the island municipality. These positive differences may take the form of the return of birds and other animals in the area, an increase in soil fertility in some of the areas planted with native trees, the presence of a cool breeze in the vicinity, and the enhancement of the quality and quantity of the island's vegetation. This manifests the restoration of multiple landscapes functions as a result of Rainforestation as implemented in the degraded mountains of the island municipality of Pilar.

Mayor Maratas and the Pilar LGU officials who have supported the island's conservation initiatives believe that Rainforestation is a significant component in the restoration of denuded marginal uplands of Pilar since it has addressed the needs for recovery of severely degraded areas where productivity and ecosystem services have been compromised (Chazdon 2019) which is the very essence of Forest Landscape Restoration (FLR). Forest Landscape Restoration has been very much felt in Pilar since through the Rainforestation conservation innovation, biodiversity in mosaic landscapes like that in the island municipality of Pilar

has been protected as well as those of the fragmented or remnant forest cover in watershed areas.

Moreover, in the thrust of implementing terrestrial ecosystem conservation on the island through Rainforestation, Pilar LGU has engaged diverse stakeholders and supported participatory governance where the management style has been tailored fit to the local context using a variety of approaches. As Fernandez (2019) has recounted, Mayor Maratas has recognized that he could only do so much. He has clearly understood that for conservation to be successfully implemented in his island municipality, he has to involve people, especially those directly or indirectly affected by the conservation efforts on the island. In his efforts to effectively implement measures to care for the natural environment, Mayor Maratas involved people in the community who were willing to take part in the island municipality's thrust to do something positive for Mother Nature's wellbeing.

As mentioned in the earlier part of this study, one of the main reasons that gave premium of the conservation of the island's terrestrial ecosystems was the drive to save what remained in the island's much-degraded watershed areas. In putting such an ambitious project into action, The LGU mobilized a group of Pilars' willing citizens to kick off the project. The LGU officials who have supported the project motivated the involved community members in doing something for their watershed areas with the explanation that while they have been doing native tree planting activities for the natural environment, they have also been doing it for themselves since said conservation activity would also contribute to enhancing the watershed's carrying capacity to supply portable water to the citizens of Pilar. The LGU also fitted his approach to encourage its constituents to be part of the conservation project by organizing a "Bayanihan" type of activity where people get themselves involved as a sign of solidarity for a significant cause. In the Filipino culture, "Bayanihan" is a form of collaborative work where people in the community would help a community member in need in

order to achieve a certain task. With the collective efforts of the community members in support of the member's need, the task or work would be easily accomplished since everybody in the community has contributed his or her share to the task at hand. Hence, getting the job done would be much easier since a number of hands are working on it in lieu of a single individual or just a pair of hands trying to accomplish a gigantic task.

Aside from the residents of Pilar, the then municipal councilor also involved his partners in Visayas State University in providing technical assistance to the municipality's terrestrial conservation project. Since 2008, Visayas State University and the Municipality of Pilar had been partners in saving Pilar's remaining watershed through the implementation of Rainforestation, a forest restoration approach originated by VSU, by the planting of native tree species in degraded areas in line with the principle that reforesting degraded marginal lands in the humid tropics with the species composition of the original rainforest would have greater chances to succeed (Goltenboth 2005). For years, Visayas State University, through the Institute of Tropical Ecology and Environmental Management had journeyed with the people of Pilar in their thrust to preserve and conserve what is left in the natural environment in the island municipality.



Dr. Marlito Bande giving instructions to the residents of Pilar on the basics of Rainforestation. Photo by Mayor Maratas

Moreover, Mayor Maratas also recounted that to keep the fire of environmental conservation burning and also keep the people involved intact, financial support needed for little things such as meals and logistics for conservation were needed. In addressing this, he sought the aid of international non-government organizations (NGOs) who were willing to allocate funds for environmental conservation projects. According to Mayor Maratas, in his letters of intent to the said NGOs, he made it a point that his request for funding would emphasize that the upland areas of his island municipality were already very degraded and that to rehabilitate the area, funds were needed to mobilize volunteers by providing them the needs in their work such as meals, native tree seedlings, and other things needed in environmental conservation projects. In that way, the volunteers would also commit themselves to the program since they could also feel that aside from themselves, others have also invested for the wellbeing of the natural environment. With this, non-government organizations (NGOs) such as Rufford Foundation, Plan International Philippines, UNDP-GEF-Small Grants Programme, Haribon Foundation, and the Environmental Leadership and Training Initiatives had significantly contributed in cash or in-kind to the environment conservation efforts of the Municipality of Pilar.

Furthermore, Mayor Maratas has also narrated that in the thrust to maintain and enhance natural terrestrial ecosystems and manage them adaptively for long-term resilience, he has sought the aid of individuals and people's organizations to help him achieve this significant aspect of environment conservation. As one could notice, such is a core principle of Forest Landscape Restoration (FLR), where maintenance of the enhanced ecosystem has to be part of the long-term priority of the island municipality in relation to its policy of taking care of the natural environment.

Structure of the People's Organization (PO) in Pilar, Camotes, Cebu

The Pilar LGU under Mayor Maratas attributed the enhancement and maintenance of the natural terrestrial ecosystems of the island municipality to two people's organizations (POs) in the municipality – the Can-ugcay Farmers Association (CARFA) and the Nakahiusang Katawhan sa Esperanza (NAKASE). For the purpose of this study, the structure of both people's organizations will be discussed.

Can-ugcay Farmers Association (CARFA)

The Can-ugcay Farmer's Association (CARFA) had a very promising beginning. It was bustling with Rainforestation activities, planting not only wildlings but other species as well, such as *talisay*, *madre de cacao*, bamboo and fruit-bearing trees, namely: jackfruit, *rambutan*, and pili nut. The dynamism of the association was evident in the active cooperation of both officers and members in all endeavors of the association. Likewise, the explicit support extended to it by the Visayas State University thru Dr. Marlito Bande had been very instrumental in carrying out its goal. As reported, it was through the effort of Dr. Bande that the association had established its own nursery. The success of CARFA had propelled it to greater heights and this goaded the other residents of the island to engage in rainforestation programs as well. In fact, Mr. Romeo Gutang described the association as a model for those who aspired to join in the government's effort to save the environment. He claimed that he used to confer with CARFA's president when he would encounter problems on his own farm when he was only starting off.

Inactive CARFA Officials. Amidst its success, however, the association was plagued with problems. Found to be the most prevalent was its leadership issues. As reported, a certain official had lost her fervor and sense of

service. The top official's personal problems defocused her from her responsibilities toward the association. Her non-attendance to meetings or seminars called or initiated by VSU, for instance, had marred the enthusiasm of the members. Her failure to arrange meetings with the members on a regular basis, or convene the other officials for proper turnover of leadership because she could no longer perform her responsibilities had eventually led to the natural death of the association. Reportedly, however, had the official formally relinquished her position, the other officers could have salvaged the association from its downfall by electing a new set of officers. Since this was not done, the next in rank was also reluctant to take over, attributing his passivity to old age. He narrated that attending meetings or trainings, especially if held away from the island, had become very exhausting for him. Worse, the meetings or trainings, usually lasting for days had diminished his capacity to provide for the needs of his family. Being a farmer, he is dependent on the farm produce that he could sell and being away for days would have drastic effects on his earnings. He disclosed feeling uncomfortable and scared in facing important people (those with positions), especially if they spoke in English. He admitted having difficulties in reading and understanding, especially if the language used was English.

Lack of Transparency. As reported, the same official failed to disclose to the member's transactions that the association entered into with external agencies, etc. During meetings, for instance, the members would be told that the association would be partnering with an external agency involving the organization's conservation activities. After that, however, there would be nothing but silence. In other words, even if the conservation projects had already been completed, the official/s concerned was/were mum on what transpired with the engagement leaving the members of the organization in the dark of what really happened. Hence, transparency was an issue that contributed to the disintegration of the said People's Organization.

No Membership Fee/Monthly Contribution.

