

Rainforestation as an Instrument for Sustainable Development: Narratives from the Nagkahiusang Katawhan sa Esperanza (NAKASE) of Pilar, Camotes Island, Cebu

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Abstract

This article looks into the aspects on how the members of the *Nagkahiusang Katawhan sa Esperanza* (NAKASE), a people's organization in the island Municipality of Pilar, Camotes, Cebu construe Rainforestation as an instrument for sustainable development. Using the narrative research method, this study has aimed to determine the reasons that facilitated the NAKASE members to adopt Rainforestation, inquire into the context on why the NAKASE Rainforestation adopters have construed Rainforestation as a means to achieve a development that is sustainable and practical, and find out the impacts of Rainforestation to the lives of the NAKASE members. This study concludes that Rainforestation adoption in Pilar, Camotes, Cebu, has been driven by both environmental and economic reasons. Moreover, this study further claims that sustainable development is only achieved when people do share in achieving the said end. In the case of NAKASE, the members have construed that sustainable development has been attained through Rainforestation adoption. Lastly, this study argues that Rainforestation adoption in relation to the structure of NAKASE has paved the way for the emergence of women empowerment, gender equality, and equal division of labor among the members of the organization.

Keywords: Environmental Conservation, Economic Benefits and Gender Equality

Introduction

According to the Report of the World Commission on Environment and Development: Our Common Future, sustainable development is defined as a kind of development that meets the needs of the present without compromising the ability of future generations to meet their own needs¹. The world, at present, is confronted by a variety of challenges. One of the most pressing among all these challenges points to the question whether the earth's resources can sustain its growing population. Logically, it would be difficult for the earth's resources to support a dynamic growing number of the earth's inhabitants if the amount of resources remain the same. The earth's resources have to match in quantity to the individuals that utilize them. Since the world's population is growing, the earth's resources, therefore, also need to be augmented so that there would be a balance between the consuming population and the resources to be consumed. This claim has already become a fact in the world today. In fact, Dennis Demick of the National Geographic asked in his September 2014 article: "As the world population booms, will its resources be enough for us"?² Yet, in the process of augmenting the earth's resources to cater to the needs of a growing population, a number of issues have also emerged. One of these issues boils down to the question on whether or not something will be left for the next generation. This question is not rather new. In fact, Thomas Malthus theorized in the

¹ Gro Harlem Brundtland, "Report of the World Commission on Environment and Development: Our Common Future," UN Documents Gathering a body of global agreements (United Nations, 1987), <http://www.un-documents.net/wced-ocf.htm>. *Our Common Future*, also known as the Brundtland Report in recognition of former Norwegian Prime Minister Gro Harlem Brundtland role as Chair of the World Commission on Environment and Development (WCED), was published in 1987 by the United Nations through the Oxford University Press. Its targets were multilateralism and interdependence of nations in the search for a sustainable development path.

² Dennis Dimick, "As World's Population Booms, Will Its Resources Be Enough for Us? New Projections of Escalating Growth Increase the Tension between Humanity's Expanding Needs and What the Planet Can Provide," Natgeo@home (National Geographic, September 21, 2014), <https://www.nationalgeographic.com/news/2014/9/140920-population-11billion-demographics-anthropocene/>

early 19th century that “while resources tended to grow arithmetically, populations exhibit exponential growth. Thus, if left unrestricted, human populations would continue to grow until they become too large to be supported by the food grown on available agricultural lands. In other words, humans would outpace their local carrying capacity, the capacity of ecosystems or societies to support the local population³. Hence, in order to address this concern, human beings initiated innovations that promote a development that enables resources which can sustain the needs of the future citizens of the world.

In the Visayas region of the Philippines, one of the state-owned institutions of higher learning – the Visayas State University – has initiated a reforestation initiative known as Rainforestation. Aforesaid institution has come up with Rainforestation innovation since trees and forests in the area have been consistently dwindling. As observed by Edwino Fernando, a University of the Philippines-Los Baños professor, “forests lost in the Philippines are largely caused by the conversion of primary forests to secondary forests by both legal and illegal logging as well as the removal of secondary forests cover by expansion of upland agriculture.”⁴ These causes of forest loss are results of human centeredness. In Philosophy, this is construed as an expression of human chauvinism that is based on a groundless belief that only human beings matter. Yet if other beings matter at all, they matter only because of their utility to humans. This is the core teaching of anthropocentrism that the pioneering scholars of environmental philosophy have been fighting to eradicate since the environmental movement started in Australia in the 1970s. Yet one significant thing in this aspect is that the environmental philosophers of the 1970s were also fighting for the preservation of Australia’s Eastern forests by fighting the notion of anthropocentrism⁵. Nevertheless, it should be noted that in the goal of protecting forests, a variety of ways have to be attained by using reason to come up with things that practically work in achieving its intended end. Hence, with forests disappearing, creating an innovation to address such problem is the most significant thing to do. The environment needs to be

³ Prateek Agarwal, “Malthusian Theory of Population,” *Intelligent Economist*, January 20, 2020, <https://www.intelligenteconomist.com/malthusian-theory/>.

⁴ Edwino Fernando, *Restoring the Philippine Rainforests*, vol. Policy Paper no. 2 (Manila, Philippines: Haribon Foundation, 2005).

