

**SOCIO-ECONOMIC AND CULTURAL VARIABLES AND  
ENVIRONMENTAL AWARENESS OF MANGYAN TAGABUKID  
HIGH SCHOOL STUDENTS IN SIBUYAN ISLAND**

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**APPROVAL SHEET**

The thesis proposal entitled “**SOCIO-ECONOMIC AND CULTURAL VARIABLES AND LEVEL OF ENVIRONMENTAL AWARENESS AMONG SIBUYAN MANGYAN TAGABUKID HIGH SCHOOL STUDENTS OF SIBUYAN ISLAND: A CASE STUDY**” prepared and submitted by Rosemin F. Rabida in partial fulfillment of the requirements for the degree of Master of Arts in Education major in Science is hereby accepted for oral examination.

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## **BIOGRAPHICAL SKETCH**

The author was born on December 16, 1996 at Cabolutan, San Agustin, Romblon. She is the second among the five children of Mr. and Mrs. Leonardo Fortu and married to Puentisol R. Ramilo who were blessed with four children.

She took her elementary education at Cabolutan Elementary School and had graduated in year 1980. After graduation she proceeded her secondary education at Romblon School of Fisheries now Romblon State University San Agustin Campus and finished it in the year 1984.

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In the year 1992, she passed the Professional Board Examination for Teachers administered by the Civil Service Commission. She started her teaching profession with permanent status in the year 1996. From that year to date she was assigned at Romblon College of Fisheries and Forestry now Romblon State University Cajidiocan Campus. Aside from instruction she was also designated as Campus Registrar and Practice Teaching Supervisor from 2003 to 2015.

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## **CHAPTER I**

### **INTRODUCTION**

This chapter presents the background of the study, statement of the problem, significance of the study and its scope and limitations.

#### **Background of the Study**

Natural environment is of crucial importance for social and economic life. We use the living world as a resource for food supply, an energy source, a source for recreation, major source of medicines and natural resources for industrial products. In this respect the diversity of nature not only offers man a vast power of choice for his current needs and desires. It also enhances the role of nature as a source of solutions for the future needs and challenges of mankind.

Humans have always manipulated natural resources in order to produce raw materials needed for the sustenance of the growing human population worldwide. The exploitation of natural resources is usually done in a non-sustainable way and this threatens human existence. The resources which are already scarce are being over exploited with the aim of improving the daily lives of human through technology and innovations. Misuse or overuse of many valuable resources has led to the deterioration & degradation in quality (Kousin, 2000).

Today, environmental pollution and problems pose a serious threat to the sustainability of ecosystem. The investigation of both reasons and effects of

these pollution and problems and the determination of the ways of their control can be achieved by considering the conditions in both parts of ecosystem, social and natural. This situation makes necessary the consideration of social, economic, political and cultural factors in social system as much as physical, chemical and biological phenomena in natural system. The reason for this situation is the structure of ecosystem depending on both social and natural systems and the presence of a permanent relationship between these two systems. This permanent relationship between these systems is shaped by their impacts on each other (Ustun and Celep, 2007).

Human being has to meet the needs of food, water and shelter to survive. In order to meet such needs, he is benefited from natural resources (Me-Bar and Valdez, 2005). This is the positive impact of natural system on social system. However, the environmental phenomena such as earthquake, volcanic eruption, floods or climate changes in natural system can lead to the formation of the conditions threatening the continuity of human life (Metzger et al., 2006) and can adversely affect social system with the negative and deep results of these phenomena.

Another part of the interaction between two systems is the impacts of social system on natural system. Human beings play a role in the formation of some environmental events through some of their decisions and applications. In addition to the impact based on the contribution of people to the generation of environmental events, human beings can reduce the absorb capacity of ecosystem to environmental phenomena through the factors such as population

increase, uncontrolled industrialization and/or poor land management (Rockström, 2003). This situation makes the natural system weaker, much more vulnerable and gives rise to increasing adverse impacts of social system on natural system.

The factors generating different parts of the web of relationships between social and natural systems such as the following are the amount and variety of natural resources which are demanded from natural system by human beings; the degree of resilience and vulnerability of human beings to the environmental occurrences; the conditions which cause people to make decisions affecting the environment; or the human activities such as uncontrolled industrialization and unplanned urbanization which increase the vulnerability of natural system by decreasing the absorb capacity of ecosystem in the society (Ustun and Celep, 2007).

In such a scenario, the importance and need for environmental education is hardly stressed at present. In order to protect and conserve the environment, enabling people to lead them to quality life. Emphasis has been given to environmental education in both formal and nonformal system of education. In formal system of education, teachers play an important role in educating their students about environment related issues (Larijani, 2010).

Environmental awareness is increasing of awareness and understanding of the environment through education. Most of our population is not aware of our finite resources and how quickly they are being used up. By its definition, “awareness” means “having knowledge or cognizance.” Environmental

awareness is defined as concern for what is happening in the environment. Students have always played an active role in the activities leading to the development of environmental awareness (Gunde and Parit, 2015).

Previous researches conducted on the level of environmental awareness and environmental concern focused on students, teachers, and workers as respondents from the majority group of society. Very rare from previous studies focused on the environmental awareness of the indigenous people where according to the Association of Asian Studies (AAS), 2000 they are the original stewards of the environment, holding the land of their ancestors in trust for future generations. And the largest of the Earth's biological resources and a healthy ecosystem are found in the ancestral domain inhabited by the indigenous people (UNCED, 2000).

Typically, Sibuyan Mangyan Tagabukid is the indigenous people of Sibuyan Island in the province of Romblon where they reside in and around the interiors and upland areas of the haven of diverse ecosystem of Mount Guiting-Guiting (Tongson and Mc Shane, 2006). Like other indigenous peoples, the Sibuyan Mangyan Tagabukid has full regard for the symbiotic relationship between their lives and lands (Tongson, 2005 ). They primarily engaged in subsistence agriculture – making their living through slash and burn farming, charcoal making, gathering of minor forest products such as rattans, resins, vines and honey, and fishing for freshwater fish and shrimps in the numerous water channels and tributaries on the mountain (Tongson and Dino, 2004).

It is from the above backdrop where the researcher is convinced to conduct a case study on the level of environmental awareness of Mangyan Tagabukid high school students where they inhabit the ancestral land of Sibuyan Island, province of Romblon.

### **Statement of the Problem**

This research study will be conducted to determine the socio-economic and cultural variables and level of environmental awareness among Mangyan Tagabukid high school students.

Specifically it seeks to find answer to the following questions:

1. What is the profile of the respondents in terms of:
  - 1.1. Socio-economic Variables
    - 1.1.1. Age;
    - 1.1.2. Gender;
    - 1.1.3. Religion;
    - 1.1.4. Family Income;
    - 1.1.5. Parent's/guardian's occupation;
    - 1.1.6. Parent's/guardians educational attainment;
    - 1.1.7. Residence Location;
    - 1.1.8. School Location?
2. What is the personal perception on Mangyan Tagabukid high school students in terms of the following cultural variables:
  - 2.2.1. Values;
  - 2.2.2. Beliefs;

2.2.3. Norms;

2.2.4. Language;

2.2.5. Literature and Arts?

3. What is the level of environmental awareness of Mangyan Tagabukid high school students in terms of:

2.1. Balance with nature

2.2. Environmental pollution

2.3. Stewardship

2.4. Solid waste management

2.5. Biodiversity and stability

2.6. Climate Change

4. Is there a significant difference on the level of environmental awareness of Mangyan Tagabukid high school students across socio-economic and cultural variables?

