Turkish Online Journal of Qualitative Inquiry (TOJQI)
Volume 12, Issue 7, July, 2021:1393 – 1401

Rainforestation as an Instrument for Environmental Education: A Philippine Rural Community Experience

Guiraldo C. Fernandez, Jr. [a,] Marlito Jose M. Bande [b], Jett C. Quebec[c] , Jimmy O. Pogosa [d]

[a] College of Arts and Sciences, Department of Liberal Arts and Behavioral Sciences, Visayas State University, Baybay City, Leyte, Philippines guiraldo.fernandez@vsu.edu.ph
[b] College of Forestry and Environmental Studies, Institute of Tropical Ecology and Environmental Management, Visayas State University, Baybay City, Leyte, Philippines marlitojose.bande@vsu.edu.ph
[c]College of Arts and Sciences, Department of Liberal Arts and Behavioral Sciences, Visayas State University, Baybay City, Leyte, Philippines jett.quebec@vsu.edu.ph
[d]College of Arts and Sciences, Department of Liberal Arts and Behavioral Sciences, Visayas State University, Baybay City, Leyte, Philippines jimmy.pogosa@vsu.edu.ph

Abstract

This study delves into the development of Rainforestation into an instrument for Environmental Education. It utilizes the qualitative narrative research method to investigate the experiences of a people's organization in a rural community in Leyte, Philippines. This paper explores into the aspects of how Rainforestation has served as a tool to teach people to care for the natural environment. Moreover, this paper also looks into the challenges that the members of the people's organization met in adopting and implementing the Rainforestation program. Finally, this study inquires into the things that Environmental Education has brought to the adopters' community through the years. This study then concludes that Rainforestation has become an instrument for Environmental Education because of the learning by doing principle. It concludes further that though many challenges have confronted the adopters in the process of Rainforestation adoption, said challenges had been overcome because of adopters' resolve that it was their only hope to address the gross exploitation of the environment. Lastly, this study concludes that Rainforestation has brought educational, environmental, and economic benefits to the members of the people's organization.

Keywords: Environmental Education, environment conservation, Rainforestation

1. Introduction

One of the challenges that the present world is confronting is the challenge brought about by the natural environment. These challenges take the form of intense cyclones, scarcity of water, prolonged warm seasons, and biodiversity loss in many parts of the world. In the Philippines, said environmental challenges have been authentic as experienced by the Filipinos for almost thirty years. Two deadly climate-induced catastrophes hit the Philippines in recent years. Typhoon Haiyan (Philippine name Yolanda) visited the country in November 2013 and left 6,300 Filipinos dead and thousands missing (Singer, 2014). Typhoon Thelma (Philippine name Uring) flooded Ormoc, a small city on the island of Leyte in the southern part of the country, and left 4,000 people dead and 2500 missing in November 1991 (Francisco, 2016). It is undeniable that the wrath of the natural environment has proven to be deadly when unleashed. However, the natural environment has been put in place in the natural order of things not to cause destruction but instead support life on earth.

However, varieties of anthropogenic activities have disturbed the order in the natural environment causing it to lose balance. Examples of these activities refer to peoples' penchant to cut wood for timber, whether in legal or illegal ways and to the clearing of forests in the mountains to give way to farms (Fernando, 2016). These

activities are rampant in the Philippines, considering that the country has an agricultural economy in the global south. In these countries, environmental abuses, graft, and corruption abound. These countries are the least developed and have struggling economies (Steger et al., 2014). Hence, the Philippines' natural environment has to be protected; otherwise, there will be less or nothing left for the next generation to enjoy. Nevertheless, with the presence of rampant graft and corruption in the country, protecting the natural environment has been done most efficiently. One of the efficient ways to prevent further environmental destruction in the Philippines is through education --- Environmental Education to be specific.

Through the years, Environmental Education has manifested social and political engagements that have sprouted from its original aim of conservation based on sound scientific data. However, it has seemingly evolved into a call for people to address notions relating to sustainable development, resiliency, and sustainability (Hursh et al., 2015). Nevertheless, one has to note that Environmental Education's essence is grounded on its aim to capacitate people to arrive at a holistic understanding of the natural environment's significance. It, therefore, creates, in people's consciousness, an awareness of the intricate relationship between Mother Nature and people's sociopolitical activities. It thereby encourages people to develop a sense of responsibility and solidarity among them (United Nations Environment Programme, 1978).