⁵ Freya Matthews, “Environmental Philosophy,” in *A History of Australasian Philosophy*, ed. N Trakakis and G Oppy (Dordrecht: Springer, 2014), 543-691.

properly managed so that it would not become barren in the long run. After all, a healthy and prudently managed environment would indubitably give a variety of benefits to humans and other species. Indeed, humans and all living organisms rely on the basic resources found in the earth's environment for their very survival. Paramount among these resources are fertile land, fresh water, energy, and biodiversity⁶ whose quality could be enhanced by the presence of a healthy and vibrant forests.

In essence, Rainforestation is an innovation designed to make use of unproductive lands by planting native tree species which are not widely used in the Philippine government's reforestation program⁷. This technology found its way to Visayas State University since in the 1990s, the Philippine-German Applied Tropical Ecology Project started to look into the possibility of rehabilitating formerly forested areas to bring back the ecological functions of the degraded areas as needed for poverty alleviation through sustainable rural development. This program was directed for the promotion of biodiversity rehabilitation, conservation of remaining primary forests and natural resources, and the development of a closed canopy and high diversity forest farming system. The directives of the program were formulated so that Rainforestation could replace the widespread slash-and-burn practices and protect and enhance biodiversity by using indigenous trees only. In 1994, the hypothesis was formulated that a farming system in the humid tropics is increasingly more sustainable the when the closer it is in its species composition to the original local rainforest. With this, the ecological functions of a given ecosystem were re-established while subsistence farmers were provided with a stable and long-term income⁸. Hence, from its inception in the early 1990s, Rainforestation was primarily designed to cater the needs of the present generation without compromising the needs for the future generations.

Since its introduction, Rainforestation was disseminated by Visayas State University and was declared one of the official

⁶ David Pimentel et al., "Impact of a Growing Population on Natural Resources: The Challenge for Environmental Management," *Frontiers: The Interdisciplinary Journal of Study Abroad* 3, 1997, 105-131.

⁷ Paciencia P Milan and Maria Juliet Ceniza, eds., *Rainforestation Trainors' Manual* (Baybay City, Leyte, Philippines: Institute of Tropical Ecology, Visayas State University, 2009).

⁸ Friedheim Goltenboth, "Ecosystem Approach," *Conference on International Agricultural Research for Development* (October 13, 2005).

reforestation methods of the Philippines' Department Environment and Natural Resources (DENR) in 2004. As mentioned earlier, Rainforestation was also designed to provide a staggered income from high-value timber, fruit trees, spices, and medicinals. To add to that, the technology had also increased biodiversity in Rainforestation sites since it helped restore soil productivity and protected the watersheds on degraded sites.⁹ Hence, Rainforestation, as an environment conservation strategy, jived well with environmental philosophy's systematic conservation planning (SCP). It had provided a system for the design of conservation area networks, "which were sets of areas protected for management for biological conservation". SCP had consistently pursued three goals: The first—representation—involved protection of those units of biodiversity included in the accepted definition of the term; the second—persistence—related to an assurance of the likelihood that those units continue into the future; and the third—economy—implied that the protection of biodiversity would be achieved through means that were comparatively inexpensive in costs and in the area of land required. Moreover, SCP demonstrated the utility of a key concept called complementarity by applying it as an alternative to richness (i.e., species count) and using it as a measure of biodiversity. In making choices based on complementarity, one had to evaluate various plans to add protected areas according to how much each new area had contributed to the protection of previously unprotected elements. These judgments were embodied in a procedure that ranked these conservation area networks according to their ability to protect more of the conservation-targeted elements of biodiversity¹⁰. Thus, from the early 1990s to the mid-2000s, Visayas State University disseminated the technology of Rainforestation and have trained willing individuals and group adopters.

One of the groups that has been trained for Rainforestation adoption is a people's organization (PO) known as the Nagkahiusang Katawhan sa Esperanza (NAKASE). A People's organization is a local, grass-roots organization that has no government sponsorship. People's Organizations are defined in section 15 of the 1987 Philippine constitution as: '... bona fide associations of citizens with

⁹ T Schneider et al., *Growth Performance of Sixty Three Species in Smallholder Reforestation Trials on Leyte, Philippines*. (Springer Science Media Dordrecht, 2013).

¹⁰ Bryan Norton, "Environmental Philosophy: A Fresh Perspective," in *BioScience* 63, no. 5 2013, pp. 404-406, doi.org/doi:10.1525/bio.2013.63.5.16.

demonstrated capacity to promote the public interest and with identifiable leadership, membership, and structure'. This section goes further in describing the relationship between the State and POs: 'The State shall respect the role of independent people's organizations to enable the people to pursue and protect, within the democratic framework, their legitimate and collective interests and aspirations through peaceful and lawful means.'¹¹ The members of this organization are composed mostly of the residents of Barangay Esperanza in the island municipality of Pilar, Camotes, Cebu. 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 is quite unique since it gives premium to family membership. This means that family members, the husband, the wife and the children can participate in the activities of the organization as much as they are able. Most, if not all, of the members of the said organization belong to the marginalized sector of society since the males or the husbands are mostly farmers who also part-timed as a fishermen or hired laborers, while the female members, such as the wives, are 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. This is the aspect that this study would determine whether or not Rainforestation has attained its intended end of empowering its adopters to attain degrees of development that are beneficial to society, and at the same time, sustainable. Utilizing the experience and perspectives of the Nagkahiusang Katawhan sa Esperanza (NAKASE), this study would determine Rainforestation's contribution to the thrust of achieving a development that is sustainable and practical.