5. Does the level of environmental awareness among Mangyan Tagabukid high school students vary across the different secondary schools of Sibuyan Island?

6. Does the level of environmental awareness among Mangyan Tagabukid high school students vary across municipalities?

7. Is there any significant relationship between socio-economic variables and level of environmental awareness among Mangyan Tagabukid high school students?

8. Is there any significant relationship between cultural variables and level



of environmental awareness among Mangyan Tagabukid high school students?

### **Significance of the Study**

This study is aimed at determining the influence of socio-economic and cultural variables on the level of environmental awareness of Mangyan Tagabukid high school students of Sibuyan Island.

Though previous researches have shown that different socio-economic and cultural factors influence the level of environmental awareness of students. These researches focused on teachers, students and workers from the majority group of society as respondents. Socio-economic factors and cultural factors included in previous researches were limited only to some extent. Therefore, the main contribution of this study is to include other socio-economic and cultural variables that may influence the level of environmental awareness among Mangyan Tagabukid high school students of Sibuyan Island.

Result of this study will serve as an important input to the concerned authorities in the academic institution for better planning and curriculum implementation that fits to students' diverse socio-economic and cultural background.

Research implication will encourage classroom teachers specifically Science teachers to provide activities that include traditional practices of diverse students culture to better enhance environmental awareness.

In addition, outcomes of this study will serve as eye-opener for all stakeholders particularly the Parents Teachers Association, Student Body Organization and all other concerned groups to cooperatively plan and work

together in conducting environment-related activities to enhance their knowledge, attitudes and values towards the protection and conservation of the environment.

It is also hoped that the study will equally serve as a reference material for other researchers who may want to carry out similar research in the future.

### **Scope and Delimitation of the Study**

The study is designed to investigate the relationship of socio-economic and cultural variables on the level of environmental awareness among the Mangyan Tagabukid high school students in the three municipalities of Sibuyan Island.

This study will be conducted during second semester of school year 2015-2016 from February to March 2016 in six public secondary schools Sibuyan Island where Mangyan Tagabukid students are enrolled. Public secondary school was chosen because it can provide free education for Mangyan Tagabukid children where according to Padilla (2002) daily living is dependent on subsistence strategies like swidden fields and gathering of forest products.

## **CHAPTER II**

### **REVIEW OF RELATED LITERATURE AND STUDIES**

This chapter consists of related literature and studies. Theoretical and conceptual framework, hypotheses and definition of terms are also included. The succeeding reviews gave the researcher a wide knowledge and concept about her present investigation.

#### **Environment**

According to Khant and Sharma (2013), environment has shape our lives since the time immemorial. It is from the environment that we get our food to eat, water to drink, air to breath and all the necessities of day to day life, thus constituting it as a life support system. Through the process of natural selection and elimination, it is the environment which has caused the evolution of biological spectrum, the biosphere as it exists today. Today environment has become the concern of all; the academicians, intellectuals, scientists, policy makers and governments across the continents.

Sharma (2015) pointed out that though destruction of environment in the past maybe excused in the point of view of ignorance; however now we have access to knowledge and information and therefore it becomes imperative on our part that we re-examine ethically as well as morally what we have inherited, what we are responsible for and what we will pass to the coming generations.

## **Biological Diversity**

Though many of the earth's habitats now are endangered with plants, animals, insects and even microorganisms as added by Sharma (2015). According to UNCEP (1992) there are still places on this earth which are considered areas of high biological diversity and cultural diversity. A typical example is the Sibuyan Island in the province of Romblon where according to Tongson and McShane (2006) Sibuyan is the second largest of among the seven islands that comprise Romblon Province in the Philippines and is known as one of the few remaining centers of biodiversity and endemism in the country. It has a land area of approximately 45,600 hectares, about seventy percent of which is covered with forest. At the heart of Sibuyan Island is the Mt Guiting-Guiting Natural Park (MGGNP) — the only remaining mountain in the Philippines with relatively intact habitats along its entire elevation gradient. Mt. Guiting-Guiting's plant and mammal biodiversity is amongst the richest in the world.

## **Biological Diversity and Indigenous People**

On the report of PFE (2013), research has shown that the healthiest ecosystems are found in areas where there are indigenous peoples. This emanates from a basic principle that they adhere to: one should take only what is needed and always bear in mind that those resources need to be protected and replenished for the continued existence of its inhabitants. The Indigenous Peoples Right Act (IPRA) law recognizes this and empowers the indigenous peoples to take control of the management of their ancestral lands.

But poverty, lack of education, ignorance of the law and their rights lend the tribe vulnerable to outside pressure. As their culture gets eroded, so will the natural resources that they have been guarding for centuries.

Tongson and Dino (2004) pointed out that concern about the environmental threats of the unregulated and unsustainable use of the island's forest resources prodded the three municipalities of Sibuyan – Magdiwang, Cajidiocan and San Fernando to promote the conservation of Mt. Guiting-Guiting. In February 1996, Mt Guiting-Guiting was proclaimed a Protected Area under the National Integrated Protected Areas System (NIPAS) through a Presidential Proclamation No. 746 dated February 20, 1996 with a total land area of 15,475 hectares and an approximately 10,000 hectares as an additional.

According to Erni (2004), it is a global phenomenon that the creation of protected areas has for many decades not entered the public consciousness as a controversial issue. Their purpose is for the conservation of biodiversity and the underlying ideological premises is the distinction between humans and “nature”, the definition of the latter with the absence of the former have at least implicitly been widely accepted.

### **The Need for Environmental Concern**

On the point of view of Romani and Bipasha (2013), environmental degradation in the present millennium, is a matter of great concern before mankind. For the development of the human race, man has been ruthlessly consuming natural resources and polluting the environment. Various environmental problems pose a threat to environmental sustainability, among

which the increasing level of wastes and air pollution, formation of ozone hole, acid rain, and global warming etc. are some of the issues of common concern. Many of these problems are rooted in human behavior (Gardner and Stern, 2002) and can thus be managed by changing the relevant behavior so as to reduce its environmental impacts. Environmental activists and people in general who aspire to foster a less polluted environment and promote the sustainable use of natural resources, often assume that behavior changes is a function of knowledge and awareness. Therefore, creating environmental awareness among the students is the need of the hour.

### **Environmental Awareness**

According to Romani and Bipasha (2013) the term “environmental awareness” refers to creating general awareness of environmental issues, their causes by bringing about changes interception, attitude, values and necessary skills to solve environment related problems. Ali (2015) emphasized that environmental awareness is all about being conscious of the environment around us. Xietal, et al. (1998) classified environmental awareness into two aspects: perception of environmental problems and behavioral inclination to protect the environment. The perception is that people should have knowledge of environment and their issues. The behavior inclination is to protect the environment that includes two major aspects: firstly, the value of environmental protection in peoples mind which is indicated by the balance between environmental protection and economic development and also the willingness to

pay for the protection of the environment; secondly, attitudes about participating in environmental protection.