Without the aforementioned constitution and by-laws, the association could not oblige its members to pay a monthly contribution to defray expenses that it would incur for its undertakings or projects. As reported, the association's income generated from its honeybee project served as its source of funding. However, Typhoon Yolanda in 2013 destroyed the Honey Bee Project and it never recovered from that. It left the organization deprived of an income generating project that provided the organization the much needed funds.

Insufficient or Absence of Financial Assistance for Members.

The seminars and trainings that the members had attended heightened their awareness of the importance of conserving their environment. However, most of them were also torn between their families' immediate needs and their responsibilities toward the association. According to the key informant, their work on the farm, i.e., bagging seedlings and planting trees, among others, had, in a way, helped them augment their income. Moreover, the earnings were not enough to support the growing needs for food and for the education of their children or grandchildren. More than their awareness of giving back to the environment was the prospect of earning and keeping their families afloat in return for their services in planting trees along coastal areas and riverbanks. At the onset of the planting projects, they were promised financial support, which they called as "maintenance", but it never came, or if it did, they really had no idea. Obviously, this has illustrated the impact of the farmers' socioeconomic status on the Rainforestation efforts of stakeholders and sponsoring agencies. It has interfered with what the association and its supporters have envisioned achieving. Thus it is surprising how this factor, crucial as it is, had been missed by organizers during the planning stage of the program

Differing Political Affiliations. As reported, the organization started off well. Both the officers and members

were in high spirits in their efforts to salvage the environment from further damage. Regrettably, their harmonious relationship began to wane at the onset of the elections. The members were supporting either opposing political candidates or were allies of competing parties. These political pressures had obviously strained their relationship; in fact, some members admitted that this was one of the major reasons that led to the collapse of the association. Looking at how the CARFA disintegrated, one can surmise that such could be explained from the lens of political ecology where the explanation could be derived from the context of the ecological and political dimensions of environmental issues. With what has happened in CARFA, it has been evident that the members of the said People's Organization has transformed their involvement with the natural environment as a stage or arena in which struggles over resource access and control have taken place (Zimmerer and Bassett 2003).

NAKASE (Nagkahiusang Katawhan sa Esperanza)

Another people's organization (PO) that has been trained for Reforestation adoption is the Nagkahiusang Katawhan sa Esperanza (NAKASE). The members of this organization were composed mostly of the residents of Barangay Esperanza in the island municipality of Pilar. Recruitment in this organization, since its founding in 1996, remained voluntary and exclusive only to the residents and their family members of Barangay Esperanza of said municipality. The organization's composition had been quite unique since it gave a premium to family membership. This meant that family members, the husband, the wife and the children, could participate in the activities of the organization as much as they were able. Most, if not all, of the members of the said organization, belonged to the marginalized sector of society since the males or the husbands were mostly farmers who also part timed as fishermen or hired laborers, while the female members, such as the wives, were mostly homemakers and had no permanent jobs. Yet, this group of willing

adopters embrace the said reforestation innovation and still are enjoying the benefits that Rainforestation has given them up to the present (Fernandez & Fernandez 2020).

The organizational structure of the organization follows the usual setup that comprises a set of officers such as the President, the Vice President, the Treasurer, the Auditor, the PIO, and the Sergeant at Arms, followed by the general membership. Nevertheless, one basic requirement of NAKASE's membership is that one should be a resident of Barangay Esperanza in the Municipality of Pilar. One of the unique characteristics that this study has found with regard to its organizational structure is that most of the officers of the association are women. During regular meetings, most of the members attending are also women.



The researcher in one of the FGD sessions with the NAKASE Officers

Hence, during one of the focus group discussion (FGD) sessions with the officers of the organization, a question was raised on the reason why most of the officers are women and why most of the members attending during meetings are also mostly women. The officers' answer to the query is that though a number of men are also members of the people's organization (PO), these members have daytime jobs such as fishermen, farmers, laborers, workers in the municipal government and other jobs available in the island. And since

NAKASE meetings are held during the day, most of the men are at work. This is why in most of the organization's meetings, most of the women are attending in place of their husbands who are out in their day time jobs. This also explains why majority of the organization's officers are women.

NAKASE's Financial Well-being

As mentioned in the earlier part of this study, one of the things that has contributed to NAKASE's existence as an organization is the presence of the organization's microfinance business. As narrated by Mayor Maratas, the organization almost disbanded in its early years of existence. If not for the organization's microfinance business which has collectibles that the majority of the members wanted to have collected, the organization might have closed shop. Yet, the National Greening Program (NGP) of the Department of the Environment and Natural Resources (DENR) has breathed life into the organization.

The Pilar LGU has endorsed NAKASE to the DENR as a people's organization to be commissioned to raise native tree seedlings available in the island, prepare the areas for planting identified by the DENR and the Pilar LGU to be planted with the native tree seedlings, plant the seedlings and to monitor and care for them for a period of three years. These activities have been accompanied by the required fees as set put by the standards of the DENR. Hence, for a period of three years, NAKASE was able to raise around one million five hundred ninety-eight thousand pesos (P1,598,000.00). The amount was equally distributed to the members based on their outputs in relation to the NGP activities. The organization also has its fair share of the income, which was properly invested as agreed by the members of NAKASE.

Transparency as a Key Feature in Building Trust Among Members

Since the NGP has brought a large amount of income to the organization, the officers and the members have strived hard to be as transparent as possible, especially in matters involving money. With this, the officers have all the income accounted for and informed the members of its details during their regular meetings. Aside from that, to enable members to be aware of the financial standing of the organization, the details of the source of income as well as the total income from the NGP are written in the organization’s bulletin board and placed in an area that is visible to all members and even visitors who would drop by their nursery kiosk that also serves as their office and meeting place. With transparency very much implemented, the members of the organization have complete trust in its members, where it also encouraged the members to sincerely contribute to the activities of the organization. This enables the organization to exist until the present since the essence of trust among the members and officers is present within the people’s organization.

PHYSICAL AND FINANCIAL TARGET (FY-2015)			
ACTIVITIES	TARGET		TOTAL
	PHYSICAL	FINANCIAL (PHP)	
SEEDLING PRODUCTION	50,000 S.	500,000.00	500,000.00
SITE PREPARATION	50 HAS.	125,000.00	125,000.00
MPEP 2015	50 HAS.	50,000.00	50,000.00
MPEP 2014	110 HAS.	275,000.00	275,000.00
MPEP 2013	360 HAS.	648,000.00	648,000.00
TOTAL	-	1,598,000.00	1,598,000.00

The NAKASE Bulletin Board Showing the Organization’s Income from the NGP as placed at a designated and visible area in the NAKASE Nursery Kiosk where the organization utilized as an office/meeting area

The Role of Women in Environment Conservation Efforts in Pilar

As mentioned in the earlier part of this study, NAKASE was commissioned by the Department of the Environment and Natural Resources (DENR) to raise native tree seedlings for the forest restoration of the island. However, implementing this entails a lot of work that requires members to step up. Yet, as also mentioned earlier, the people's organization assigned to implement Rainforestation is an organization founded on family membership. Nevertheless, since the male population of the country has been culturally obligated to find means to support their families, the male population usually works during the day to make ends meet while the women have been culturally expected to take care of their respective homes and children. However, since the people's organization has to implement Rainforestation on the island, the women decided to go out of their homes to carry out the tasks while their husbands are on their daytime jobs. One of the requisites to reforest an island is to establish a tree nursery. With this, the women have to collect wildlings in the forests which have been usually done by men. Yet, the women realized that they could also do what their husbands used to do (Fernandez & Fernandez 2020).



The Researcher in one of the meetings of the NAKASE Members who are majority composed of women

During the course of the study, the husbands were asked of how they viewed and felt about their wives' involvement in the tree nursey efforts. The husbands' answers varied from one person to another. Some of the husbands informed the researchers that they were at first not okay with their wives' involvement in conservation since the wives were expected to take care of the children and to take care of their homes. Nevertheless, the husbands also gave in to their wives' wishes since they reasoned out that they could easily finish the household chores while the children were out during the day. Hence, there were two things that were quite important to note here. First, the husbands had a say as to what their wives would do in their household and even in their community. Second, the women were unconsciously willing themselves to transcend the long-held cultural practice of being limited to their homes by doing extra work such as keeping the household intact and, at the same time, being actively involved in the tree nursery project. Hence, one could notice, the women were making extra efforts just to do things that they were not expected to do or involved with.