¹¹ Stephen Duthy and Bernadette Bolo-Duthy, "Empowering People's Organizations in Community-Based Forest Management in the Philippines: The Community Organizing Role of NGOs," *Annals of Tropical Research* 25, no. 2 (December 2003): pp. 13-27)

Objectives

In the thrust to determine Rainforestation's contribution to the goal of attaining sustainable development, the following objectives are sought: a) Determine the reasons that facilitated the NAKASE members to adopt Rainforestation introduced by Visayas State University starting the year 2008, b) Inquire into the context on why the NAKASE Rainforestation adopters had construed Rainforestation as a means to achieve a development that is sustainable and practical, and c) Find out the impacts of Rainforestation to the lives of the Nagkahiusang Katawhan sa Esperanza (NAKASE).

Methodology

In the thrust to determine Rainforestation's contributions of attaining sustainable development as discernible from the experiences of the Nagkahiusang Katawhan sa Esperanza (NAKASE) Rainforestation adopters, this study makes use of the narrative qualitative research method. For the purpose of this study, this paper follows Chase's paradigmatic narrative framework that gives significant emphasis on how individuals are enabled and constraint by social resources, socially situated interactive performances and how researchers developed interpretations¹². Yet, since this paper would come up with stories or narrations on how the officers of a people's organization construe Rainforestation as an instrument for sustainable development, this study specifically employs the narrative of change method since such method simplifies and tailors the application of this type of narrative to a purpose of an analysis which aims to demonstrate how narrations show themes connected to change¹³. Hence, since only the officers of the said people's organization are considered in this study, purposive sampling is necessarily utilized. This type of sampling method fits well in achieving the objectives of this study since the officers and members of said people's organization are very similar with each other in the sense that they share similar ways of life. To add to this, the officers

¹² Susan Chase, *The Sage Handbook of Qualitative Research*, ed. N K Denzin and Y S Lincoln, 3rd ed. (Thousand Oaks, California: Sage, 2005).

¹³ Walter Kintsch and Teun Van Dijk, *Strategies of Discourse Comprehension* (New York, NY: Academic Press, 1983).

and members of this organization also belong to the same community in the said island.

In the conduct of this study, the researchers asked permission from the officers of the Nagkahiusang Katawhan sa Esperanza (NAKASE) whether they would agree to serve as our study's respondents. Fortunately, all of them have agreed to the researchers' request and express their willingness to share their thoughts about their experience and views on Rainforestation. Moreover, the respondents also agreed to be interviewed and participate in a focus group discussion at a place and time that they are most comfortable with as well as the use of language that they are also very familiar. The use of the local language is very important in the sense that understanding the respondent's worldviews entails the researchers to understand their respondents' way of life, their beliefs and values as shown in their language and the way they live in society¹⁴. Furthermore, during the key informant interviews (KII) and focus group discussion (FGD) sessions, the researchers have also asked the respondents to digitally record the proceedings of the said activities. Digital recording has allowed the researchers to focus on the interviews or the focus group discussions, attend to the participants, record memos and accurately capture participants' tone, inflections and pauses.

After the data have been gathered, an analysis on such data has been thoroughly done and emerging themes that have been essential to represent the structure of experience have also been identified. After the process of data interpretation, the researchers have also assessed the trustworthiness of the data analysis by presenting the study's interpretation to the respondents. As a qualitative method, this research has embarked on several sessions of key informant interview and focus group discussion sessions for clarification and validation of data. Hence, the final draft of this study has been presented to the respondents for their appraisal.¹⁵ Lastly, consent to publish the respondents' answers during the KII and FGD sessions have been given to the researchers by the respondents themselves.

¹⁴ C. Paz, *Ginhawa Kapalaran Dalamhati: Essays on Well Being, Opportunity/Destiny, and Aguish* (Quezon City, Philippines: University of the Philippines Press, 2008).

¹⁵ Guiraldo C. Fernandez and Marlito Jose M Bande, "Rainforestation and Sustainable Development: From the Lived Experience of the Four Individual Adopters from the Visayas Region in the Philippines," *Recoletos Multidisciplinary Research Journal* 7, no. 2 (December 31, 2019): 29-46.

Results and Discussions

Reasons for Adopting Rainforestation

The members of the Nagkahiusang Katawhan sa Esperanza (NAKASE) adopted the Visayas State University (VSU) Rainforestation project in 2010 for two reasons: environmental and economic.

Environmental Reason

Care for the environment is the first and foremost reason why the Nagkahiusang Katawhan sa Esperanza (NAKASE) members decided to adopt the reforestation technology. Way back in 2008, the then Municipal Councilor Eufrazio Maratas had observed that water in the island municipality of Pilar, Camotes, Cebu had increasingly become a problem in many households. With this, he commissioned NAKASE to start the propagation of native tree seedlings endemic in the island so that they could address the impending water shortage. Councilor Maratas during that time was already an alumnus of the Rainforestation Training Program co-sponsored by Visayas State University and Yale University's Environment Leadership Training Initiative (ELTI)¹⁶. He commissioned the organization the task of raising native tree seedlings since NAKASE had engaged in tree nursery propagation activity since its founding as a people's organization in 1996. With this, NAKASE started to venture into propagating seedlings of endemic tree species in response to the call of the then councilor Maratas.