Ali (2015) stressed the important strategies of environmental awareness in attaining sustainable environment, especially environmental pollution which is caused normally by environmental pollutants such as pollutants from a point source e.g. factory, industry and those from a non-point source which include market and agriculture. These pollutants may result into environmental degradation. Promoting environmental awareness is an easy way to become an environmental steward. People's knowledge can be enhanced through environmental education.

### **Environmental Education**

According to Sengupta, et al. (2010) environmental education is the main interests of school organizations, local communities, the private sector and local governments for over the last 50 years. These organizations ask to the government to put environmental education under the curriculum of education. Many authors name the 1960s as the decade when environmental education started to develop in response to the world's growing awareness about environmental problems. Others believe that environmental education grew up from the movement that already existed from the beginning of the last century such as study of nature, conservation of natural resources and outdoor education (NACD, 1998). Therefore, environmental education is considered as a life-long process that is interdisciplinary and holistic in nature and application. It concerns the relationship between human and natural ecosystem and encourages the

development of environmental protection e.g. environmental ethic awareness, understanding of environmental problems, development of critical thinking and problem solving skills. Moreover, environmental awareness is the initial step ultimately leading to the ability to carry on responsible citizenship behavior.

A number of research works have been taken up in this respect. But being a location of specific issue, research on environmental education should be familiar in different parts of the world in order to develop a clear understanding of all the perspective of the issue involved. Rajput et al. (1980) made attempts to identify the awareness of children at primary level, towards the scientific and social environment. The study revealed that only one of the four groups (2 schools X 2 classes) were significantly different on environmental awareness at pretest stage (control group), whereas at the post test stage two experimental groups were significantly better than the control group. In 2005, Sabastian and Nima cited that science students have more awareness of biodiversity and its conservation than other students' discipline. Romani & Bipasha (2013) studied environmental awareness and ecological behavior among Female B.Ed. students in University of Calcutta, India. Results indicate that English medium students of urban areas have higher environmental awareness than Bengali medium students of semi-urbanized rural areas. Results further show that status has no effect on environmental awareness. Another study by Hossam (2013) suggested that middle and high school students in Saudi Arabia are more knowledgeable on many of the environmental issues while female students having higher knowledge than male students. This result is in contrast with the study conducted



by Ali (2015) who showed that environmental awareness level amongst secondary school students with Terengganu as the study area is low and the author added that there is no significant difference seen between gender and different locations of the schools. Age was reported to have a relatively low significance in the environmental awareness of secondary school students. The attitude of students towards environment and environmental education was quite low.

On the basis of previous researches conducted, it could be noted that there are variation in the level of environmental awareness as affected by several socio-cultural factors. In this study, the researcher adds the extent of socio-economic and cultural variables that may influence the level of environmental awareness of the indigenous students of Sibuyan Island.

### **Socio-economic Variables**

According to Walter (2008) socioeconomic status is related to differences between groups of people cause mainly by their financial situation. Davis-Kean (2005) found out that socioeconomic factors such as family income level, parents' level of education, race and gender, all influence the quality and availability of education as well as the ability of education to improve life circumstances. In the same manner, Cole-Ingait (2016) recognized that socioeconomic factors such as income, education and occupation influence behaviors, attitudes, trends, tastes and lifestyles of individuals.

Ustun and Celep (2007) conducted a study on the connection between environmental awareness and socio-economic and cultural structure. Results

showed that socio-economic and cultural structures of the people affect their environmental awareness and their impacts on the region. But opposite result was obtained by Erickson (2010) on the effect of socioeconomic status on environmental awareness of elementary school children interacting with school gardens. The results were inversely related to the hypothesis, which stated, if a school with a lower socioeconomic scale would have lower environmental awareness. In other words socioeconomic status has no effect on the environmental awareness of school children.

### **Age**

According to Dietz, et al. (1998), age is the strongest and most consistent predictor of environmentalism. But Yilmaz et al. (2008) argued that it is negatively associated with environmental concern. The control of environmental pollution and solution of environmental problems make necessary some structural changes in the society. While the older people are not open to new ideas and they do possibly not want to change the existing system, the young people are ready to and enthusiastic for new world views and value systems and they easily support the birth of new issues like environmental concern.

Aminrad et al. (2011) agreed with the positive relationship with knowledge and attitudes on environmental awareness. The study utilized students in different level of education from public and government universities in Malaysia and categorized age groups as 17-25, 26-40 and above 40. Results revealed that there is statistical significance on the effect of age on overall environmental awareness for all the three levels of education groups (Bachelor, Master's and

Doctorate). Increasing in age and level of education has effect on increasing of environmental awareness and attitude.

### **Gender**

There was no certain idea about who has stronger environmental concern: men or women for long years (Pyatt, 2005). Yilmaz, S. et al. (2008) pointed out those men that have gone higher education and more active in social life for longer years are expected to be more concerned with environmental issues than the women. But, because of the father effect and having opportunities for monetary gains for long years, meeting the economic needs of their families are much more important for the men than becoming concerned with environmental issues. The situation is different for the women. The environmental problems or pollution can lead to the generation of conditions threatening the life of their families. As a result of mother effect and generally having more social responsibility than the men, they prefer to be concerned with the environmental issues.

The debate over gender differences in environmental concern is one of the issues which need to be verified. Attempt was made by Mc Donald and Hara (1994) using two sets of theory where first theory states that women tends to be more environmentally concerned than men while the second set expects the opposite to be true. Results showed that males were found to be slightly more likely than females to express environmental concern. Similar result obtained by Xiao xiao and McCright (2013) where it showed that women have greater pro-environmental views and concern about environmental concern and problems,

yet, they found only minimal gender differences in institutional trust and no evidence that institutional trust mediates the relationship between gender and environmental concern.

Another study was conducted by Price and Bohon (2012) on the gender intersections and environmental concern. They found out that women tend to express a greater level of environmental concern than men. However, there were differences among women and among men. Contrasting result was obtained by McCright (2010) in his study on the effects of gender on climate change knowledge and concern in the American public. Consistent with much existing sociology of science research, women underestimate their climate change knowledge more than do men. Also, women express slightly greater concern about climate change than do men, and this gender difference is not accounted for by differences in key values and beliefs or in the social roles that men and women differentially perform in society. Modest yet enduring gender differences on climate change knowledge and concern within the US general public suggest several avenues for future research, which are explored in the conclusion.

## **Religion**

According to Oma-as et al. (2003), social philosophers recognized the church as the conscience formators of people. The church is a social institution entrusted with the task of teaching morality to individuals and groups. In the church, individuals reach out to others and learn their obligations toward self, family, church and society.

Gardner (2002) explained that many scholars have highlighted the relevancy of religion to the environmental movement. Not only do religious and environmental groups share similar values, such as opposing excessive consumption and valuing nature beyond economic terms, but religion shapes worldviews through its moral authority and large numbers of followers; it encourages individuals to support the well-being of other people, communities, and future generations; and it serves as an important source of individual and societal change. Furthermore, Gottlieb (2006) added that religion can also focus people's attention on disturbing matters that they would rather ignore, and it provides a more effective language than political rhetoric for expressing the seriousness of environmental problems and societal failings.