Moreover, the women of NAKASE are empowered people working on an endeavor that may be our last line of defense against this impending climatic destruction. They have already said their goodbyes to the archaic, traditional, and patriarchal structure of the family. Most members believe that decision-making pertaining to family matters such as budget management and business lie on both the husband and wife equally. As one woman NAKASE member puts it

“Para nako equal raman, para sa magti-ayon equal ra, kuan gyud ob.” (For me, it’s equal, couples are equal). “Mag kuan mi, mag konsultabay sa ako asawa ug pilay amu ipang presyo, pilay among ipatung.” (We would consult each other on how much we should price our goods, how much mark-up we would impose).

Yet, when it comes to child-rearing most tasks are believed to fall on the female partner and is mostly because of biological reasons and the nature of work the male partner

engages in (most of them are fisher folks). A female member of NAKASE also adds:

“Kasagaran nanay, kasagaran babayi, Naa pod gyuy bana kay ug nagtrabaho diay ang asawa so ang bana naman pod toy mukuba.” (Most of the time it’s the mother, most of the time, women. There are times though that it is the father if the mother is busy at work, so he picks up the children from school).

Other aspects of the family, such as religion, politics, and health, are also practically a decision made by both partners. Interestingly though, during our discussions with the members of NAKASE, some of our male participants believed they make decisions in the house when it comes to politics. “Ako mag desisyon diha sa amua” (I make decisions in our home). But contrary to that, the female members believed they make decisions together with their husbands or individually. As another female NAKASE member recalls:

“Para nako individual, depende kinsay na uyunan.” (For me it’s individual, depends on who we favor).

It is unclear whether there is still a struggle for power between partners or worse, an illusion of liberty and empowerment. Despite the discrepancy and incongruence when it comes to political decision-making, both male and female members believed that when it comes to livelihood, both the husband and wife must try to earn money, and they attributed this change to rising prices in commodities. One of the female respondents said that husbands shouldn’t be left to earn on their own.

“Dili naman kaayu pasagdan ang bana nga mag trabahong siya ra.” (It’s already unlikely for wives to let husbands earn on their own). This statement was also affirmed by one of the male respondents saying: “Magtinabangay naman labi raman sauna nga pasagdan ra ang bana ba. Karun silang duba na gyud na ang maoy ma kuan sa ilang panginabubian.” (We help each other

now, unlike before when husbands are left to earn on their own. Now both the husband and wife contribute to their livelihood).

Of course, without opportunities, it would have been hard for women to earn as much as men since, according to them, they only had to work part-time as they are also mainly in charge of child-rearing. Though it would seem that the family structure of the members still closely resembles that of the traditional Filipino family, it can be seen that they have adapted through time. Despite the heterogeneous structural-functional status of their families, the women of NAKASE slowly break through the structure by opening themselves to the environmental projects pushed by different institutions through the Local Government Unit of Pilar.

This is where the National Greening Program and Rainforestation projects come in. NAKASE and the other organizations which came to Pilar and have given the women the opportunity to work for lesser hours but with a decent income. They are able to work equally with men and in their words “*Pariba ra ang sweldo, pariba ra ang dad-on nga seedling pariba ra ka daghan, lakig babayi. Equal gyud ang among pagtrabaho diha.*” (Men and women have equal salaries, same amount of work, same amount of seedlings produced, we have equal work here). As mentioned earlier, most members of NAKASE are females, but they consider their membership conjugal. A factor in this membership structure is also due to the fact that most male partners are fisher folks and are unable to attend meetings. This does not imply, though, that the wife is a mere substitute in the absence of their husbands as they are in most aspects better than them at this job. According to their President, women are more meticulous when it comes to the acquisition of seedlings and preparing them for distribution as compared to men. Though there are still roles in the organization that would require the assistance of their husbands especially in physically exhausting tasks, hence they consider their membership as conjugal and their role as a couple is a product of team effort.

Regardless of the amount of work or economic gain they may have acquired because of this project, one aspect which was unique and essential – which this endeavor has given the women of NAKASE – is the empowerment it provides its female members. The ability to make decisions on their own and for their sake is irreplaceable. This kind of liberation is what this environmental conservation effort has given them, setting aside of course, the fact that it too gives our planet hope. This, indeed, is the epitome of sustainable development.

Individual Adopters’ Experiences: Facing the Challenges and Problems Head-on

Environmental conservation efforts are a mainstay in the island of Pilar, Camotes. The birth of people’s organizations has been complemented by the emergence of individuals whose advocacy to promote reforesting the terrestrial ecosystems is unparalleled. They are called individual adopters. But just like the first people’s organization (CARFA), the individual adopters were likewise confronted with challenges that, in some ways, have sabotaged their attempts to achieve a hundred percent success in their greening programs. These problems revolved mainly in the aspects of operation and maintenance since the individual adopters, namely: Mr. William Cabonegro and Mr. Romeo Gutang are two dedicated stewards of the environment that the island of Camotes has ever produced. They have narrated the problems and challenges encountered as follows:

Location of Growing Trees to Households.

According to Mr. Cabonegro, most areas planted with trees are now populated. He pointed this out saying that, “*Ang problema kasagaran naa nay tanum, naa poy tagbay nga doul-doul sa gitamnan, unya naa sad silay mga binubi.*” The proximity of the young, growing trees to the residents is now seen as a threat, especially if the families have farm animals such as cows and

goats. These residents would irresponsibly pasture their animals on the farm or would tie them in areas where the young trees are within their reach, obviously destroying the plants after these were either eaten, uprooted, or left with broken branches. There are also cases of stray cows and goats feeding on the plants, although there are few cases observed with goats since the *magtalisay*, the common tree species planted in the area, has bitter leaves

Littering. Mr. Cabonegro also revealed that a good number of students still demonstrate a lack of genuine concern for the environment. He observed that up to this day, many would still throw their garbage indiscriminately, like plastics and wrappers of junk foods. According to him, the principal of PNHS had become so upset and had required that the students conduct a regular clean-up drive in the upper and lower *poblacion* because these are areas frequented by their students, thus, there can be no other culprits but themselves. He shared their frustration over their students' lack of discernment on the harm that these non-degradable materials would do to the island, despite the school's efforts to educate them. He lamented over some students' stubborn resistance and negligence of the environment saying, "*Ang mentality pod usabay aning mga bata karong panabuna, pataka gihapon og labay.*"

Destruction of Tree Guards. As a rejoinder, Mr. Gutang also narrated how some of their students had mischievously muddled with the tree guards placed around young growing trees, especially those planted along the highway. At first, it had puzzled them who would have lifted the tree guards and placed them in the middle of the road. But concerned residents living within the area would say that it was their own students themselves doing it after attending a night dance (disco). Until now, this naughty and damaging practice has been going on that the principal could not help but ask, "*Naunsa naman ning atong mga estudyante uy?*" Both educators believed that the students would do this misdemeanor when they were drunk. Asked if they had done

something to address this problem, Mr. Cabonegro said that he and the principal could do nothing but heave a sigh of frustration since they did not have the names of actual students involved

Pervading Indifference and Defiance to Reforestation Efforts. Not all residents on the island are members of the environmental organizations. Reportedly, this group nonchalantly continues to exhibit the “*I don’t care*” mentality, ranging from simple misdeeds like deliberately tearing leaves of plants/trees, breaking their twigs or branches, to pasturing stray animals. According to Mr. Gutang, however, these destructive actions manifest even among members, especially those living in the vicinity, as he observed in one of his project areas. He narrated how his heart sank when he saw his plants being stomped upon intentionally, or parts of leaning plants pulled down harshly by passers-by, claiming that these had blocked their way, “*Samok sa among dalan, maypa balion*”; they would complain. Mr. Gutang shared how he would often ponder in despair what had gone wrong with the members. Based on his informal talks with some residents, he surmised that this negativity could possibly stem from the members’ perception that their efforts had been useless because they had not financially benefitted from the project. Alarmed by what he discovered, he vowed to conduct massive campaigns in the area in order to further educate the members as regards the long-term benefits of forest restoration in watershed areas that all of them can benefit from eventually, including their children and the next generations to populate on the island.