According to the Mr. Nicolas "Kula" Pagalan¹⁷, the past president of NAKASE who served as the organization's president for more than a

¹⁶ The Environmental Leadership and Training Initiative (ELTI) is an Extension arm of Yale University's School of Forestry and Environmental Studies. Since 2008, YALE-ELTI has partnered with Visayas State University's (VSU) Institute of Tropical Ecology and Environmental Management (ITEEM) where the former has technically and financially supported the latter in its environmental conservation initiatives and projects throughout the Philippines.

¹⁷ Mr. Nicolas Pagalan was interviewed by Fritz Geraldine Fernandez as part of her thesis at his workplace at Pilar, Camotes island, Cebu in June, 2019. Ms. Fernandez's interview was supervised by her thesis adviser, Dr. Guiraldo C. Fernandez, Jr. Being the adviser, clarifications in relation to the data gathered was done by Dr. Fernandez since this study is a component of his University mandated Research and Extension Project as a faculty member of Visayas State University.

decade, he responded to the prodding of Councilor Maratas¹⁸ to propagate native and endemic tree seedling planting materials because he himself also believed that there was already a need to address emerging environmental problems in the island. One of these problems was the dwindling water supply, most especially, during summer or the months of April and May. The impending water shortage in the island was caused by the fast disappearance of trees in the watershed area because of the conversion of watershed areas into upland agricultural farms as well as the cutting of young trees for firewood. Aside from that, some people also use tree leaves to feed to the animals raised in households during the dry season when grasses were brown because of so much heat.

This affected the health of the island municipality's watershed areas which in turn caused the island's dwindling water supply. In response, the members of NAKASE wasted no time in propagating tree seedlings endemic to the island and started to plant trees at the areas designated by Councilor Maratas. When asked what Kuya Nicolas felt about planting native trees in the watershed areas, he gave a clear and assured answer: *"We adopted Rainforestation for the reason that we wanted to help care for the natural environment"*. This answer was reinforced by the current president of NAKASE, Mrs. Gina Pagalan¹⁹, when asked why their organization adopted Rainforestation in the island's Rainforestation efforts.

Like what Nicolas Pagalan had said, we adopted Rainforestation because we simply wanted to contribute to the environmental conservation efforts. Aside from this, water supply in our place for the past years had started to dwindle. This was caused by the absence of a lot of trees at our watershed areas.

¹⁸ Eufrazio Maratas served as a municipal councilor of the island Municipality of Pilar, Camotes, Cebu when Rainforestation was introduced to the island starting the year 2008. He served as an elected government official in various capacities such as being a member of the Municipal Council, a Municipal Vice Mayor and a Municipal Mayor from 2016-2019. At present, he served as the Director of a Non-Government Organization dedicated for environment conservation which is based at the Institute of Tropical Ecology and Environmental Management at Visayas State University.

¹⁹ Gina Pagalan, the current president of NAKASE shared her thoughts on Rainforestation during a focus group discussion session at the NAKASE nursery in Pilar, Camotes island, Cebu. All the FGD conducted in this study was moderated by Fritz Geraldine Fernandez and supervised by her thesis adviser, Dr. Guiraldo Fernandez, Jr. Since this study is part of a bigger project lead by Dr. Fernandez, validation on the data in relation to this FGD was likewise done by Dr. Fernandez.

With the answers of the past and current presidents of the Nagkahiusang Katawhan sa Esperanza (NAKASE), it can be surmised that the primary reason why their organization went into Rainforestation was first motivated by their intention to contribute to the environment conservation efforts in the island municipality of Pilar, Camotes, Cebu. As a people's organization who had already been involved in tree propagation through the establishment of a tree nursery, the organization did not hesitate to answer the call of the then councilor Maratas to raise tree seedlings that were endemic to their island. This contributed much to the efforts to rehabilitate denuded lands and watershed areas in their municipality since tree seedlings or endemic trees were readily available in the area and were also very much adaptive to the climate of the island. As Agapita Cruz²⁰, the Vice President of the organization also stressed:

Aside from planting native trees in the island's watershed areas, we were also able to plant native tree seedlings in private lands that were established to be Rainforestation sites. We, from the request of then councilor and now Mayor Maratas, provided native tree seedlings, the Magtalisay, and helped in their planting at the Rainforestation site of Mr. Romy Gutang, a public elementary school teacher at Dapdap Elementary School in Pilar, Camotes in the year 2011. Now, the trees that we planted years ago as part of the municipality's support to sir Romy's conservation efforts are already tall and has converted sir Romy's Rainforestation site into a mini forest.

From the responses of Nicolas Pagalan, Gina Pagalan and Agapita Cruz, it is evident that the three NAKASE members are expressing their own unarticulated ecosophies. In the line of thinking of Arne Naess, a personal ecosophy is the aspect where an individual realizes that he/she must begin to care for the well-being of the ecosphere²¹. Naess further points out that an ecosophy refers to a philosophy of ecological harmony or equilibrium. A philosophy as a

²⁰ Agapita Cruz, the current vice president of NAKASE shared her thoughts on Rainforestation during a focus group discussion session at the NAKASE nursery in Pilar, Camotes island, Cebu.

²¹ Arne Naess and Eide Dekke, *Ecology, Community and Lifestyle: Outline of an Ecosophy*, trans. David Rothenberg (Cambridge : Cambridge University Press, 1989).

kind of sofia (or) wisdom, is openly normative, it contains both norms, rules, postulates, value priority announcements and hypotheses concerning the state of affairs in our universe. Wisdom is policy wisdom, prescription, not only scientific description and prediction. The details of an ecosophy will show many variations due to significant differences concerning not only the 'facts' of pollution, resources, population, etc. but also value priorities²².