Moreover, Environmental Education's agenda focuses on empowering the most considerable number of people to decipher the natural environment's significance to people's lives and the challenges that the environment has been confronting for quite some time now. To add to this, Environmental Education also enables people to acquire the necessary skills, knowledge, and commitment to work individually or as members of a group. It also capacitates them to seek solutions for current environmental problems and come up with measures to prevent new ones from emerging (Touloumis& Smith, 2018). Hence, educating to save the natural environment could be a communal or an individual effort. People should work together in order for Environmental Education to achieve its intended end.

In the Philippines, Environmental Education needs to be cascaded and facilitated to the residents of marginalized rural areas. For one, these people are living closely with the natural environment. Hence, when people do something against the well-being of Mother Nature, they either are involved or are affected by the consequences of such acts. According to the study of Compendio and Bande (2017), several environmental cases of abuse have persisted in many forested rural communities in the Philippines. With this, it is proper to say that people living in rural communities have high potentials to be agents of protecting the natural environment. They are living in the frontiers of the remaining natural resources of the country. Hence, they must be mobilized to fight against environmental destruction.

After all, environmental education can fight environmental destruction. It is a potent weapon to address the problems of environmental degradation in the Philippine countrysides. For one, Environmental Education teaches people how the natural environment works. It makes them understand that living organisms interact with each other in order for them to live sustainably. Second, Environmental Education enables people to delve into issues that concern the natural environment, come up with rational solutions to address environmental problems, and take measures to improve Mother Nature's well-being (Eneji et al, 2017).

Sometime in the 1990s, the Visayas State University, a government-owned institution of higher learning in the Philippines, initiated Rainforestation. It was a reforestation innovation designed to rehabilitate degraded lands by enabling people to plant native tree species in forest restoration activities. Dr. Paciencia Milan, a Biology professor, with the help of Dr. Josef Margraf of the Philippine-German Applied Tropical Ecology, started the project in the early 1990s. Rainforestation aimed to improve the lives of the people in Philippine rural communities. It promoted the conservation of the remaining forest cover in the area, biodiversity rehabilitation, and the development of a closed canopy and high diversity forest farming system (Fernandez & Bande, 2019).

Since its dissemination and implementation in the 1990s, Rainforestation had been subjected to several studies to find out the veracity of its earlier claim that it was a practical innovation for nature conservation. The belief that Rainforestation could also alleviate farmers' lives who opted to adopt Rainforestation had also been delved into. For Milan et al. (2011), Rainforestation was not only conceptualized to highlight the importance of the use of native trees in forest restoration. It also gave significant shreds of evidence that using exotic trees in reforestation activities were not very suitable in the Philippines. Aside from that, this study also introduced ideas on proper land use management that focused on protecting a community's watershed areas to Rainforestation adopters. It covered the aspects of the restoration of heavily exploited rivers, protection of wildlife habitat, and greening areas where a significant number of people live.

Moreover, the study of Milan and Asio (2002) claimed that Rainforestation as a reforestation strategy had greatly improved soil fertility in non-arable lands planted with native trees. This study's claim collaborated with the results of Pinho et al. (2012) that stressed that a variety of native tree species planted in denuded lands led to

the improvement of soil fertility. The leaves from the different species of native trees that fell on the ground had increased the area's organic matter, which significantly improved the land's richness. Hence, the study of Pinho et al. (2012) validated Milan and Asio's (2002) claim that Rainforestation was effective in restoring soil fertility aside from its being a conservation innovation (Fernandez & Bande, 2019). With these claims at hand, Rainforestation made it possible to alleviate people's lives since fertile soil made the land conducive to farming. With fertile soil, farmers would have bountiful harvests that had many times translated into better income.