Lax Implementation of Ordinance. Mr. Gutang and Mr. Cabonegro both agreed that a major drawback in their effort “to educate” the non-member residents could be attributed to the lax enforcement of the municipal and barangay ordinance that prohibits the residents to pasture their animals on farms or plantations of adopters. In their common parlance, they revealed that, “*Wala’y ngipon and*

ordinance” because it could not be strictly implemented. When violations were reported, for instance, these were just noted, violators would be asked to sign some papers, but after that, Mr. Gutang and Mr. Cabonegro noticed that no action had ever been taken, except in one case where it was a DENR official himself who caught a farmer allowing the animals to graze in the farm. Reportedly, the owner of the animals was fined P30,000.00 for the three cows, and the farmer had to run away because he had no money to pay the owner back. Apparently, the farmer was only hired to care for the animals.

Socio-economic Factor. The socioeconomic status of many residents, may they be members or not of the organizations, is one recurring aspect that could possibly provide the explanation for why it was difficult to engage them in forest restoration projects. Although the two adopters did not openly verbalize this but very clearly, certain problems encountered would always point back to the earning capacity of the residents. For instance, Mr. Gutang admitted that one of the reasons why the ordinance (on stray animals) could not be strictly implemented was the economic condition of the resident(s). In one incident, he narrated having brought a resident to the *barangay* council because the latter was caught pasturing animals in the farm. But to his dismay, the violation was only settled; the violator was forgiven for the same offense committed repeatedly. Disappointedly, he recounted that, “*Gipasaylo nalang kay lisod man pod lagi ang economic ... ang panginabuhì. Hasta kapila, pasayloon gibapon.*”

Threat to Adopter’s Life. Mr. Gutang has yet to share the greatest challenge encountered as an individual adopter. On one occasion, he lost his temper upon the sight of a cow and carabao tied around his growing Narra trees. He knew the owner of the animals because that was not the first time this person had violated his farm. In fact, he had warned said person several times in the past and he had considered the same violation a number of times already because they were neighbors. In his anger, he untied the animals, threw the

ropes into the grasslands, and drove the animals towards the owner's house. Then, he went home in order to avoid heated confrontations. But the animals being animals, headed toward their owner's maize plantation nearby and had their fill of the succulent crops. The damage must have been huge. Obviously. Unknowing what had transpired, Mr. Gutang returned to his farm. He said that he cried when he saw three (3) young Narra trees chopped down and their leaves and trunks were scattered in the middle of the road. To him, the message was clear. It was a warning. He would be next. Later, he learned that it was the son of the animals' owner who destroyed the trees. After that incident, he admitted being extra careful and at the same time, he decided not to go after his neighbor.

But that was not the last between them. The same person was caught for the same offense, this time involving the damage of more trees in Mr. Gutang's farm. This person had not learned his lesson. Mr. Gutang said that he had no choice but to confront his neighbor outright. He told his neighbor that he would now seek the help of policemen so that appropriate action could be enforced. When Mr. Gutang came back, his neighbor had fled with his animals. After that incident, he told the interviewee that he had become extra cautious, *'Lisud, Ma'am, uy. Gabi gyud. So, nangita nalang mi'g paagi nga dili pod gyud mi madisgrasya.'*

As individual adopters, both Mr. Gutang and Mr. Cabonegro admitted being disappointed at times because they are only humans. But as teachers, they have been trying to understand the way things go. Often, they would console themselves with the thought that the violations were reconsidered due to the socio-economic status of the residents. As reported, most of them are small-time farmers paid for their services in tending to the animals.

Lack of Commitment for the National Greening Program (NGP)

Students. As the focal person of NGP, Mr. Cabonegro recounts his experiences in the school where he is teaching. He said that many students sorely lack the ability to be committed or stay committed to their greening projects. Despite lectures and seminars spearheaded by school officials, Mr. Cabonegro notices that there are still students who have not yet fully understood the importance of trees. According to him, “*Wa pa jud siguro makatubop and ilang paghigugma sa mga kaboy.*” For instance, their monthly activities would not always engage the participation of all students. To ensure that all students would come, the principal had suggested reminding them by announcing even if such activity had already been calendared. But as observed, many would play deaf and attendance had not been maximized. Thus, the principal of Pilar National High School (PNHS) had instructed that they keep a record of those who participate in monthly undertakings. That way, the school could enforce sanctions for those who habitually missed the activities come final exams. The principal also lamented the fact that it is only PNHS that actively does its share in NGP’s projects out of the four high schools on the island.

Teachers. The foregoing observation was also shared by Mr. Gutang. As district coordinator of NGP, he consolidates reports submitted by the schools. He confirmed PNHS’ active involvement and added that this school really conducted the activities, compared with the other three schools where he described their data as *tabled*. He also said that more than the students, it is the teachers themselves who could be blamed for the students’ passivity. He opined that as teachers, it is they who must drive the students on the action that they must do in order to protect and save the environment. He asserted that the teachers’ lack of love for nature had been felt by their students and this ineptitude had unfortunately influenced the latter’s behavior.

School Administrators. Another problem pointed out by Mr. Cabonegro is the practice of other schools to often change their NGP coordinator. He explained that this practice would have adverse effects on the effectiveness of the program since there would be no continuity in the execution of plans and activities. For example, if a new teacher is hired, he/she will replace the sitting coordinator and this process is observed by the school each time it has a new recruit. Mr. Gutang also mentioned that since most of the new teachers are millennials, he observes that they do not show the slightest inclination to take care of the environment. According to him: *“Molingo-lingo, labina moingon ka nga this coming Saturday, duna ta’y tree growing activity. Nah, mora nag kalbaryo na nila nang adlaw.”*

These are the challenges that the two hard-core environmentalists in Pilar, Camotes have to constantly contend with in their journey towards environmental preservation. It is good that both of them are in the academe. There, they can be effective agents of change because they are in close contact with the students. Mr. Romeo Gutang and Mr. William Cabonegro have been relentless in their drive to push for attitude change among residents on the island. As an offshoot to their efforts, it is interesting to note that the planting of seedlings (both fruit-bearing and forest trees) has been made a requirement for couples who would apply for marriage. While in schools, they have launched projects called *“Lasang sa Eskuylaban”* and constructed a biodiversity park in order to instill the importance of trees and taking good care of them, especially among students. However, being humans themselves, they are aware that they can only do so much. At times they feel the weight of the responsibility on their shoulders, but as stewards of the environment, they said that they would never stop in their drive to educate people, even if their words would sometimes fall on deaf ears. The environment deserves to be taken care of. It is everybody’s concern to do it. After all, humanity would certainly have perished a long time ago had it not been for the nurturing bounty of Mother Nature.

The Role of Non-Government Organizations in Pilar's Environment Conservation Efforts

Mayor Maratas also recounted that one of the key players that enabled the island municipality to kick-off its environment conservation projects both for the marine and terrestrial ecosystems was the involvement of non-government organizations (NGO). As Mayor Maratas had recounted, the committee on the environment had a very limited budget as far as the budget of the Local Government Unit (LGU) of Pilar was concerned. Hence, to come up with the much-needed budgetary requirement, Mayor Maratas sought the help of both international and local non-government organizations (NGO). In the local scene, Mayor Maratas had narrated that he was aided by Haribon Foundation to access Rufford, an international NGO that would award grants to small-scale and medium-scale conservation projects. With this, Mayor Maratas designed a proposal for his intended forest restoration projects through Rainforestation which the NGO had granted in return. With the money from Rufford, the then councilor Maratas was able to start his Rainforestation initiatives on the island involving people from the community who volunteered for the conservation project. Aside from that, Pilar LGU's Rainforestation initiatives, especially in forest restoration of the island's degraded marginal uplands, were also fully supported by the Environmental Leadership and Training Initiatives (ELTI) of Yale University School for the Environment. The support from ELTI had also paved the way for the enhancement of the terrestrial conservation initiatives of the island as well as providing technical expertise to the people involved in the implementation through ELTI's partnership with Visayas State University.