Moreover, aside from planting in watersheds and private Rainforestation farms, NAKASE, through the recommendation of then councilor Maratas, was also given the opportunity to be commissioned to raise native tree seedlings and plant them in the island's protected areas by the Department of Environment and Natural Resources (DENR) in its National Greening Program (NGP). In this commissioned work, the NAKASE members viewed this government contract as an opportunity to contribute to the national and local governments' environment conservation efforts. In addition to this, this commissioned work also gave NAKASE the occasion to plant more native tree seedlings endemic to their island. For the NAKASE members, this contract did not only give them the opportune space to protect and conserve of what was left of the natural environment in their island, this also gave them the chance to preserve native trees which were not used in previous government reforestation efforts. The NAKASE members made it a point to make use of Philippine native tree seedlings, a method originated, espoused and advocated by the Rainforestation program. This is the essence of Rainforestation. After all, in the 1990s, a hypothesis was developed that planting trees would be more successful if native and endemic²³ tree seedlings would be used since they were closer to the composition of the original rainforest²⁴.

Hence, with the things said earlier, it could be deduced that Rainforestation adoption was driven by the desire of the members of NAKASE to contribute to environmental conservation movement in the island municipality. With the then councilor and now Mayor

²² A Drengson and Y Inoue, eds., *The Deep Ecology Movement: An Introductory Anthology* (Berkeley, California: North Atlantic Publishers, 1995).

²³ A tree is endemic if it is only found in one country or one locality. A native tree is indigenous when it is native to a country but also to other countries with the same climactic zones. These definitions were given by the late botanist Leonardo Co,

²⁴ Friedheim Goltenboth, "Ecosystem Approach," *Conference on International Agricultural Research for Development* (October 13, 2005).

Maratas consistently engaging in taking care of what was left of the natural environment, most especially the watershed areas in their island municipality, NAKASE, as a people's organization was inspired and responded to the call of councilor Maratas to do the same. With their capacity to propagate native tree seedlings, the NAKASE members strengthened this capability, and in the process, were able to make use of Magtalisay tree seedlings -----seedlings from a mother tree endemic to Pilar. With this, the members of NAKASE were able to contribute to the development of their island without comprising the needs of its future citizens. In fact, what they did had enhanced the quality and quantity of the natural resources in the island which also enhanced the chances of the next generation to enjoy the basic ecosystem services that only the natural environment could provide.

Nevertheless, the NAKASE members adopted Rainforestation not only for the enhancement of their forest. They did it also so that they could continuously enjoy enough supply of water for more years to come. Hence, their actions were not motivated only for environment conservation but also to serve their interest which was within the scope of the definition of anthropocentrism. As currently defined, anthropocentrism is the belief that value is human-centered and that all other beings are simply means to human ends. This definition gives anthropocentrism a connotation that, as a concept, does not sit well with human beings' effort for nature conservation. However, when one looks at the recent trends in relation to the Mother Nature's capability to sustain the present and future generations, anthropocentrism, after all, may also serve as an inspiration to protect and preserve what is left of the natural environment. Anthropocentrism's relation to environment conservation lies with the fact that since ecosystems constitute the "life-support system" for humans, anthropocentrism can and should be a powerful motivation for environmental protection²⁵. This is what is referred to as enlightened anthropocentrism. It is governed by four principles that defines human beings' relationship with the natural environment. First, human beings must recognize their moral obligations to the present generation of human beings in relation to their utilization of the environmental goods. Second, the present generation must take into account the well-being of future generations

²⁵ Fernandez, Guiraldo C. "Enlightened Anthropocentrism in the Filipino Visayan Fisherfolks' Notion of Pagbulig Sa Tawo Sa Kinaiyahan." *Social Ethics Society Journal of Applied Philosophy* 4, no. 2 (October 2018): 31-52.

and be aware that the stability and health of the future generations are directly affected by the decisions that the present generation makes concerning the environment. Third, people must understand and take into consideration the full value of the various ecological services provided by the ecosystem. Finally, people must recognize that nature has an aesthetic value²⁶.

Economic Reason

Economic opportunity is another reason why the Nagkahiusang Katawhan sa Esperanza (NAKASE) adopted Rainforestation. As mentioned earlier, NAKASE was given the chance to enter into contract with the Department of Environment and Natural Resources (DENR) to supply tree seedlings for its National Greening Program (NGP) project. With this, NAKASE was not only given the opportunity to contribute to the national government's environment conservation and reforestation efforts, the people's organization was also given the chance to earn. With the NGP contract, NAKASE earned by the hundreds of thousands as payment to the seedlings they produced as well as the services that they have rendered in the planting of said seedlings in the island's protected areas. Not only that, this activity also included the maintenance of the planted seedlings for a period of three years. This not only gave economic opportunities to the NAKASE members, but this also gave opportunities to non-members to also earn by rendering services like the planting of tree seedlings as well as their maintenance. Hence, NAKASE non-members and members alike were given chances to partake in this economic activity that came as an off-shoot of the government's thrust to conserve of what is left of the natural environment. According to Vilma Obida²⁷, the NAKASE secretary:

With our thrust to make a nursery for native tree seedlings as well as in our adoption of the rainforestation program, we were given the opportunity to earn from our work. With the recommendation from the former councilor and now Mayor Maratas for us to be suppliers of native tree seedlings to the Department of

²⁶ Ibid.