Furthermore, Goltenboth (2011) has manifested that Rainforestation is also a helpful tool to mitigate the effects of climate change in the humid tropics where the Philippines is situated. This study has also agreed to one of the findings of Milan et al. (2011), which stresses that Rainforestation could also protect a community's watershed areas. The roots of the native trees naturally serve as nutrient traps and are instrumental in nitrogen-fixing. Aside from that, Rainforestation also can provide critical ecological functions. For Goltenboth (2011), Rainforestation has been a sustainable conservation innovation considering the environmental and social impacts of Rainforestation adoption. For one, it enables adopters to have enough water supply during prolonged dry spells because of Rainforestation's ability to safeguard watershed areas. As most of the Rainforestation adopters are farmers, the availability of water for most of the year enables them to till their lands for a longer time, enabling them to make ends meet at the end of the day. Hence, Rainforestation has improved the lives of its adopters by enabling them to reap the good things that Mother Nature has given them. This is the result of their efforts in taking care of the natural environment. Nevertheless, said studies have failed to recognize that Rainforestation has also become a means of educating the adopters of the importance of the natural environment to their lives.

Rainforestation as an instrument for Environmental Education is not a far fetch idea. After all, Rainforestation's goal of giving its adopters an awareness of the need to protect what is left of the natural environment coincides with the five objectives of Environmental Education. The first objective aims to help people arrive at a holistic understanding of the natural environment's essence and the challenges that are confronting it. The second objective zeroes in on the aspect that enables people to attain the significant experience of the workings of the natural environment and understand the perennial harms that are associated with it. The third objective aims to help people develop a sense of love, importance, and concern for the natural environment. It motivates them to get involved in activities geared toward environmental protection and conservation. The fourth objective aims to equip people with the ability to recognize environmental problems and the capacity to come up with solutions to address such problems. The fifth objective targets to give people the opportune space to enable them to be personally involved in attaining practical answers to the more pressing questions concerning the well-being of the natural environment(Biedenweg et al., 2013).

For this paper's purpose, this study would delve into the experiences of a people's organization in a rural agricultural community in the Philippines. This people's organization had adopted Rainforestation since the earliest stage of its dissemination and implementation in the 1990s. This people's organization is the Cienda San Vicente Farmers Association (CSVFA) of Barangay Kilim, Baybay City, Leyte. This paper explores Rainforestation's evolution into a tool for Environmental Education as experienced by the members of CSVFA. This paper also investigates the challenges that the adopters' met in adopting the Rainforestation program in the early stage of its implementation. Lastly, this study also inquires into the things that Environmental Education, as a result of Rainforestation adoption, has brought to the adopters' community through the years. This study finds its relevance concerning the thrust of protecting what is left of the natural environment in the Philippines. The experiences of the respondents of this study would hopefully inspire the readers of this paper also to do their share of protecting Mother Nature.

2. MATERIALS AND METHODS

In the thrust to understand the aspects of how Rainforestation has served as an instrument for environmental education, this study makes use of the narrative qualitative research method. For this study, this paper follows Susan Chase's narrative framework. The said method reflects and makes sense of experiences to understand the connections among people's actions, things, and happenings. It makes people understand meanings linked with the results of human activities and events with time (Chase et al., 2018). This study would delve on stories or narrations on how the respondents have construed Rainforestation as an instrument for Environmental Education. Thus, this study explicitly employs the narrative of change method. The said method analyzes respondents' narrations of experiences and events to show how said narratives manifest themes associated to change (Bau, 2018). Nevertheless, since this study only considers selected individuals, purposive sampling is utilized. This sampling method fits well in achieving the objectives of this study since the chosen respondents are very involved and are familiar with the Rainforestation program from the very start. This study's respondents also belong to the same community in a rural area in the Philippines.

In the conduct of this study, the researchers asked permission from the selected CSVFA members whether they would agree to serve as this study's respondents. Fortunately, all of them agreed to the researchers' request. They expressed their willingness to share their thoughts about their experiences and views on Rainforestation adoption's effects on their lives. Moreover, this study's respondents also agreed to be interviewed in their most preferred time and place. Since most of the respondents were farmers, the researchers used the vernacular during the interviews since it was the language that the respondents were very comfortable with. Furthermore, during the conduct of the key informant interviews (KII), the researchers also asked the respondents whether they could digitally record the conduct of the interviews to which the respondents also agreed. It was of great advantage to the researchers because, during the interviews, the researchers focused on the respondents. With this, the researchers were able to take notes, recorded, and observed the respondents' voices and their total behaviors during the activity.