Similar with the conservation efforts of terrestrial ecosystems, the conservation efforts of the island's marine ecosystems were also aided by a non-government organization. As mentioned earlier, funds for the committee on the environment from the municipal council were scarce,

and hence, municipal officials had to look for other sources to finance a conservation project. As reported by Bianchessi (2010), the conservation efforts of Pilar's mangrove ecosystem followed a rather detailed process that was facilitated in partnership with a skilled technical team from the Philippine Environmental Governance Project. EcoGov which was funded through the United States Agency for International Development (USAID). Nevertheless, the sustainability of continuous support and care of Pilar's mangroves was a joint effort of USAID, the community members, as well as international non-government organizations such as Plan International and RARE. Support from these international organizations was not only limited to the financial aspects of the project but also linked the Pilar LGU with other institutions that had greatly helped in the conservation of Pilar's Mangrove ecosystems.

Chapter 3

The Benefits brought by Rainforestation as a Conservation Strategy to the Stakeholders of Pilar

As narrated by the stakeholders of the terrestrial ecosystem conservation initiatives from the Municipality of Pilar, one of the things that this study is very certain of is that Rainforestation adoption as forest restoration and conservation strategy on the island has brought a variety of benefits to the people concerned. These refer to **environmental benefits, educational benefits, social benefits, and economic benefits**. These are the changes that Rainforestation adopters and the community members who actively invested themselves in the realm of conservation in the island have experienced in their lives.

Environmental Benefits. With the implementation of Rainforestation, the degraded marginal uplands and watershed areas of Pilar have been enhanced and its quality improved. One of the things that the residents of Pilar could attribute to the island's enhanced degraded marginal uplands was the forest restoration activities that were initiated by the then Municipal Councilor Eufracio Maratas. According to a number of residents who took part in that conservation activity, the planting of native and indigenous trees in the watershed areas gave a breath of life to the island's degraded

watersheds. For the said residents, at that time, where the community already felt the need to do something to save the island's water source, contributing something to save the watersheds by planting native tree seedlings was way far better for the watershed than doing nothing at all. Said plants had their chances to survive and those that survived could continue sequestering carbon from the island's surroundings, serving as habitat for birds, while their leaf litters could contribute to the nutrient fertility of the soil in the vicinity.

Moreover, the use of Rainforestation in reforesting Pilar's denuded uplands and watersheds had enabled the island to environmentally and properly recuperate from degradation. With the use of trees native to the island like that of the Magtalisay (*terminalia foetidissima*), trees that suit the soil type of the island like Narra (*Pterocarpus indicus*), Yakal Saplungan (*Hopea plagata*), White Lauan (*Shorea contorta*), Red Lauan (*Shorea negrosensis*), and Kalumpit (*Terminalia microcarpa*), their survival had never been greater and their capacity to bring back biodiversity never been similar had the trees planted in the reforestation site were fast-growing exotic trees. The use of native tree species in forest restoration when they were planted in the islands was projected to thrive and survive. This is backed up by the theory of Milan and Margraf (1994) that trees planted in degraded areas would have greater chances of survival if said trees planted were of the same species composition as the original rainforest.

Finally, the reintroduction of Philippine native dipterocarps on the island has been a huge accomplishment through the Rainforestation strategy. This family of trees has been extinct in the islands for more than fifty years already. Evidence that these trees had thrived in the islands in the past is very much discernible in the lumber used in the remaining old houses in the municipality, where said houses had utilized lumber made up of the Philippine dipterocarp species that had been already extinct in the islands for some time already. This observation has been confirmed by Mayor Maratas himself. Lastly, the planted dipterocarp species will serve as mother trees in the future.



Magtalisay trees (Terminalia foetidissima) in the Rainforestation site of Mr. Romeo Gutang, one of the successful Rainforestation sites on the island



Dr. Bande poses with a 6-year-old Narra tree (Pterocarpus indicus) planted in the degraded watershed area of Pilar



*Dr. Bande and Mr. Nicoloas Pagalan posing with a surviving 6-year-old Yakal Saplungan tree (*Hopea plagata*) at the planted at Pilar's in Bandera, a marginal upland in the island of Pilar*



*Guinaldo Fernandez with a surviving 6-year-old Red Lauan tree (*Shorea negrosensis*) planted at Pilar's degraded water shed. Photo by Engr. Jimmy Pogosa*



*Dr. Bande and Mr. Nicolas Pagalan posing with a 6-year-old healthy surviving Lauan tree (*Shorea contorta*) planted at the degraded watershed of Pilar*



*Dr. Bande noticed a bird's nest in one of the surviving Yakal 6-year-old Saplungan tree (*Hopea plagata*) – a clear manifestation that native tree species are instrumental in bringing biodiversity lost years back since they serve as the habitat of the island's local bird species*

Furthermore, the citizens of Pilar also claimed that planting native trees in areas where the island's source of water was located also enhanced the quality of its well-being. Trees, after all, had been very instrumental in keeping the health of the watershed so that it could continue to supply the much-needed water to the citizens of Pilar. According to the conservation volunteers of Pilar, water had always been scarce and valuable for the people. Hence, planting native trees in the vicinity of the water source would certainly contribute something positive to the watershed's wellbeing as compared to the proliferation of undesired exploitative practices that had threatened the island's source of water for years already.



The Gabi-gabihan water source in Barangay Imelda, Pilar, Camotes, Cebu

Furthermore, one benefit of the Rainforestation implementation on the island was that it paved the way for the use of native tree species in the government-mandated National Greening Program (NGP), where the island's

vegetation cover had significantly increased. Through the National Greening Program, the island was planted with around five hundred twenty (520) hectares of land for a period of three years. This had greatly improved the vegetation cover quantity of the island as well as the aspect of carbon sequestration. This leads to the process of bringing back biodiversity accompanied by the return of basic ecosystem services in the near future.

Aside from the terrestrial ecosystems, Rainforestation has also played a significant role in enhancing the quality of the island's mangrove forests. This environmental benefit also came as an offshoot of the National Green Program (NGP) since said government program also includes the rehabilitation of mangrove forests. A number of native mangrove seedlings were planted in the island's mangrove areas. As part of the Rainforestation initiative, as well as part of the contract from DENR's National Greening Program, NAKASE was contracted to plant one hundred twenty-five thousand (125,000) mangrove tree seedlings covering an area of fifty (50) hectares (Fernandez & Fernandez 2020). This had greatly improved and enhanced the quality and well-being of the mangrove areas on the island, paving the way of the return of biodiversity in the island's marine protected areas, which had contributed much to sustain the traditional fishing grounds of the island to sustain the lives of the fishermen.

Educational Benefits. The establishment of Rainforestation demonstration farms in the Municipality of Pilar had also contributed to the island residents' awareness of the significance of the natural environment to the lives of people. In the process of implementing Rainforestation conservation initiatives on the island, the people were made to understand why it was important to their lives. In the process, people were educated on how the environment played a vital role in sustaining their daily activities in relation to their means of making a living as a farmer, a fisherman, a hired laborer, an employee in the local government unit, a businessman, or an elected official in the municipality.

Enabling people to feel and understand the essence of the functions of the natural environment has made some of them supportive of the island municipality's conservation efforts. This is manifested in the passion of the two public school teachers who went out of their way to establish native tree forests of their own in order to convince people of all ages to share their passion for Mother Nature's conservation. Not only that, the members of the Nakahiusang katawhan sa Esperanza (NAKASE) had also inculcated to their consciousness that though they were monetarily compensated for their efforts to implement the National Greening Program (NGP), they also realized that their contribution to the NGP such as raising seedlings, preparing the planting area, planting the native tree seedlings, and maintaining them after planting had somehow endeared them to Mother Nature. This developed among them a sense of moral obligation that, as citizens of the earth, it was one's responsibility to care for the things that support life.