²⁷ Vilma Obida, the current secretary of NAKASE shared her thoughts on Rainforestation during a focus group discussion session at the NAKASE nursery in Pilar, Camotes island, Cebu.

Environment and Natural Resources (DENR) for their National Greening Program (NGP), the NAKASE members, male and female alike, were given opportunities to earn, especially those who worked extra hard to find wildlings for Magtalisay, Narra, and other native trees in the forests of Pilar in order for us to contribute to the stock of the nursery. For every seedling we contribute, we were paid quite enough. Hence, as long as the members would just work hard to find and raise native tree seedlings, there will be a chance to earn.

Furthermore, the NAKASE treasurer, Emma Sendo²⁸, also added that the NAKASE members were able to earn their share of the income because they were paid by the DENR per seedling at seven pesos each (P7.00). Of the seven pesos, five pesos (P5.00) would be given to the one who raised the seedling and two pesos (P2.00) would go to the organization for the organization's investments. This scheme had provided income not only to the individual members but also to the organization. Hence, one of the reasons why the NAKASE members had persevered in the raising of native tree seedlings was that there was an economic guarantee commensurate to one's efforts. Not only that, other activities like site preparation and labor for maintenance of the reforestation area had also its share of monetary and economic counterparts and benefits among the members as well as the people who were involved in the reforestation rainforestation program. With this, Florentina Navotas²⁹, one of the organization's Public Information Officers (PIOs) vividly recalled:

Rainforestation as a strategy in propagating native tree seedlings had greatly helped us. In Pilar, jobs were scarce so when we gathered and raised native tree seedlings, we eventually earned from it the moment we got paid. This then had alleviated our economic wellbeing by enabling us to acquire the things that we needed. Aside from this, Rainforestation did not limit its financial beneficiaries to the members only. Non-members who helped in the raising of native tree seedlings, prepared the planting sites,

²⁸ Emma Sendo, the current treasurer of NAKASE shared her thoughts on Rainforestation during a focus group discussion session at the NAKASE nursery in Pilar, Camotes island, Cebu.

²⁹ Florentina Navotas, one of the current PIOs of NAKASE shared her thoughts on Rainforestation during a focus group discussion session at the NAKASE nursery in Pilar, Camotes island, Cebu.

and maintained the planted areas were also able to partake of this economic activity since workers were paid one hundred fifty pesos (P150.00) per day for their labor. The compensation was not very high, but it was much better compared to an ambience where jobs were not available. Hence, the NAKASE members were very much enthusiastic in adopting rainforestation since they were not only given the chance to contribute to movements geared towards saving Mother Nature, they were also given a chance to earn especially for those who work hard.

Since 2013, the NAKASE as a people's organization was able to raise more than one and a half million pesos sales of native tree seedlings from the National Greening Program (NGP) and other sources. Specifically, the organization and its members were able to earn a total of one million five hundred ninety-eight thousand pesos (P1, 598,000.00)³⁰ for producing native tree seedlings and site preparation and maintenance. To sum up the things that were mentioned earlier in this research, one could not readily deny that environmental and economic reasons were among the driving forces why the members of Nagkahiusang Katawhan sa Esperanza (NAKASE) had adopted Rainforestation for quite some time now.

Sustainable Development Brought About by Rainforestation Adoption

Watershed Protection and Conservation

Rainforestation adoption undertaken by Nagkahiusang Katawhan sa Esperanza (NAKASE) had brought a feel of sustainable development to the lives of the members. Sustainable development had, time and again, been defined as a form of a development that met the needs of the present generation without compromising the ability of future generations to meet their own needs³¹. From the perspective of the NAKASE members, Rainforestation adoption had led them to achieve a development that is sustainable and practical. This claim was elaborated by the NAKASE past president and current Sergeant at Arms, Nicolas Pagalan. According to Mr. Pagalan, the organization's

³⁰ The basis for this figure is derived from the data showed by the members of NAKASE as posted in their organization's bulletin board.

³¹ Gro Harlem Brundtland, 1987.

activity to plant trees in the watershed areas of the island municipality had greatly helped in the improvement of watershed protection awareness among the ordinary residents of the island. Though the effects of these tree planting activities had not been fully experienced since it was implemented just in 2008, it gave people awareness that they also had to do their share to protect their watersheds otherwise their island municipality would run out of water.

Considering that Pilar had only small watershed area, said areas had already been consistently taken care of and planted with Philippine native trees starting the years when the then councilor and now mayor Eufracio Maratas had introduced Rainforestation to the members of the Nagkahiusang Katawhan sa Experanza (NAKASE). According to Carmelito Pagalan³², one of the current Sergeant at arms of the people's organization:

One of the things that we had done to help protect the watersheds in our islands was the planting of native trees in the Gabi-gabihan watershed, the source of water of the biggest barangay in Pilar – Barangay Kawit. Since we started planting native trees in their watershed areas, the barangay officials or Kawit and the officials of the neighboring barangays were encouraged to protect their watershed.