The researchers analyze the data collected through the recordings and notes from the interviews. From there, they start to recognize emerging themes significant to the organization of the respondents' experiences. Aside from that, the researchers also ascertained the trustworthiness of the data's interpretation. Since the narrative of change method is a qualitative research method, this study had gone through several KII sessions for the data validation and clarification. The researchers would present the final draft of the paper to the respondents for their assessment. Lastly, consent to publish the respondents' answers during the KII sessions had also been given to the researchers by the respondents themselves.

3. RESULTS AND DISCUSSIONS

The Evolution of Rainforestation into an Instrument for Environmental Education.

The Learning by Doing Principle. Rainforestation's evolution as a means for Environmental Education came as a result of the principle of "learning by doing." After experiencing the adverse effects of a degraded environment in their rural community, CSVFA decided to adopt Rainforestation to rehabilitate degraded lands because of the undesirable anthropogenic activities in the vicinity of their community. As pioneering Rainforestation adopters, the CSVFA members did not only plant Philippine native trees in denuded lands. They also volunteered and trained to be deputized forest wardens. It empowered them to stop and catch people involved in illegal logging activities, poisoning freshwater fish in the rivers, sand and gravel quarrying, and wildlife poaching(Bande et al., 2016). These experiences had given the adopters two significant lessons. First, the CSVFA members realized that conservation may be a tedious task yet very doable. Second, they also realize that many people tend to exploit the natural environment grossly. Hence, they needed to protect Mother Nature; otherwise, there would be nothing left for future generations.

In this sense, through the "learning by doing" principle, Rainforestation became an instrument for Environmental Education. It was evident that the adopters learned of the importance of the natural environment to people's lives from their own experience and not from books or other sources. According to Victoriano Catalan, one of CSVFA member and officer:

"After we formed ourselves into a people's organization, we were introduced to Rainforestation, where we were taught to make our nursery. Without the rigors of formal scientific training, we successfully established our nursery with native tree seedlings because we were made to make the nursery ourselves. Our trainers enabled us to engage in hands-on activities in nursery establishment. In other words, we made our hands dirty. We knew what it felt and what it took to make our first steps toward environment conservation. After that, we established our Rainforestation demonstration site and cared for the well-being of the native trees planted. Aside from that, many of us also volunteered to be deputized forest wardens. We found it necessary to protect what was left of the already over-exploited natural resources in our community. With that, we were given hope that we could still make things right concerning the well-being of our last remaining natural resources".

Moreover, through learning by doing principle, Environmental Education enabled adopters to look at things in broader perspectives consistently. On the one hand, essential acts such as collaboration, one's responsibilities, the ability to do something, and awareness of persisting conflicts had been thoroughly taken into consideration. On the other hand, it had enabled individuals to freely choose the best course of action in dealing with possible chances and securing support availability (Block et al., 2016). The CSVFA Rainforestation adopters practiced these things. They collaborated with the other members of the organization when they made themselves available for hands-on training and as commissioned forest wardens. They took their responsibilities by heart and reflected on things that required their involvement in matters of making decisions. They made themselves flexible by balancing their task as their families' breadwinners and as guardians of the environment. Rainforestation educated the CSVFA members to conserve and protect their existing natural resources. As AgustinoValenzona, a member and officer of CSVFA, had it:

"Had I not engaged myself in Rainforestation, I would view the natural environment as an object where human beings could do anything they wish. However, I realized that the relationship between human beings and Mother Nature had always been reciprocal. With Rainforestation adoption, one of the reflections that I had arrived at was that humans instigated the conflicts between them and the natural environment. Hence, humans must also be the ones to resolve such conflicts. Such conflicts might be difficult to resolve. However, they were not impossible to attain. I learned these things because of my experience in Rainforestation adoption and as a deputized forest warden".