Dr. Marlito Bande (left) and Mayor Eufrazio Maratas, Jr. (Right) are the key players in bringing environmental education through Rainforestation conservation in the Municipality of Pilar.

Moreover, Rainforestation had not only brought educational benefits to the people in relation to the conservation of the mountains, they were also educated that protecting the mountains also was a way of protecting the seas. This referred to the experience of the members of NAKASE when they were also commissioned to plant native tree seedlings to enhance the beach forests near the island's mangrove areas. Furthermore, this activity was also reinforced by NGP's commissioning of NAKASE to plant mangrove seedlings available in the area to augment the quality of the island's mangrove forests, thereby paving the way for the mangrove forests to be more rehabilitated than before. In the process of the said activities, the NAKASE members were made to realize that caring for the mountains was also important if people would intend to care for the seas. The members of the NAKASE were also made to understand that there was interconnectivity in the natural environment. This was made more emphasized in the geographical make-up of their island, where space was limited and there was close proximity between the mountains and the seas. With Rainforestation implemented on the island, the people were both educated that "ridge to reef" conservation was the ideal environmental conservation initiative best suited to the needs of their home municipality.

Social Benefits. The Rainforestation conservation initiatives on the island have also socially benefitted the citizens of Pilar. According to Fernandez and Fernandez (2020), another benefit that Rainforestation has given to the members of NAKASE is the empowerment of women and the feeling that gender treatment is equal among them. For instance, the current president of the organization is a woman and the majority of the officers for the year 2018 are mostly women. According to Ms. Gina Pagalan, NAKASE incumbent President, there is equal opportunity among men and women in our organization. For instance, in the thrust to find native tree seedlings in the forest and the preparation and maintenance of forest restoration sites, men and women have

equal tasks and equal opportunities to earn. If the men would plant, the women would also plant and so on. There are no special treatments among the members. In terms of governance, women have also been given a chance to lead the direction of the organization.

Moreover, aside from gender equality and women empowerment, another social benefit that Rainforestation has given to the citizens of Pilar is fair or equal distribution of labor as practiced among the members of the organization. As expressed by Ms. Gina Pagalan, during meetings, the women are the ones who would regularly attend, especially in day time, when their husbands are out doing their usual day jobs like carpentry, farming, fishing, and construction work, and other related jobs. Hence, the women, who are mostly housewives, empower themselves to be active in the activities of the organization in terms of regular meetings and consultations. Yet, the wives have not excluded their husbands from the activities of the organization since they share with their husbands the important tasks and activities in relation to the organization, which made the organization vibrant and productive.

Furthermore, Rainforestation has also enabled the residents of Pilar, especially those who have been actively involved in Rainforestation and mangrove conservation, to be acquainted with people who are interested in conservation. The people in the community have been acquainted with conservation enthusiasts, both foreign and local, thereby giving them the opportune space to learn from them not only in relation to conservation but also about other aspects of human life such as culture, language, interests, advocacies, and even politics and governance matters.

Lastly, one of the social benefits brought about by Rainforestation was that it paved the way for upstream and downstream collaboration of the residents of Pilar. As Mayor Maratas recounted, facilitating the proper use of resources with fishermen who also doubled as farmers and backyard cattle and goat raisers gave him the opportunity to harmonize the use of limited and scarce resources on the island by

engaging people through the promotion of community participation. With that, it led to greater constituency engagement which included women and children. For Mayor Maratas, engaging in environmental conservation initiatives in the islands was good politics. This enabled him to serve his people for a cause that would greatly contribute to the well-being of the lives of his constituents for years to come.

Economic Benefits. Rainforestation conservation has also brought along economic benefits to the people involved in terrestrial and mangrove conservation efforts on the island. For Mr. Romeo Gutang, the establishment of his mini forest has enabled him to be promoted in relation to his teaching position at the Department of Education (DepEd). With the promotion comes an increase in salary. According to Mr. Gutang, the increase in his salary as an offshoot of his promotion has been one of the economic benefits brought about by his thrust to contribute to the well-being of the natural environment in his new home - the island municipality of Pilar. This does not include the proceeds of the surplus of the harvest of his high-value crops which he planted alongside the native trees while the trees were still growing a few years back. Looking back at his experience when he first planted native trees in a denuded parcel of land years earlier, Mr. Gutang recalled that his aim way back then was just to make a little contribution to Mother Nature's wellbeing. Yet, he also asserted that he was very happy with the economic benefits that came as an offshoot of Rainforestation adoption since he also construed it as a gift from Nature.

Moreover, Fernandez and Fernandez (2020) have reported that economic compensation is one of the things that the NAKASE Rainforestation adopters have enjoyed aside from the basic ecosystem services given to them by the natural environment. The monetary remuneration that the members of NAKASE have enjoyed as a result of their thrust to raise native tree seedlings, planting them in designated sites and maintaining the newly planted seedlings have strengthened the bonds among members of the organization. It also has

motivated the NAKSAE members to work for more since more seedlings raised, planted and maintained would mean more money to the NAKASE members' pockets.

ACTIVITIES	TARGET		TOTAL
	PHYSICAL	FINANCIAL (PHP)	
SEEDLING PRODUCTION	50,000 S.	500,000.00	500,000.00
SITE PREPARATION	50 HAS.	125,000.00	125,000.00
MPEP 2015	50 HAS.	50,000.00	50,000.00
MPEP 2014	110 HAS.	275,000.00	275,000.00
MPEP 2013	360 HAS.	648,000.00	648,000.00
TOTAL	-	1,598,000.00	1,598,000.00

NAKASE's Bulletin Board showing that the organization has earned One Million Five Hundred Ninety-Eight Thousand (P1,598,000,000.00) for a period of three years

For the past three years, NAKASE had earned a total of P1,598,000.00. This amount may not be very big as compared to what were derived from other bigger projects in the other parts of the country. Yet, considering the limitations confronting the NAKASE members in Pilar in relation to the area and resources available for them, earning said of money was not an easy feat. It took hard work and dedication to accomplish the NAKASE members' conservation target. Yet, after all had been achieved, they were compensated fairly and reaped the fruits of their labors.

Aside from that, the NAKASE members have not only seen economic benefits as only coming from the services that they have rendered for nature conservation; such benefits also take the form of their share of the profits from the business ventures that the organization has established. These small business ventures refer to the sari-sari store, the microfinance business as well as the organization's catering services. Hence, one of the driving forces that also enabled the NAKASE

members to commit themselves in Rainforestation has been the economic side of it (Fernandez & Fernandez 2020). With conservation accompanied by economic remuneration, Rainforestation implementation in the island municipality has gone full throttle and has made a lasting impact in the island municipality.



The sari-sari store that NAKASE had established from the organization's share of the monetary compensation from the NGP

With regards to the mangrove ecosystems, Rainforestation has also brought economic benefits to the people involved in the mangrove conservation efforts on the island. Going back to NAKASE's activities as a contractor to raise native tree seedlings by the National Greening Program (NGP), it had to also be known that the organization was also contracted to plant one hundred twenty-five thousand (125,000) mangrove seedlings covering an area of fifty (50) hectares. This enhanced the mangrove areas on the island and sustained fish catch for the fisherfolks for quite some time now. As Bianchessi (2020) would assert, a number of Pilar citizens had observed that fish catch in Pilar had improved, as

manifested by the increase of catch of the hook-line-sinker fishers at the Pilar pier.



A citizen of Pilar planting mangrove seedling in one of the island's mangrove areas. Photo by Annalisa Bianchessi

Moreover, regular fishermen had also testified that their catch had increased a few years after the mangroves' well-being were enhanced through the planting of additional mangrove seedlings that paved the way for the return of fish population in the area. With an increase in catch, the fishermen had also increased their income. This was just one of the economic benefits that came as a result of the conservation of the island's mangrove areas (Bianchessi 2020).