Enhancement of Mangrove Areas

According to Julia Diendo³³, one of the Public Relations Officer (PRO) of NAKASE, planting native trees in their watersheds was not only the activity that the organization had undertaken to promote sustainable development. They also planted native mangrove seedlings 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 also contracted to plant one hundred twenty-five thousand (125,000) mangrove tree seedlings covering an area of fifty (50) hectares. This eventually led to the

³² Carmelito Pagalan, one of the current Sergeant at Arms of NAKASE shared her thoughts on Rainforestation during a focus group discussion session at the NAKASE nursery in Pilar, Camotes island, Cebu.

³³ Julia Diendo, one of the current PIOs of NAKASE shared her thoughts on Rainforestation during a focus group discussion session at the NAKASE nursery in Pilar, Camotes island, Cebu.

enhancement of watershed in the island and *sustained fish catch* for the fisherfolks for quite some time now. Aside from that, NAKASE was commissioned by the local government to maintain one of the island's mangrove areas, the Dimsamar Nature Park, and converted it into an eco-tourism site. With this, NAKASE had also been given a share of the environmental fees from visitors who came to the area, and thus, gave the organization another source of income.

Establishment of Business Ventures

Yet, when asked about the organization's sustainability after the contract from DENR's National Greening Program (NGP) would expire, Gina Pagalan, the current NAKASE president was confident that the organization could sustain its operations and environmental initiatives. According to Mrs. Pagalan, the organization's share from the sales of the native tree seedlings enabled the organization to establish business ventures that generated substantial income. For instance, the organization was able to put up a sari-sari store patronized by the members themselves. Aside from that, the organization had also maintained their native tree seedling nursery because even without the NGP contract, there were other organizations that had procured native tree seedlings from them like the Department of Education for their tree planting as well as a municipality from mainland Cebu. To add to this, NAKASE had also ventured into catering services to the activities of the local government unit and also open to private individuals as well as the establishment of a micro-finance scheme that was exclusive only to the members of NAKASE.

To sum it up, Rainforestation adoption paved the way for the organization to enjoy the fruits of sustainable development since it enabled NAKASE to enter into contract with DENR, enabled the organization to have their share of the income from the contract, and enabled the organization to put up businesses that sustained the organization. Aside from that, the organization was also able to achieve the encouragement of environmental protection among the island municipality's residents by spearheading environment conservation activities that are geared towards the protection of the island's watershed areas. This was also accompanied by the organization's achievement to enhance the wellbeing and quality of their mangrove areas which lead to the increase of fish catch among the resident fisherfolks of the islands, as well as the establishment of

an eco-tourism site which contributed to the income of the Local Government Unit and also enabled NAKASE to have their share of the income from the environmental fees. With all these said, it was evident that Rainforestation had really contributed to the attainment of sustainable development in the island municipality of Pilar, Camotes, Cebu with the cooperation of the Nagkahiusang Katawhan sa Esperanza (NAKASE), a people's organization that committed itself to the thrust of environment conservation.

Impact of Rainforestation Adoption

Contribution to Government Conservation Efforts and the Opportunity to Earn

One of the impacts of the Rainforestation to the lives of the members of the NAKASE is that it gives the members a sense of fulfilment that even if they are only residents of an island municipality, they have been able to participate in the thrust of the government to protect and conserve of what is left of the natural environment. Yet, this sense of fulfilment has also been accompanied by the opportunity to engage in economic activities that have improved the lives of the members in relation to their capacity to earn. Hence, Rainforestation is like hitting two birds in one stone where the members have been given the chance to take part in environment conservation efforts as well as the chance to earn their fair share of the income that have been brought about by the said economic activities. As Nicolas Pagalan has asserted: the organization has greatly contributed to the environment conservation efforts of the island since the organization members have planted native tree seedlings and fruit trees to three hundred sixty hectares of protected areas in the island municipality. This includes the enhancement of watershed and mangrove areas.

Women Empowerment and Gender Equality

Another impact that Rainforestation has given to the members of the NAKASE members is that empowerment of women and a feeling that gender treatment is equal among them. For instance, the current president of the organization is a woman and majority of the officers for the year 2018 are mostly women. According to Ate 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 as well as the preparation and maintenance of reforestation sites, men and women have equal tasks as well as equal opportunity 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, the women have also been given the chance to lead the direction of the organization.

Equal Distribution of the Division of Labor

Aside from gender equality, distribution of labor is also practiced among the members of the organization. As expressed by Gina Pagalan, during meetings, the women are the ones who would regularly attend, especially on daytime, since their husbands are out doing their usual day jobs like carpentry, farming, fishing, construction work, and other related jobs. Hence, the women, who are mostly housewives, empower themselves to by actively participating in 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 to with their husbands the important tasks and activities in relation to the organization which made the organization vibrant and productive.

Hence, to sum up the impacts of Rainforestation adoption to the lives of the members are discernible in the adopters' sense of fulfilment that they have contributed in the government efforts in nature conservation as well as their participation in the economic activities brought about with their contract with the government's National Greening Program. This has greatly alleviated the economic wellbeing of the members. Moreover, Rainforestation adoption has also empowered women in the governance as well as leading the direction of the organization. Yet, the organization's success has also been aided by the equal distribution of labor by both its male and female members.

Emerging Themes

From the narratives of the members of NAKASE, various themes have emerged. The most dominant themes that are discernible in this study are care for the environment, economic benefits, the promotion of sustainable development and a sense of equality among members of different genders.