Gardner (2012) elaborated that while religion can become an important ally in the environmental movement, the two groups have had a tenuous historical relationship. A number of barriers have limited cooperation between religion and environmentalists, including mutual misunderstandings, the longstanding rift between science and religion, different views on humans' relationship to the natural world, and religion's association with conservative social and political views.

### **Family Income**

According to Cole-Ingait (2016), income is the amount of money individuals earn from their daily economic activities, be it employment, business or investments. The availability of disposable income influences spending habits. Davis-Kean (2005) emphasized that family's financial status influences a number

of factors that can help or hinder a child in gaining an education. Wealthy families have the financial resources to send a son or daughter to high-quality schools, hire tutors and obtain supplemental education sources. In some countries, students from low-income families may not even be able to attend school; in the U.S., low-income families are limited mostly to public schools while wealthier families can afford to send their children to private schools. Financial stress on the parents can cause a child to leave school early to work. Worries about financial hardship at home can negatively affect low-income children's ability to learn.

Relating this factor to environmental awareness, Pyatt (2005) cited that environmental concern is positively associated with income. The priorities of lower income people are more likely to meet the basic needs of their own or families and Yilmaz et. al., 2006 added that concern for environmental issues can be ignored when compared with meeting these basic needs. However, higher income people have the proper conditions for meeting the basic needs such as adequate nutrition or health care. They are those people with much interests in environmental compared to those with lower income.

### **Parent's/guardian's Occupation**

According to Cole-Ingait (2016), occupation refers to the type of jobs people perform by virtue of their skills, experiences or choices. It may be self-employed or work as an employee of an individual or organizational entity. The different types of occupation dictate the income earned by people in the society. High-salaried individuals are normally associated with skilled occupations such

as doctors, engineers, lawyers and accountants. Self-employed individuals owning successful businesses also generate huge amounts of income. Unskilled occupations such as menial labor do not pay much.

Brennan (2009) identified the three types of sustainability in social work: social, economic, and environmental. Social work has focused on social, touched on economic, and largely ignored environmental. Social workers are familiar with social sustainability, which recognizes that individual health and well-being, nutrition, shelter, education, and cultural needs must be met. In addition environmental sustainability requires that “natural capital remains intact,” meaning natural resources should not be used in excess of their rate of renewal. In addition, nonrenewable resources should be guarded and used minimally. It is here where the field of social work has been largely inactive.

Mary (2008) proposed expanding social work values to include transpersonal elements and demands that social work education, in academic coursework, fieldwork, and continuing education, takes a radical look at the ways in which social workers can help improve their clients’ world, figuratively and literally. Mary encourages workers to be stewards or caretakers of the Earth.

### **Parent’s/Guardian’s Educational Attainment**

According Davis-Kean (2005), parents’ education level directly correlates to the importance and influence of education in their children's lives. Educated parents can assess a son or daughter's academic strengths and weaknesses to help that child improve overall academic performance. The educated parent also sets expectations of academic performance that propel students forward in their

achievement levels. However, even if educated, parents who struggled academically and do not think highly of formalized education may have negative attitudes toward education that can still hinder the child academically.

Environmental concern and education are positively associated with each other (Pyatt 2005). Emphasis was made by Üstün and Celep (2007) that the positive impacts of education on environmental concern of the human beings are linked to the contributions of education to the relationships of people with the outside world. Yilmaz (2006) also cited that raising education level, people have improved their ability to comprehend complex environmental problems as a result of a higher level of awareness of public affairs based on increasing cognitive skills. With education, people can come into contact with other individuals who have different values, opinions and worldviews and become more open to new ideas and value systems. Such an improvement makes easier the acceptance of environmentalism for these people.

### **Residence Location**

Residence is a place where a person lives or resides which refers to home. Schunck and Meece (2010) defined home environment as the aspects of peoples domestic lives that contribute to their living conditions. These factors may be physical (poverty, psychological conditions due to parenting; social circumstances (nest, living, etc) or wider cultural patterns of life related to the location (suburban environments, urban environments).

Home location does not imply that rural residents will be more pro-ecological than urban citizens (Berenguer et al., 2005). Berenguer et al. (2005)



found that urban adults are more pro-environmental than rural ones. On the contrary, Müller et al. (2009) concluded that youngsters from rural areas were more pro-environment than those in urban ones and claim that frequency of contact with nature (higher in rural areas) is one of the reasons for this result.

### **School Location**

School location refers to the community in which the school is located, such as a village, hamlet or rural area, a small town, a town, a city, close to the centre of a city or elsewhere in a city (OECD, 2002).

On the study conducted by Ghosh (2014) on the environmental awareness among secondary school students of Golaghat district in the state of Assam and their attitude towards environmental education, results showed that there is a significant difference on the environmental awareness of students with respect to settlement. The students of rural and urban secondary schools are not equally aware about environment. However, opposite result was obtained by Benerjee and Das (2014) on their study on the environmental awareness of higher secondary students of Bankura District, West Bengal in respect of their gender, locality and academic streams. Results showed that there is no significant difference on the environmental awareness of students living in rural and urban areas.

Another study conducted by Barman (2015) on the environmental awareness of secondary level students of Bholanath College Dhubri, Assam, India. Results revealed that males of rural area, private school and English medium school were found to be more aware about their environmental problems

as compared to female. On the other hand female students of urban area, Government school and Assamese medium have higher environmental awareness than male students.

### **Cultural Variables**

As defined by Taylor (2003), culture is a complex whole which includes knowledge, belief, art, morals, law, customs and any other capabilities and habits acquired by man as a member of society. Leong and Ward (2006) pointed out that culture is based on mental and spiritual link among the members of a society where culture is defined as “shared belief systems between different social groups” or “the collective programming of the mind which distinguishes one group from another”. In 2003, Omas-as et al. identified the elements of culture that are interrelated and unified in order for all its aspects to function effectively. These elements of culture include values, beliefs, norms, language, folkways, mores, laws, material culture and technology.

Ustun and Celep (2007) emphasized the relationship between culture and environmental awareness which was explained by the effects between social system and natural system. According to them, human being can play a role in the generation of some environmental phenomena through some of his decisions and applications or he can reduce the absorb capacity of the ecosystem with the factors such as population increase, uncontrolled industrialization and/or poor land management.

On the other hand, while the environment affects the social system positively through the supply of natural resources, it can also adversely affect

human life through the results of the environmental phenomena. During these relationships for the sustainability of the ecosystem, it is expected from the human beings, the preference of the activity which harms the environment as least as possible. Such activity calls for high environmental concern and awareness. The decisions, activities and applications which give idea about the level of environmental awareness of the people, are a result of not only their socio-economic conditions but also their cultural structure which can also be shaped with respect to these socio-economic conditions. Human being will give a decision as a result of the factors such as his knowledge, belief, intellectual and emotional features and will show his environmental concern and awareness by this way.

### **Values**

According to Omas-as et al. (2003), the basic set of values make up the essential part of culture, providing directions on what is good or bad and right and wrong. Different cultures have diverse values so what are approved in one society maybe disapproved in another.