Hence, Rainforestation inculcated Environmental Education into the hearts and minds of the CSVFA members. As Rainforestation adopters and deputized forest wardens, the CSVFA members had acquired an awareness of the natural environment's susceptibility and the challenges that had confronted it. With these values of seriously taking care of the natural environment and the quest to be part of environmental protection and improvement may have developed in the consciousness of the people concerned (Biedenweg et al., 2013). In this case, the CSVFA members.

Family Membership Scheme. The way Rainforestation had transformed itself as a potent means for Environmental Education also came as a result of the CSVFA members' notion of a family membership. With a family membership, every family member should do something for the well-being of the Rainforestation project. In this aspect, each family had acquired a sense of ownership of the Rainforestation project itself. As a result, the younger family members learned the basics of environmental conservation. They did their task either by helping their parents take care of the native trees or doing the tasks themselves in the establishment of the Rainforestation site. As Bernie Tabaranza, a son of a pioneering CSVFA pioneering adopter, recalled:

"Upon the establishment of the Rainforestation project, my fellow children and I were made to take care of the native tree seedlings planted in the Rainforestation site. It gave my fellow children and me a sense of ownership towards the Rainforestation site since we were involved in its establishment. Hence, not only my father and mother were involved in Rainforestation adoption but the whole family. In that sense, we learned the basics of environment conservation by helping our parents care for the native trees at an early age similar to household chores".

Moreover, Bernie's claim was also reinforced by the assertion of Engineer Jimmy Pugosa, a faculty member of the Institute of Tropical Ecology and Environmental Management at Visayas State University in the Philippines. Engr. Pugosa's parents were also pioneering members of CSVFA. He recounted that he also took part in chores related to the care and maintenance of the Rainforestation site during his childhood years. As Engr. Pugosa recounted:

"I learned to value the natural environment's significance to human lives when my parents got me involved in the Rainforestation project. As a family member, I was expected to do things for the well-being of the Rainforestation site since our family was part of it. Since I experienced first-hand the things required to make trees grow healthy and keep them in top form, it became natural for me to feel for Mother Nature. My involvement in the Rainforestation project taught me to love the natural environment and be aware of its importance to humankind".

With family membership practiced among the CSVFA Rainforestation adopters, young children's involvement in caring for the native trees was already part of Environmental Education. Children's involvement in doing tasks in the implementation and maintenance of the Rainforestation project were characteristics of two objectives of Environmental Education. First, it equipped children to develop the ability to recognize things that may damage the well-being of the environment. Second, it provided children the opportunity to be actively involved in arriving at their solutions to address environmental problems (Biedenweg et al., 2013).

Visual Aid for Environmental Education. All these years, the CSVFA Rainforestation site has served as a learning site for students in nature conservation, scholars in environmental science, environmental management, and environmental studies. Not only that, the CSVFA Rainforestation site has also served as a training ground for farmers who want to go into sustainable agriculture and Rainforestation adopters themselves. These things have demonstrated that the presence of vibrant native trees in the Rainforestation site has also served as the best visual aid for Environmental Education. The Rainforestation site's presence could attract attention from learners and arouse curiosity among them. It could lead to their development of knowledge, positive attitudes, and behaviors towards problems concerning the environment and the means to address such problems (Bozdogan, 2011). According to Dr. Marlito Bande, CSVFA's former community organizer:

"The CVSFA Rainforestation site has been very instrumental in convincing scholars, students, farmers, and people to go on with their intentions to save and conserve what are left in nature. Scholars and students not only from the Philippines but from other parts of the world such as Europe, North and South America, Oceana, and

of course, Asia have come to study in the CSVFA Rainforestation site. They have come up with new knowledge in their quest to enhance environmental conservation. Above all, the Rainforestation site has inspired people from all walks of life".

Challenges Met in the Implementation Stage of Rainforestation Adoption.

Economic Viability. One of the challenges of Rainforestation adoption was its economic viability. The question on whether or not Rainforestation was a sustainable conservation method made the adopters took a gamble in believing in the sustainability of Rainforestation. After all, during those times, the remaining natural resources in their community were already grossly exploited, and Rainforestation was the only thing that gave them a practical option. As farmers, the CSVFA members may have known from experience that if they could bring back the essence of the natural environment in their community into its pre-grossly exploited state, they could also bring back the experience of reaping the most out of their efforts in their farming activities.