Also, the existence of the healthy mangrove areas in the island had also paved the way for the development of ecotourism. As Pilar Municipality Marine Park won the "Most Outstanding Marine Protected Area of the Philippines" out of seventy (70) nominations in 2009, it attracted local and foreign tourists. This also gave the Municipality of Pilar the opportunity to economically benefit from it through environmental fees that tourists pay to experience the beauty of the mangrove areas through small boats paddling that brought the tourists to the most scenic parts of the mangrove areas. With this at hand, funds for the maintenance and conservation of the mangrove areas were raised, which would be used to maintain the well-being of the mangroves.

Chapter 4

Summary and Conclusion

Summary

The island's social and political ecology has shaped and influenced Pilar's conservation initiatives for the past years. For one, Rainforestation conservation efforts in Pilar had been triggered by the influence of social-environmental interactions where the stakeholders on the island tried to address the issue of the struggle over resources and control. The concern to save Pilar's remaining watershed and mangrove areas had shaped human-environmental dynamics where the stakeholders in the island municipality had to adjust to the things brought about by the contradiction between environmental degradation and environment conservation.

One sad experience among the fishermen who also mostly doubled as farmers in the area was the aspect where their access to water and terrestrial resources had been temporarily limited. However, the local government had responded to it through alternative modes of livelihood so that the stakeholders could survive even with the limitations that came along their way. Considering that livestock raising was one of the island's means of livelihood, providing stakeholders with support through the dispersal of livestock had been acceptable to the people affected by the limitations brought about by nature conservation. This brought one to

the politics of culture and representations of nature and the narratives that gave them form and meaning. This is a manifestation of the political ecology of scale, where diverse environmental processes interact with social processes creating different scales of mutual relations (Zimmerer & Bassett 2003). The reason why livestock raising as an alternative to farming and fishing worked among the stakeholders was that such was already part of their culture and that engaging in it was more practical considering that the stakeholders affected used to farm and fish in limited areas that allowed them to sustain themselves and their families. The raising of livestock in limited areas had posed no problem to them since they had been used to working with limited spaces all their lives in the island.

The significant role of people's organizations and non-government organizations (NGOs) in the implementation of the island's marine and terrestrial conservation efforts has been deeply triggered by the powerful influence of places in shaping environmental issues. Realizing the limited space separating the marine and terrestrial boundaries of the island municipality, the members of the people's organization put on themselves to contribute to saving what was left in nature on their home island. The biophysical and social characteristics that are associated with the environment of their place had put fire on the will of the members of the people's organization to sincerely do their part in conserving their watersheds and their mangrove areas.

This holds true with the non-government organization's involvement in support of the island's conservation initiatives. Yet, their involvement had fallen more in the realm of environmental globalization, which had been spurred by the integration of planetary support services like climate change mitigation (Zimmerer & Bassett 2003) which had been addressed by the restoration of the watershed and mangrove areas with the use of native tree species. Nevertheless, the two public school teachers' contribution to the nature conservation efforts of Pilar had been mostly felt to be related to environmental modernization. The efforts of Mr. Gutang

and Mr. Cabonegro in establishing something that would greatly contribute to nature's wellbeing on their island just to mitigate the pressing heat of the sun during summer and to encourage the youth to do the same had been a perspective that recognized the enlarged importance of environmental issues. Hence, reasoning from recognition, one could construe that environmental management is central to the overall workings of present-day and future societies (Zimmerer & Bassett 2003).

With regards to Mayor Maratas, who started it all, his brand of governance through his years in government service had spoken for itself. In an island municipality where the challenges of modernity had slowly but surely indirectly confronted the resources of the island's carrying capacity, Mayor Maratas just strove to engage both ecological and political dimensions of environmental issues in a more balanced and integrated manner. The scale of social and ecological processes and their interactive effects on environmental problems and policies (Zimmerer & Bassett 2003) had made Mayor Maratas' style of governance and politics beneficial to the lives of people and the well-being of the natural environment in the island municipality of Pilar, Camotes, Cebu, Philippines.

Also discussed in this study is the socio-ecological framework of Forest Landscape Restoration of the Municipality of Pilar. This study has extensively discussed the social life of Pilar which shows that Pilar has a social structure that is very much common to many island rural communities in the country. As the island municipality's geographical makeup has situated the mountains and the seas in close proximity because of the island's limited land area, people's means of making a living have been culturally directed to farming, fishing, and livestock growing. Such has led to the degradation of the mountains because of the people's thrust to farm for a living either by tilling farms and domesticating animals. On the side of the marine ecosystems, fishing and related livelihood had been the traditional trade of the people of where the traditional fishing grounds of the island had

tended to be overfished which made the Local Government Unit (LGU) rehabilitate with the help of the community as well as local and foreign partners. This resulted in positive results, which had benefitted people in a variety of ways.

With regards to the governance of the island, Mayor Eufracio Maratas had implemented a brand of governance that was aligned with Forest Landscape Restoration (FLR) even during the days when he was still a Municipal Councilor and Municipal Vice Mayor. For one, Mayor Maratas' environmental governance was focused on landscapes that aimed to restore multiple landscapes functions. His type of implementing conservation projects had engaged diverse stakeholders which were based on the context of participatory governance. Hence, the governance style was tailored to fit the local context using a variety of approaches that the people of Pilar had found acceptable. Moreover, Mayor Maratas' ultimate goal of his conservation efforts was to enhance and maintain natural ecosystems and manage them adaptively for long-term resilience, which was very much needed in conserving and preserving what is left of the natural environment in the island municipality.

Moreover, the study also recognized that Key important players in Pilar's conservation initiatives were the people's organizations (PO). These people's organizations had been instrumental in implementing Rainforestation in the islands. These organizations were composed of ordinary citizens who had that willingness to contribute something to the natural environment. However, of the two people's organizations involved in Pilar's conservation initiatives, one disbanded and died a natural death due to very common reasons. Among the causes of the organization's disbandment were a lack of transparency on matters both on the officials and members, the absence of constitution and by-laws, the insufficient or absence of financial assistance to the members, and the difference in political affiliations.

However, the other people's organization is still existing and operating until the present since even with the financial gains enjoyed by the members of the people's organization

through the National Greening Program (NGP), transparency has been observed with utmost importance. Aside from that, one noticeable element in said people's organization's success is that it empowered women and allowed them to be greatly involved in the conservation projects. This gives women the capacity to decide for themselves and gives them a sense of breaking away from the patriarchal tendencies of many rural societies in the country.

Furthermore, this study also delved into the aspect that conservation efforts in Pilar were implemented not without challenges. For the individual Rainforestation champions, for instance, key challenges for conservation in the islands took the forms of young people's lack of concern for the conservation efforts accompanied by pervading indifference and defiance to it even with the adult population, lack of implementation of environment-related ordinances, socio-economic factors that sometimes contradicted with conservation initiatives, and the lack of commitment of some of the citizens to the National Greening Program (NGP) of the government.

This part of the study then narrates the significant role of non-government organizations (NGOs) in Pilar's conservation efforts. Said organizations have aided the island municipality's conservation initiatives by providing funds for the projects' implementation. The funds given may not have been much. Yet, what is important is that it enabled the Pilar LGU to jump-start the conservation initiatives of the island considering the limited funds allocated by the LGU to environmental activities of the municipality. Aside from their provision of the needed funds, the NGOs also provided expertise to the people involved in the island's conservation program, thereby enabling the locals to do things the right way in the conservation projects' implementation. Not only that, the NGOs also paved the way for Pilar to link with other institutions that have interests in environment conservation, thereby opening the doors for the island municipality for significant opportunities to network with bigger environmentally supportive institutions and organizations.

Nevertheless, this study also recognized the benefits of Rainforestation conservation innovation to the lives of the people of Pilar. As thoroughly discussed, the citizens of Pilar had gained environmental, educational, social, and economic benefits from Rainforestation conservation. These benefits had been experienced by the key players in the Rainforestation conservation initiatives in the island municipality. The people of Pilar had experienced benefits as they lived their lives years after the implementation of the said conservation projects. As people had experienced the enhancement of their mountains' forest covers, the cool air experienced in the reforested areas and the enhancement of the well-being of the mangrove areas, one could really observe that the environmental conditions in the island had improved through the years.