In the study conducted by Poortinga et al. (2004), the seven value dimensions which include self-enhancement, environmental quality, self direction, openness to change, maturity, family health and safety and achievement and general and specific environmental concern contributed significantly to the explanation of policy support for government regulation and for market strategies aimed at managing environmental problems. However, results suggest that using only attitudinal variables, such as values, may be too limited

to explain all types of environmental behavior. Schultz et al. (2004) cited that there is a strong support for the cross-cultural generalizability of the relationship between values and attitudes and on the structure of environmental concern. In addition, analyses of the relationship between values and environmental behavior show evidence for norm activation only for self-transcendence. Results for self-enhancement show a consistently negative relationship.

As emphasized by Schultz and Zelezny (1999) that in the last century, social psychologists have investigated “general attitudes about environmental issues” and they measured “an individual’s degree of concern for human caused environmental problems” through a variety of scales. In 2001, Schultz pointed out that during this process, a value basis theory for environmental concern was developed by Stern and Dietz as a result of investigations of the values as the basis for environmental attitudes. According to this theory, as a result of the set of values of human beings, there are three kinds of environmental attitudes in the society: Egoistic, Social – altruistic and Biocentric. They are shaped by consideration of individualistic interests, benefits of other people and all living things, respectively. The priorities of these concepts in the value system of the people show the level of environmental concern and awareness of the human beings.

### **Beliefs**

As stated by Omas-as, et al., (2003), people of modern age technology still consider, consult and depend upon the body of beliefs for courses of actions. Society’s beliefs, which are composed of fables, superstitions, proverbs, myths,

folklore, theology, philosophy, arts and science are influenced by the members' attitudes, emotions and values.

Beliefs can be associated with the individual's interaction with the natural environment. Empirical studies on environmental behavior have been using a multitude of different operationalizations of environmental concern, which complicates cumulative research.

In the study conducted by Best and Mayer (2013), they found out the direct effects of specific attitudes on behavior, but no direct effects of higher-level cognitions. Rather, values and primitive beliefs influence general attitudes, which in turn determine specific attitudes. The empirical analyses confirm the proposed hierarchical structure.

### **Norms**

Walter (2008) defined norm as an accepted standard or a way of behaving or doing things that most people agree with or a situation or type of behavior that is expected and considered to be typical. Omas-as, et al. (2003) cited that etiquette, speech, facial expressions and mannerisms are part of society's norms. Individuals subscribing the norms win the admiration and respect of the society while those who do not are met with disapproval.

### **Language**

Human beings used language and therefore possess culture as mentioned by Omas-as, et al. (2003). Language is purely human and non-instinctive method of communicating ideas, emotions and drives by means of

voluntarily produce symbols (Panopio and Rolda, 2000). Omas-as, et al. (2003) added that language is considered the most important channel of communication and a medium for determining society's values.

According to Brown (2005), language has been studied by scholars dealing with practically all the liberal arts such as psychology, pedagogy, linguistics and philosophy. Some of the recent trends in language studies have focused on the correlation between the biological processes of the brain and language (neurolinguistics), as well as the mental processes occurring in mind and their influence on the linguistic system (cognitive linguistics). Lately, also the relationship between the people's environment and their language also arouse linguists' interest.

Analyses of large texts are also performed in order to check what attitudes towards the natural environment might be developed by their readers. Usually focusing on the choice of lexis linguists emphasize that the same issues might be portrayed in a quite different way by people from opposite parties. Opposing groups use different words to describe the same notions as for example in the case of environmentalists and developers talking about the same piece of land. In spite of the fact that the described entity is the same, because of different approaches in texts readers of the environmentalists' version will have a different notion of the landscape than readers of developers' text.

### **Literature and Arts**

According to Buell, et al. (2011) literature and environment studies commonly called "ecocriticism" or "environmental criticism" in analogy to the

more general term literary criticism comprise an eclectic, pluriform, and cross-disciplinary initiative that aims to explore the environmental dimensions of literature and other creative media in a spirit of environmental concern not limited to any one method or commitment. Ecocriticism begins from the conviction that the arts of imagination and the study thereof by virtue of their grasp of the power of word, story, and image to reinforce, enliven, and direct environmental concern can contribute significantly to the understanding of environmental problems: the multiple forms of ecodegradation that afflict planet Earth today. In this, ecocriticism concurs with other branches of the environmental humanities such as ethics, history, religious studies, anthropology and humanistic geography—in holding that environmental phenomena must be comprehended, and that today's burgeoning array of environmental concerns must be addressed qualitatively as well as quantitatively.

Environmental writers and literary critics illustrate with their poetry, fiction, nonfiction and scholarship the ways in which people with different cultural, racial and gendered backgrounds often have different ideas about what constitutes "nature's balance" or what constitutes abundance versus scarcity. Environmental literary and cultural critics also analyze the metaphorical constitution of fundamental scientific theories. They contribute to inquiry surrounding the issue of sustainability by helping social, cultural and scientific communities interpret cultural differences and fundamental metaphors and oppositions in scientific theories. They facilitate meaningful debates which are critical to meeting the

environmental challenges we face, which are primarily social in both their origin and solution (ASU IHR, 2010)

Curtis, et al. (2012) pointed out that scientists struggle to communicate their research to the general public, and often find that their academic arenas of professional practice do not encourage direct public engagement. In their study communicating ecology through art: what scientists think showed that ecologists respond favorably to the use of the arts in a scientific forum and recognize that the visual and performing arts are useful in communicating scientific information and providing a conducive atmosphere in which to receive that information. The literature reveals the dramatic role of the arts in communicating issues, influencing and educating people and challenging dominant paradigms. Despite acknowledging the potential of the arts in communicating science, few scientists merge science with the arts. Therefore, considerable scope to grow this area of endeavor and, potentially, have a huge impact on public attitudes. In an era when skeptics threaten to undermine a scientific view of major environmental concerns such as climate change, the use of the arts to connect with people emotionally may indeed be an effective way to win support for actions.

### **Theoretical Framework**

Theory of Reasoned Action (TRA) and Theory Planned Behavior (TPB) by Ajzen and Fishbein (1980) will be used in this study as a framework in understanding, explaining and predicting behavior. These theories are also useful as a guide for designing intervention strategies to maintain or change a particular behavior. The theory is based on the assumptions that individual



behavioral intentions are directly associated with their attitudes. The Theory of Reasoned Action views an individual's intention to perform or not to perform as an immediate determinant of the action. This behavioral intention has two determinants: 1) attitude towards the behavior, and 2) the subjective norms. The beliefs related on attitude towards the behavior are called behavioral beliefs whilst normative beliefs are for the subjective norms. The Theory of Planned Behavior views an individual's determination is influenced by attitude, social support and perceived behavioral control. Thus, it is best to examine human behavior when participation decisions are voluntary and under an individual control. Therefore, this theory is suitable to predict a student's intent to participate in a specific behavior in relation to environmental awareness.

### **Conceptual Framework**

Upon gathering enough material, literature and related studies for review, the researcher believed that socio-economic variables such as age, gender, religion, family income, parent's/guardian's occupation, parent's/ guardian educational attainment and residence location significantly affect the level of environmental awareness. In the same manner cultural factors such as values, beliefs, norms, language, and literature and arts of students significantly influence the level of environmental awareness of Mangyan Tagabukid high school students of Sibuyan Island. Based on the ideas mentioned above the following paradigm was established.