Willingness to Take the Risk. Another challenge met was the willingness of the adopters to do what it took in order for them to establish a Rainforestation site. Considering that the adopters were farmers, one of the dilemmas that the farmers faced was to contribute to the project by heart despite their current work. Nevertheless, as tillers of the land, the CSVFA members were aware that their lives were intertwined with the natural environment. For them, committing to care for the natural environment to bring back its essence into the times where it could still provide them with the things they need was a risk worth taking.

The Uncertainty of the Promise of Rainforestation. With all these challenges present, the most significant challenge that confronted the adopters during the early years of Rainforestation implementation was the certainty of the results promised by Rainforestation. Though Rainforestation was based on proper scientific research, the adopters who were ordinary farmers found it difficult to comprehend the projected promising results based on calculated research. For the farmer Rainforestation adopters, it was more of a gamble that they had to take necessarily. According to Florencio Tabaranza, a pioneering adopter and current CSVFA officer:

"When we adopted Rainforestation, it was more of a gamble for us since we did not know what will happen after the implementation. Though we were told by the researchers from Visayas State University that Rainforestation was based on sound scientific research, it did not make sense to us at that time. As farmers, we did not have the education to comprehend what they were telling us. We just took the risk, adopted and pinned our hopes in Rainforestation because it was our very viable hope during that time".

The Things Acquired from Rainforestation Adoption.

Educational Benefits. Through the years, the CSVFA Rainforestation site has educated its adopters of the natural environment's significance to human lives. As the CVSFA Rainforestation site has inspired a significant number of new Rainforestation adopters, the number of people educated on the importance of the natural environment has also increased. Moreover, as the Rainforestation site has also served as a demonstration site for environment conservation, the site also served as a very viable and realistic visual aid available to demonstrate that nature conservation is a very doable thing.

Environmental Benefits. Years after Rainforestation implementation, the CSVFA Rainforestation adopters had noticed that birds were returning, and there was a noticeable increase of edible freshwater fish in their river. The adopters had the freedom to catch them for their consumption. Aside from that, the adopters also noticed that water from the river was already available for most of the year, which enabled them to farm consistently (Fernandez & Bande, 2018). According to Lita Paraiso, a pioneering member of CSVFA:

"A few years after we took care of the environment through Rainforestation adoption, we noticed that Mother Nature had been more merciful to us. For instance, nature provided us fish in the river that gave us sumptuous viand for free".

Economic Benefits. The environmental benefits enjoyed by the Rainforestation adopters also boiled down to economic benefits. Since the river had already been rehabilitated from gross exploitation, the adopters were able to engage in freshwater aquaculture. According to Compendio and Bande (2017), this was made possible because of the clean water in the community's river resulting from the adopters' forest restoration efforts. With this, the adopters were able to sell the surplus of their harvest that allowed them to have income. This was already in addition to the fact that the adopters had been given a chance to farm for the significant parts of the year because of the availability of clean water from their river.

Moreover, the study of Fernandez and Bande (2018) also mentioned that CSVFA had also economically benefitted by going into government and private contracts to raise and supply native tree seedlings for reforestation purposes. It enabled them to acquire income by the hundreds of thousands in Philippine peso. For

instance, CSVFA was commissioned by the Department of Environment and Natural Resources (DENR) of the Philippines to raise native tree seedlings for the agency's National Greening Program (NGP) in 2011. Not only that, CSVFA also had a contract to raise native tree seedlings for forest restoration with Del Monte Corporation – Philippines way before the NGP contract. The said engagement had also given CSVFA to obtain income by the thousands of pesos. Looking at what the CSVFA Rainforestation adopters had experienced, it was quite evident that people had also economically benefited from activities geared towards environment conservation.