Moreover, Rainforestation has also raised awareness among the citizens of Pilar that the natural environment is a significant factor in supporting life on earth. The implementation of said conservation method has educated many of the Pilar's citizens across genders and ages through said members' participation in the various environmental conservation activities implemented in the municipality. Yet, Rainforestation's implementation has also enabled the citizens of Pilar to meet other people who are also advocates of environmental conservation, both local and foreign. This has enabled them to learn other people's culture, political beliefs, and ways of life. For the leadership in the local government unit, Rainforestation has also benefitted them politically because conservation initiatives in the island have given them the opportune space to serve the people by doing something special that would surely have a lasting impact in the community.

Lastly, the people of Pilar, who have played a significant role in the implementation of environmental conservation initiatives on the island, have been compensated monetarily in their efforts. In other words, they have economically benefitted from their work and have literally reaped the fruits of their labors. Though said benefits have come in different forms and manner, it does not change the fact that doing

conservation could lead to a variety of benefits, economic benefits included.

Conclusion

This study concludes that conservation efforts in Pilar were designed to engage both the ecological and political dimensions of environmental issues in a more balanced and integrated manner. In addressing the problems of degraded watershed areas and denuded mountains on the island, the government officials led by the then Councilor Eufrazio Maratas, Jr. had tried to implement a conservation strategy that would effectively address the environmental problem at hand, while at the same time, finding ways not to prohibit people access from their means of making a living. This also held true to the conservation of the mangrove areas where many fishermen in the municipality had depended much for a living. While there were instances where conflict between the socioeconomic need of people and the conservation of nature, the Local Government Unit (LGU) of Pilar had implemented measures to arrive at a middle ground where both conservation and sustaining people's basic needs were met. This resulted in the livestock dispersal among Pilar's fishermen affected by the mangrove rehabilitation measures, as well as the implementation of livelihood programs for the farmer-members of the people's organization involved.

This study also concludes that the ecological makeup of the island municipality has triggered the kind of conservation measures that suit the needs of the island. This is the reason why watershed and mangrove restoration have been given due importance since they were crucial to sustaining the lives of the island residents for years to come. Hence, in showing that the implemented conservation measures were applicable and practical, agroecological production accompanied by the establishment of demonstration farms were established. This also aided in educating the citizens about the importance of the natural environment to their lives.

Moreover, this study also concludes that environmental governance following the framework of forest landscape restoration (FLR) was effective on the island in the sense that it has made conservation acceptable and construed as practical by the people. FLR's essence focused more on landscapes where it restored multiple landscape functions, enabling conservation to be considered effective and applicable to people's lives as they live on the island. FLR's characteristic where it has engaged diverse stakeholders and supported participatory governance, thereby tailor-fitting conservation initiatives to the local context using a variety of approaches, has made Pilar's citizens construe such as practical. With this, conservation initiatives in Pilar have maintained and enhanced natural ecosystem thereby, local officials have been able to manage adaptively said conservation measures for long-term resilience.

Furthermore, this study also concludes that the structure of the people's organization on the island has paved the way for its success in aiding the LGU in its conservation initiatives. It promoted the acceptance of gender equality and women empowerment, thereby making conservation activities inclusive. Nevertheless, social problems have also been construed as a hindrance and a challenge to the operation of an organization, especially one that has strived to the environmental wellbeing of the island. However, the said challenge has been mitigated by the involvement of Non-government Organizations (NGOs), which contributed much to the success of the island's environmental conservation initiatives through their technical and financial support.

Lastly, this study also concludes that Rainforestation conservation would lead a community or individual to a variety of benefits. These benefits come in different packages, such as environmental, educational, social, and economic – all of which are very significant to people's lives. Looking at the benefits brought about by Rainforestation to the municipality of Pilar, one could assert that there is always something to reap when someone plants something important. This is what happened in the island municipality of Pilar. Though the

impacts of the conservation projects have not been that great a few years after implementation, people on the island have sincerely vouched for their enjoyment of the fruits of their labor may it be environmentally, educationally, socially, and economically. As an old adage clearly puts it, “one reaps what one has sown.”

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The Authors

Dr. Guiraldo C. Fernandez, Jr. is the University and Board Secretary - Designate of Visayas State University (VSU) and an affiliate faculty of the university's Institute of Tropical Ecology and Environmental Management (ITEEM). Before his appointment to his current position in October 2020, Dr. Fernandez served as the Director for Instruction and Evaluation from June-September 2020 and also served as the Head of the Department of Liberal arts and Behavioral Sciences from February 2012-May 2014 and from January 2016-May 2020. Aside from being a graduate of a Doctorate Degree in Education and a Master's degree in Philosophy from the University of San Carlos in Cebu City, Dr. Fernandez is also a holder of a Master of Science in Tropical Ecology degree from Visayas State University which has enabled him to understand the language and the science of environmental conservation. Yet, to further advance his knowledge in the said discipline, Dr. Fernandez also enrolled and completed the one-year online certificate course on Tropical Forest Landscapes: Conservation, Restoration, and Sustainable Use offered by Yale University School of the Environment from June 2020 – May 2021 through a scholarship from the Environmental Leadership and Training Initiatives (ELTI). Dr. Fernandez also served as a visiting fellow at the McLean Center for the Study of Culture and Values at the Catholic University of America in Washington D.C., USA in 2019 where he completed and presented his paper on “The Role of Democratic Governance in Environment Conservation at an Island Municipality in the Philippines” as part of his commitment to the fellowship. Dr. Fernandez's research interests are in line with Environmental Education, Environmental Philosophy, and Socioecology. He has published his research outputs in reputable peer-reviewed local, national, and international journals and scholarly books.

Dr. Marlito M. Bande is the current Director of the Visayas State University (VSU) Biodiversity Center and the former Director of the Institute of Tropical Ecology and Environmental Management (ITEEM). He is a holder of a Doctorate Degree in Agroecology from the University of Hohenheim in Stuttgart, Germany. Dr. Bande spends most part of his academic career as an educator in the field of Environmental Science and Conservation and bringing and applying what he learned from his trainings to the people in local communities. In the earlier part of his career, Dr. Bande served as a focal person in the implementation of the Rainforestation program in marginal upland communities not only in the Visayas but across the country and many parts of Asia. Dr. Bande has been very instrumental in helping communities being awarded stewardship of their forests through the Department of Environment and Natural Resources (DENR) program on Community Based Forest Management (CBFM). CBFM enabled local famers to safeguard the wellbeing of their forest, while at the same time, allowing them to enjoy the benefits from nature in a sustainable way. Dr. Bande is also passionate and serious about bringing the science of conservation, through Rainforestation, to natural resource dependent communities so that said communities could easily adopt to the drastic changes brought about by climate change. Dr. Bande's research interests are in line with Agroecology, Natural Resource Management, and Climate Change Adaptation and Mitigation. He has published widely on agroecology, community-based forest restoration, Rainforestation, and biodiversity conservation in scholarly books and reputable peer-reviewed high impact journals.



Dr. Guiraldo C. Fernandez, Jr. is the University and Board Secretary of Visayas State University and an affiliate faculty of the Institute of Tropical Ecology and Environmental Management (ITEEM). He is a holder of a Doctorate Degree in Education and a Master of Arts Degree in Philosophy both obtained from the University of San Carlos.

He also has a Master of Science in Tropical Ecology degree from Visayas State University and served as a visiting fellow at the Catholic University of America in Washington D.C., USA in 2019. He published widely on Rainforestation, Environmental Education, Environmental Philosophy, and Socioecology in scholarly books and peer-reviewed journals.



Dr. Marlito M. Bande is the Director of Visayas State University (VSU) Biodiversity Center and former Director of the Institute of Tropical Ecology and Environmental Management (ITEEM). He is an agroecologist by profession, and holds a Doctorate in Agroecology from the University of Hohenheim, Stuttgart, Germany.

He is a leading proponent of Rainforestation, an agroforestry strategy that integrates native forest trees, which was developed at VSU. He has published widely on agroecology, community-based forest restoration, Rainforestation, and biodiversity conservation in scholarly books and peer-reviewed journals.