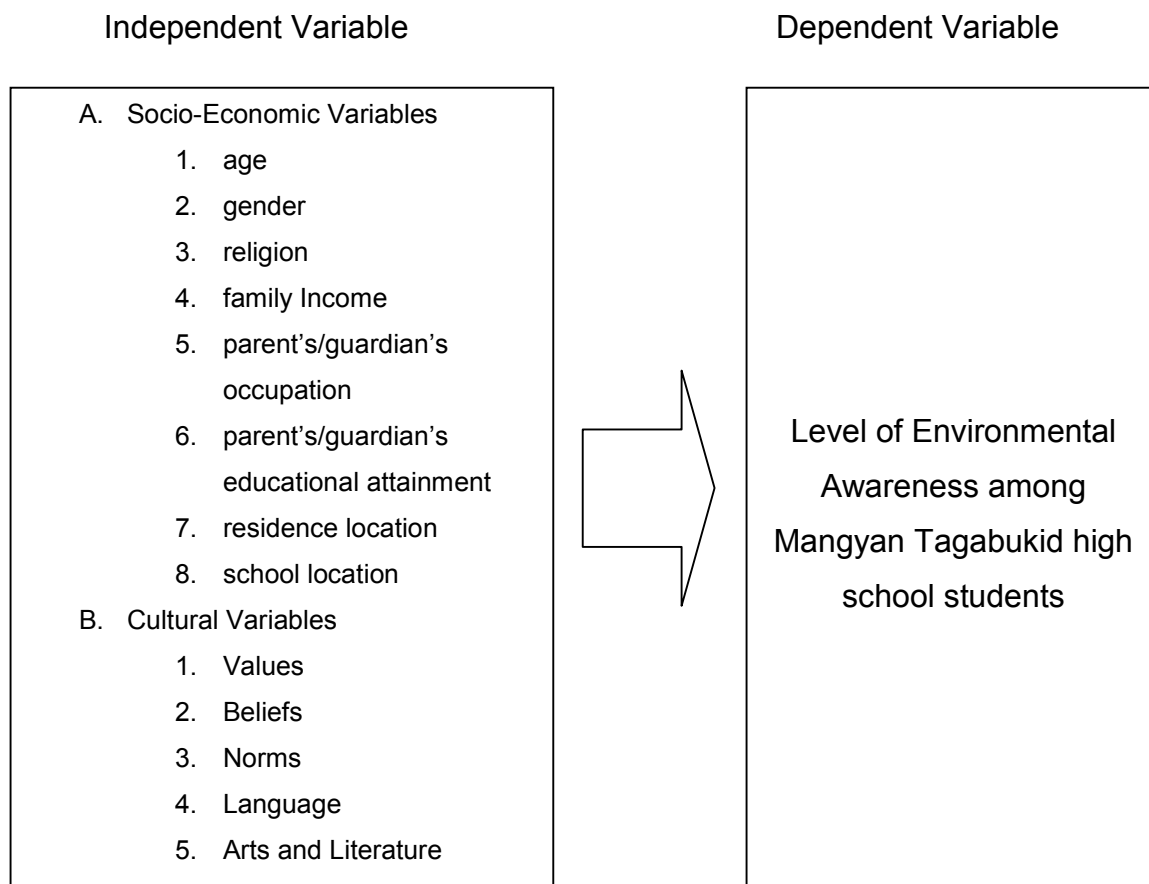


Figure 2. Relationship between dependent and independent variables.

### **Hypotheses**

The following null hypotheses were formulated for testing the assumption.

1. There is no significant difference on the level of environmental awareness of Mangyan Tagabukid high school students across socio-economic and cultural variables
  
2. The level of environmental awareness among Mangyan Tagabukid high school students does not vary different secondary schools in Sibuyan Island.
  
3. The level of environmental awareness among Mangyan Tagabukid high school student does not vary across municipalities.

4. There is no significant relationship between socio-economic and level of environmental awareness among Mangyan Tagabukid high school students.

5. There is no significant relationship between cultural variables and level of environmental awareness among Mangyan Tagabukid high school students.

### **Definition of Terms**

For clear and vivid understanding of the study the following terms are hereby operationally defined:

**Age** refers to length of time the Mangyan Tagabukid high school has existed. This usually expressed in a number of years.

**Beliefs** refer to the acceptance of the mind of the student that something is true or real like believing on the nature spirit that influence the wellness of life and what to do something to harmonize life with them.

**Cultural Variables** refer to such factors as values, beliefs, norms, language and arts and literature that may influence environmental awareness of the respondents.

**Environmental Awareness** refers to the Mangyan Tagabukid students' gained experiences and acquired understanding of the environment and its associated problems.

**Family Income** refers to the gross income of the family members earned in a month or year from wages, salaries and other activities that generate income.

**Gender** refers to the physical or social condition of the Mangyan Tagabukid student as male or female.

**Language** refers to the language used by the respondents and their family in communicating each other. This could be either Filipino or English and dialect such as Aklanon, Hiligaynon, Tagalog and Romblomanon.

**Literature and Arts** refers to the creative or artistic ways of the Mangyan Tagabukid community such as dance, visual arts, music, literature, architecture that represent figures or objects exactly as what they appear in real life.

**Lowland** refers to the low-lying areas of Sibuyan Island usually at usually at sea level.

**Mangyan Tagabukid high school student** refers to the high school students who belong to the indigenous people of Sibuyan Island.

**Parent/Guardian's Educational Attainment** refers to the highest grade, year level or degree attended by parent or guardian of Sibuyan Mangyan Tagabukid high school students.

**Parent/Guardian's Occupation** refers to the principal activity or work of the parents or guardian which serves as the means or earning income for the family.

**Religion** refers to the Mangyan Tagabukid cultural system and practices, world views, ethics and social organization that relate humanity to an order of existence. This includes Roman Catholic, Iglesia ni Cristo, Aglipayan, Seventh Day Adventist, Four Square, Born-Again, Jehovah's Witnesses and others.

**Residence Location** refers to the place where the Mangyan Tagabukid student lives either upland or lowland.

**School Location** refers to the place where the school is located either in town or in barangay.

**Socio-economic Variables** refer to such factors as age, sex, gender, religion, family income, parent/guardian's occupation, parents/guardian's educational attainment and residence location that may influence the Mangyan Tagabukid students' environmental awareness.

**Upland** refers to the areas of Sibuyan Island that has a high elevation which is usually above sea level.

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

This chapter presents the research design and research procedure that will be used.

#### **Research Design**

Presented in this section are the components which describe the observations to be made, how to organize them and how to analyze and interpret quantitative observations. It includes among others research method to be used, the locale and time of study respondents, formulation and validation of questionnaire, data collection and sources of data and methods of data processing and analysis.

#### **Method of Research to be Used**

The study aims to determine the influence of socio-economic and cultural variables on the level of environmental awareness among Mangyan Tagabukid high school students of Sibuyan Island. In this study the researcher will make use of descriptive correlational method where it investigates the possibility of relationship between two variables, although investigations of more than two variables are common. Correlational research describes to which two or more quantitative variables are related and it does so using the correlation coefficient.

As applied in this study, the variables to be tested for the significant relationships to the level of environmental awareness are the socio-economic and cultural factors.