Care for the Environment. The most identifiable theme in relation to NAKASE's involvement in Rainforestation adoption is care for the environment. All respondents have manifested that they got themselves involved into Rainforestation adoption for the sole reason that they all want to contribute something in saving the last remaining natural resources in their island. The NAKASE members have stressed that their willingness to raise native tree seedlings and planting them in designated Rainforestation sites are triggered by their desire to do something for the environment. For instance, their efforts in rehabilitating their watershed areas as well as their efforts to care for the island's mangrove areas manifest that environmental conservation and protection are two of the important things that the NAKASE members value the most. As residents to an island municipality with scarce resources that would sooner or later find it difficult to support its growing population, the respondents of this study have manifest in their responses that they have to act fast in saving their resources before it is already late. Yet, one has to note that the island municipality of Pilar has only a small area. Thus, the endemic trees in the islands – the Magtalisay trees – are only few in quantity. Hence, one would not waste time to raise seedlings for planting. To add to the scarcity of seedlings is the irregular flowering season of the endemic mother trees. With this, one should consider that when the mother trees produce flowers at a designated time of the year, people should not waste time to gather them, raise them in nurseries and make them ready for planting. The more tree seedlings, the more chances of reforesting the island with endemic trees.

Economic Benefits. 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 NAKASE members to work for more since the more seedlings raise, planted and maintained would mean more money to the NAKASE members' pockets. 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 have established, such as the sari-sari store, the micro finance business, as well as the catering services. Hence, one of the driving forces that enabled the NAKASE members to commit themselves in Rainforestation has been the economic side of it.

The Promotion of Sustainable Development. The NAKASE members have manifested through their various Responses in the key informant interviews (KII) and focus group discussion (FGD) sessions that they construe Rainforestation as an instrument for sustainable development. For one, they view Rainforestation as a means to address the problem of the declining water supply because of the decline of the number of trees in their watersheds. With Rainforestation, the NAKASE members have hoped that water supply problems would be properly addressed so that the needs of the future citizens of Pilar would also be taken cared of. Moreover, the NAKASE members' claim that the quantity of fish in the vicinity of their traditional fishing grounds have significantly increased as a result of their efforts in rehabilitating the mangrove areas is connected to their belief that Rainforestation could bring about a development that is sustainable and practical. Lastly, with the economic benefits that the NAKASE members have enjoyed, it is also not difficult to construe that NAKASE members have also looked at the organization's financial capacity as having the ability to sustain not only themselves but also their children. After all, NAKASE gives premium to family membership whose benefits could be passed on to the next generation when an individual is no longer capable to function as a member of the organization.

Sense of Equality among Members of Different Genders. Rainforestation adoption among members of the Nakahiusang Katawhan sa Esperanza (NAKASE) have led them to the possession of a sense of equality among members of different genders. The genders of the members of NAKASE do not really matter on the kind of work that the members are willing to render. For the NAKASE members, there is a sense of equality among men and women since there is no discrimination on the kind of work that each member will be undertaking. For instance, in the thrust to collect wildlings from the forests to be used in seedling propagation, both men and women are free to do so. This seems dangerous for women to go to the forest to collect seedlings from mother trees. Yet, since their husbands have

always returned every time they go out for seedling collection, the empowered women of NAKASE have seen to reason for them to be afraid of doing the same activity. With this it is quite unusual that husbands allowed their wives to do such unwomanly thing. Yet, even as fishermen or famers, the NAKASE members allowed their wives to do such things since they believe in them. In so doing, they empowered their wives to do difficult things and take the risks. Yes, there are always risks involved. Yet, the empowered women have been very willing to take the same risks that their husbands have taken. With regards to the compensation for the job done, the remuneration is the same for both genders. The difference depends primarily on the quantity of seedlings gathered and raised. Looking at the gender composition of the respondents of this study, almost all of them are women. Hence, a possession of a sense of gender equality has eventually led to women empowerment. Hence, Rainforestation adoption in relation to the experiences of the NAKASE members does not only serve as a means for sustainable development, it has also paved the way to the possession of a sense of gender equality among its members as well as women empowerment.

Conclusion

This study concludes that Rainforestation adoption in Pilar, Camotes, Cebu, has been driven by both environmental and economic reasons. When people realize that they need to save the environment in order to save themselves, they would naturally do whatever is required of them to do their share in the name of environmental and self-preservation. Yet, this study has also arrived at a conclusion that if organizational environmental activities are accompanied by economic activities, there is a greater chance for said activities to prosper and be sustained. After all, human beings always have that penchant to support themselves as well as their families. Hence, economic opportunities would fuel activities to succeed including environment conservation efforts.

Moreover, this study also concludes that sustainable development is only achieved when people do share in achieving the said end. In the case of NAKASE, the members have construed that sustainable development has been attained through Rainforestation adoption. With Rainforestation, the NAKASE members have been given the chance to do their share of contributing to the efforts to sustain the availability of water in the island as well as the availability

of fish catch in the waters of the island municipality. Aside from that, this study also concludes that the establishment of income generating projects have supported the economic aspect of the organization as well as the economic lives of the individual members.

Furthermore, this study also concludes that Rainforestation adoption has impacted the lives of NAKASE members in the sense that it gives them a sense of fulfilment that they have done their share in the island municipality's environment efforts as well as the members' enjoyment of the economic benefits that Rainforestation adoption have brought to them. Lastly, this study also concludes that Rainforestation adoption in relation to the structure of the NAKASE has also paved the way for the emergence of women empowerment, gender equality, and equal division of labor among the male and female members of the organization.

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