4. CONCLUSIONS

This study concludes that from being an environmental conservation innovation, Rainforestation has evolved into an instrument for Environmental Education through CSVFA's thrust to adopt Rainforestation. The principle of "learning by doing" enables the Rainforestation adopters to be educated on the importance of the natural environment as they implement their Rainforestation site and serve as forest wardens at the same time. It manifests the fulfillment of Environmental Education's goal of helping people arrive at a holistic understanding of the essence of the natural environment and the challenges that are confronting it. This has given the adopters the opportune space that enables them to attain significant experiences of the workings of the natural environment and understand the perennial harms that are associated with it (Biedenweg et al., 2013).

This study also concludes that the family membership scheme in Rainforestation adoption has also strengthened this study's claim that Rainforestation has served as an instrument for Environmental Education. It enabled the adopters' whole family, including children, to be involved in the implementation and maintenance of the Rainforestation site, thereby inculcating the hearts and consciousness of the children a love for nature and awareness that they can do something for the welfare of the natural environment. These give fulfillment to the objectives of Environmental Education that enable people to develop a sense of love, importance, and concern for the natural environment that motivate them to get involved in activities that are geared toward environmental protection and conservation (Biedenweg et al., 2013). Moreover, the family membership scheme also manifests the Environmental Educations goal of equipping people with the ability to recognize environmental problems as well as the capacity to come up with solutions to address such problems. Involving children in their tender age to care for Mother Nature indubitably gives them a sense of involvement with their parents' thrust to care for the natural environment. With this, children are given the occasion to be personally involved in attaining practical answers to the more pressing questions concerning the well-being of the natural environment (Biedenweg et al., 2013).

This study also concludes that a Rainforestation site with the vibrant native trees serves as the best visual aid to educate people that nature conservation is very doable. The Rainforestation site can also serve as a learning site for people who want to delve into nature conservation and scholars in sustainable development, environmental studies, and their allied fields. Furthermore, this study also concludes that the challenges confronting the adopters during the Rainforestation implementation stage have not stopped them from proceeding with their intention of adopting Rainforestation. The adopters have doubted Rainforestation's economic viability, have hesitations about committing to the program, and have been quite uncertain of the projected outcomes of the Rainforestation project. However, they took the risk of adopting Rainforestation since it was their only hope to address the gross exploitation of the natural environment during that time.

Lastly, this study also concludes that Rainforestation has brought educational, environmental, and economic benefits to the adopters. From the experience of the members of CSVFA, said benefits fell in place because they took their share of taking care of Mother Nature through Rainforestation adoption since its implementation in the 1990s. With these benefits at hand, it would be quite essential to note that as far as the CSVFA members are concerned, Rainforestation has taught them that when human beings care for the well-being of the natural environment, it would also give back good things to them in return.

5. ACKNOWLEDGEMENT

The authors would like to sincerely thank the members of the Cienda San Vicente Farmers Association (CSVFA) for accommodating them during the field work stage of the study. Your insights have greatly shaped the essence of this work. The authors also express great gratitude to President Edgardo E. Tulin, President of Visayas State University, for his all-out support for the Natural Resource Management (NRM) Project Phase II that has provided the authors the opportune space to conduct this research.

References

[1] Bande, M., Consunji, H., Bloomfield, G., &Labastilla, P. (2016). Rainforestation Case Study: The Cienda San Vicente Farmers' Association Experience. Yale University and Smithsonian Topical Research Institute.

[2] Bau, V. (2016). A narrative approach in evaluation: "Narratives of Change Method.". Qualitative Research Journal, 16(4), 374–387. https://doi.org/ 10.1108/QRJ-08-2015-0072

[3] Biedenweg, K., Monroe, M., & Wojcik, D. (2013). Foundations of Environmental Education. . In M. Monroe & M. Krasny (Eds.), Across the Spectrum: Resources for Environmental Educators (pp. 9–28). chapter, North American Association for Environmental Education.

[4] Bozdogan, A. E. (2011). The Effects of Instruction with Visual Materials on the Development of Preservice Elementary Teachers' Knowledge and Attitudes towards Global Warming. . The Turkish Online Journal of Educational Technology, 10(2), 218–233.