## **Locale and Time of the Study**

The study will to be conducted in eight public secondary schools in the municipalities of Sibuyan Island namely Cajidiocan, Magdiwang and San Fernando (see Figure 2). Shaded part of the map is the territorial site of Mangyan Tagabukid community.

Cajidiocan is one of the three municipalities in the mango-shape Sibuyan Island with a total land area of 16.4 m<sup>2</sup>. It is bounded on the north by Magdiwang, on the east by Sibuyan Sea, south by San Fernando and on the west by Mount Guiting-Guiting. There are four public secondary schools in the municipality namely Cajidiocan National High School, Lumbang East National High School, Cambalo National High School and Danao National High School.

The municipality of Magdiwang is bounded by the Municipality of Cajidiocan in the east, municipality of San Fernando in the south and Sibuyan Sea in the north. It has a total land area of 11,190 hectares. There are two public secondary schools in this municipality, the Magdiwang National High School and Agutay National High School.

San Fernando is a coastal area town located at the foot of the mountain. It lies in the southwestern portion of the island of Sibuyan and the biggest among the three towns comprising Sibuyan with a total land area of 190,608.231 square meters. Seventeen kilometers north is Magdiwang. The municipality has high and steep mountain ranges. Life in this place with its exotic forest and lust life of creatures is a paradise itself. There are two public secondary schools found in this municipality, the Don Carlos Mejeias Memorial National High School and

España National High School with one private high school, the Hill Side View High School.

This study will to be conducted from of February to March 2016.

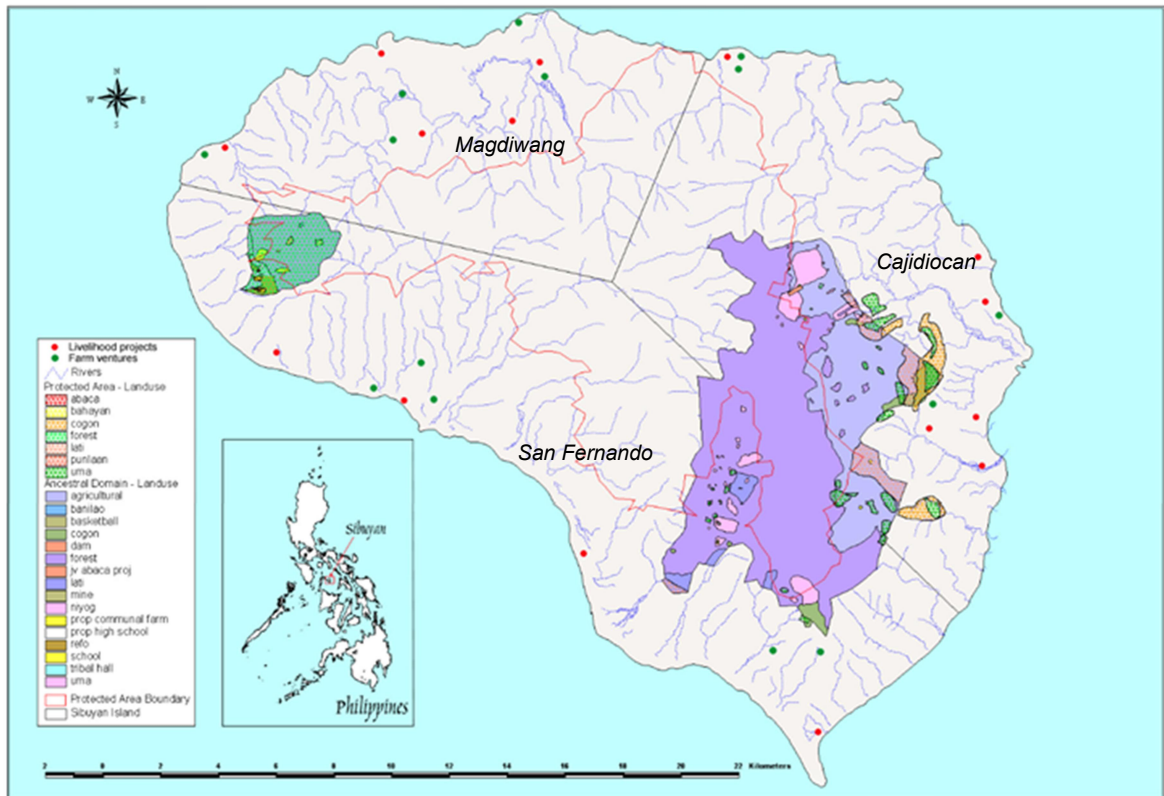


Figure 2. Map of Sibuyan Island showing the territorial site of Mangyan Tagabukid Community. (Source: Retrieved from the Article of Tongson, E. (2006), *Payments for Environment Services*).



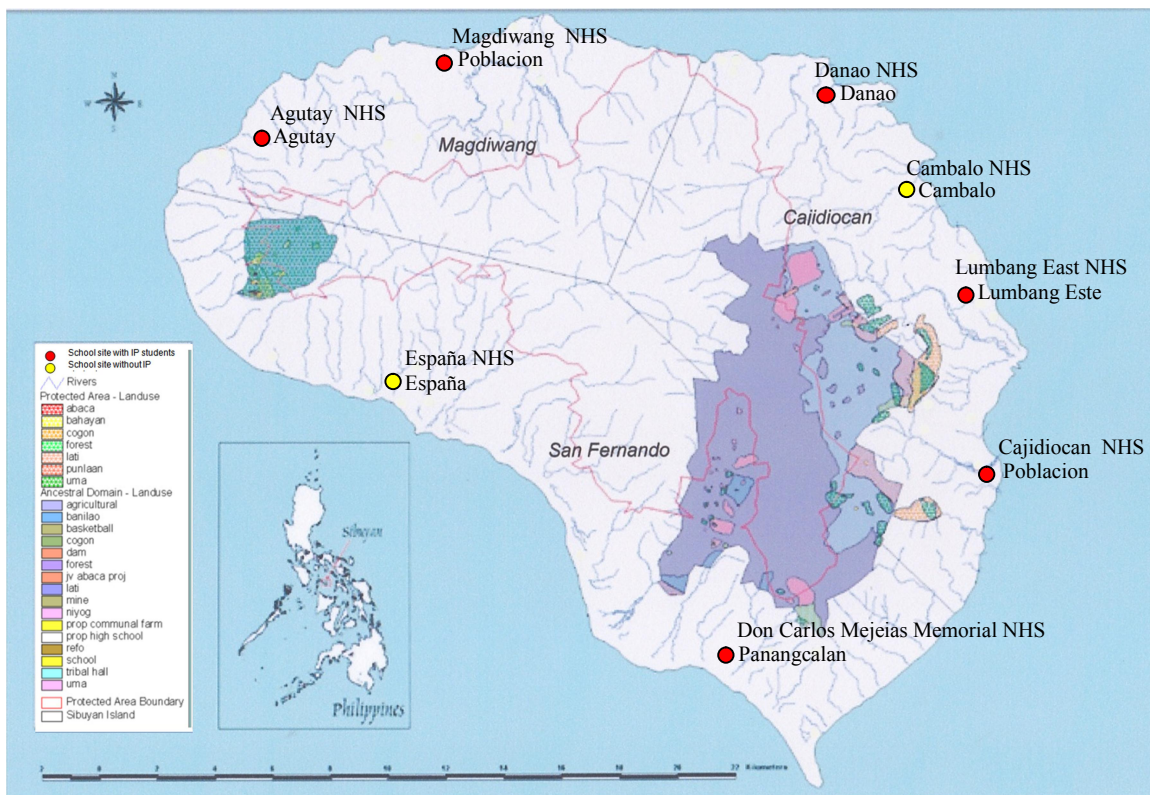


Figure 2. Location of public secondary schools in Sibuyan Island.