[5] Block, M., BraBler, M., Orth, V., Riecke, M., Rodriguez Lopez, J. M., Perino, G., &Lamparter, M. (2016). Dies Oecologicus—How to Foster a Whole Institutional Change with a Student-Led Project as Tipping Point for Sustainable Development at Universities. In W. Leal Filho & P. Pace (Eds.), Teaching Education for Sustainable Development at University Level (pp. 341–355). chapter, Springer International Publishing.

[6] Chase, S. (2018). The Sage Handbook of Qualitative Research. (D. Denzin & Y. Lincoln, Eds.) (5th). SAGE Publications, Inc.

[7] Compendio, S. M., & Bande, M. M. (2017).). Effectiveness of Community-based Forest Management Program as a Strategy on Forest Restoration in Cienda and San-Vicente, Baybay City, Leyte, Philippines. Asian Journal of Agricultural Extension, Economics, and Sociology, 15(4), 1–20.

[8] Eneji, , C. O., Akpo, D. M., &Etim, A. E. (2017). Historical Groundwork of Environmental Education. . International Journal of Continuing Education and Development Studies, 3(1), 110–123.

[9] Fernandez, G. C., & Bande, M. J. M. (2018). Rainforestation Implementation and Durkheim's Notion of Mechanical Solidarity: From the Experiences of the Pioneering Adopters of the Cienda San Vicente Farmers Association in Baybay City, Leyte. Journal of Agriculture and Technology Management,21(1), 8–16.

[10] Fernandez, G. C., & Bande, M. J. M. (2019). Rainforestation and Sustainable Development:

[11] The Lived Experience of the Four Individual Adopters from the Visayas Region in the Philippines. Recoletos Multidisciplinary Research Journal, 7(2), 29–46.https://doi.org/10.32871/rmrj1907.02.03

[12] Fernando, E. (2016). Classifying Natural and Restored Forests Containing Primary, Secondary Growth or Residual Forests (Vol. 3). PANAO Rain Forest Restoration Initiative.

[13] Francisco, K. (2016, November 6). The 1991 Flash Flood that Devastated Ormoc. Rappler. https://www.rappler.com/newsbreak/flashback/15 1178-look-back-1991-flash-flood-ormoc.

[14] Goltenboth, F. (2011). Rainforestation Farming - An Appropriate and Applied Ecological Approach for Landscape Rehabilitation and Impact Mitigation of Climate Change in the Humid Tropics. Annals of Tropical Research, 33(2), 85–106.

[15] Hursh, D., Henderson, J., & Greenwood, D. (2015). Environmental education in a neoliberal climate. Environmental Education Research, 21(3), 299–318. https://doi.org/10.1080/13504622.2015.1018141

[16] Milan, P. P., & Asio, V. (2002, January). Improvement of soil quality in degraded lands through Rainforestation farming. RFRI . http:// www.rainforestation.ph/resources/publications. html.

[17]

[18] Milan, P. P., Ceniza, M. J. M., Bande, M. M., &Consunji, H. (2011). Rainforestation: Restoring Philippine Forests For Communities, Biodiversity, and Ecosystem Services. In Contribution of Ecosystem Restoration to the Objectives of the CBD and a Healthy Planet for All People: Abstracts of Posters Presented at the 15th Meeting of the Subsidiary Body on Scientific, Technical and Technological Advice of the Convention on Biological Diversity (Vol. 62, pp. 65–67). essay, Secretariat of the Convention on Biological Diversity.

[19] Pinho, R. C., Miller, R. P., &Alfaia, S. S. (2012). Agroforestry and the Improvement of Soil Fertility: A View from Amazonia. Applied and Environmental Soil Science, 1–11. https://doi.org/10.1155/2012/616383

[20] Singer, M. (2014, July 13). 2013 State of the Climate: Record-breaking Super Typhoon Haiyan. https://www.climate.gov/news- features/understanding-climate/2013-state-climate-record-breaking-super-typhoon-haiyan.

[21] Steger, M. B., Battersby, P., &Siracusa, J. M. (Eds.). (2014). The Sage handbook of globalization. SAGE Student's Handbook.

[22] United Nations Environment Programme. (1978). Intergovernmental Conference on Environmental Education. In Final Report. Tbilisi, USSR; unesco.org. https://unesdoc.unesco.org/ark:/48223/pf0000032763..