## Respondents

The respondents of this study are the 100% Mangyan Tagabukid high school students with a total of three hundred thirty three (333) students enrolled in six public secondary schools during the School Year 2015-2016 in the three municipalities of Sibuyan Island namely Cajidiocan, Magdiwang and San Fernando.

Table 1. Distribution of Mangyan Tagabukid High School Students by Municipalities, School, Grade Level And Sex

MUNICIPALITY/SCHOOL	Grade Level	Male	Female	Total
<b>CAJIDIOCAN</b>				
Cajidiocan National High School	7	0	0	0
	8	0	1	1
	9	2	2	4
	10	<b>0</b>	<b>2</b>	<b>2</b>
Total		<b>2</b>	<b>5</b>	<b>7</b>
Lumbang East National High School	7	5	10	15
	8	10	9	19
	9	12	9	21
	10	4	10	14
Total		<b>31</b>	<b>38</b>	<b>69</b>
Danao National High School	7	9	13	22
	8	5	10	15
	9	1	14	15
	10	3	8	11
Total		<b>18</b>	<b>45</b>	<b>63</b>
<b>MAGDIWANG</b>				
Magdiwang National High School	7	<b>3</b>	6	9
	8	2	7	9
	9	8	8	16
	10	4	5	9
Total		<b>17</b>	<b>26</b>	<b>43</b>
Agutay National High School	7	14	18	32
	8	16	13	29
	9	26	17	43
	10	16	13	29
Total		<b>72</b>	<b>61</b>	<b>133</b>
<b>SAN FERNANDO</b>				
Don Carlos Mejeias Memorial National High School	7	2	4	6
	8	2	1	3
	9	3	5	8
	10	1	2	3
Total		<b>8</b>	<b>12</b>	<b>20</b>
<b>GRAND TOTAL</b>				<b>333</b>

### **Formulation of Questionnaire**

In order to determine the socio-economic and cultural variables among Mangyan Tagabukid high school students, the researcher will make use of a questionnaire. This questionnaire contains the different socio-economic variables that include age, gender, religion, family income, parent/guardian's occupation, parent/guardian's educational attainment, residence location. Cultural variables include values, beliefs, norms, language, literature and arts that may affect the level of environmental awareness among Mangyan Tagabukid high school students.

For the respondents' level of environmental awareness, the researcher will employ the Likert Scale with five alternative ratings as 5- Extremely aware, 4- Moderately aware, 3- Somewhat aware, 2- Slightly aware and 1- Not at all aware. This rating scale contains items in different areas of environmental awareness such as balance with nature, environmental pollution, stewardship, solid waste management, biodiversity stability and climate change.

Using the collection of ideas from books, periodicals, theses, dissertations, magazines and journals that the researcher took into account on this study, she was able to formulate and construct the Environmental Awareness Rating Scale (EARS), an instrument to be used for investigation.

### **Validation of Questionnaire**

Validation of instrument will be done in consultation with several experts in this field of study. A trial survey will be conducted toward the improvement of the questionnaire.

### **Data Collection and Source of Data**

Since the scope and conduct of the study entailed some effort and time for the sampled schools in the province, a permit will be requested from the Schools Division Superintendent of the Division of Romblon. In the same manner, a letter requesting permission to conduct the study will be sent to all concerned public secondary school heads and principals particularly on the administration of questionnaire and rating scales in a scheduled visit.

Once the request is approved, the researcher will start gathering the data through administration of questionnaire and environmental awareness scale to the eight public secondary schools.

### **Scoring the Instrument**

The responses for every question in the Environmental Awareness Scale will be rated using the qualitative bases for the interpretation of results.

The equivalent weights for the answers are as follows:

4.51 – 5.00 Extremely aware

3.51 - 4.50 Moderately aware

2.51 – 3.50 Somewhat aware

1.51 – 2.50 Slightly aware

0.51 – 1.50 Not at all aware

### **Methods of Data Processing and Analysis**

All data will be tallied, tabulated and analyzed. Tables will be used to illustrate the gathered data.

The following statistical tools will be applied:

1. Frequency counts and percentage will be used to determine the profile of the respondents in terms of socio-economic and cultural variables.
2. Weighted mean will be applied in determining the level of environmental awareness in terms of their socio-economic and cultural variables.
3. Pearson Product-Moment Coefficient of Correlation will be used to. Determine the relationship between socio-economic as well as cultural and level of environmental awareness.
4. One Factor Analysis of Variance will be used in determining the significant differences of the level of environmental awareness of students in different high schools and across municipalities.

Data will be encoded and treated in a computer using Statistical Package for Social Science (SPSS) application.

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## Appendix A. Questionnaire on Socio-economic Variables

### Questionnaire on Socio-economic

**Directions:** Put a check mark (✓) on the circle of the option that corresponds to *Panuto: Lagyan ng tsek (✓) and bilog ang pagpipilian na tumutugma sa iyong pang- your socio-economic profile. Please answer all items honestly. Your answer will Sosyoekonomikong kalagayan. Matapat na pakisagutan ang lahat ng bilang. Ang iyong held strictly confidential and will be used for research purpose only. sagot ay itatago ng pribado at sekreto na tanging gagamitin lamang sa pananaliksik.*

Name (Optional) \_\_\_\_\_  
*Pangalan (Maaring huwag nang lagyan)*

1. Age in years  
*Gulang ayong sa bilang ng taon*  
 12-13  
 14-15  
 16-17  
 18-19  
 20 years and above (*20 taon at mahigit pa*)
  
2. Gender (*Kasarian*)  
 Male (*Lalaki*)  
 Female (*Babae*)
  
3. Religion (*Relihiyon*)  
 Catholic  
 Iglesia ni Cristo  
 Seventh Day Adventist  
 Aglipayan  
 Four Square  
 Others (Please specify) \_\_\_\_\_  
*At iba pa (Pakisulat na lang)*

4. Parent's/Guardian's Occupation (*Trabaho ng magulang o tagapag-alaga*)
- Swiddener (*Mag-uuma*)
  - Farmer (*Magsasaka*)
  - Self-Employed (*May sariling negosyong pinagkakakitaan*)
  - Government employee (*Empleyado ng gobyerno*)
  - Private employee (*Empleyado ng pribadong sector*)
  - Others (Please specify) \_\_\_\_\_  
*At iba pa (Pakisulat na lang)*
5. Monthly Family Income (*Buwanang kinikita ng pamilya*)
- Below Php 7,890.00
  - Php 7,890.00 – 15,779.00
  - Php 15,780.00 – 31,559.00
  - Php 31,560.00 – 78, 899.00
  - Php 78,900.00 – 118,349.00
  - Php 118,350.00 – 157,799.00
  - Php 157,000.00 and above
6. Household size (*Bilang ng miyembro ng pamilya na nakatira sa inyong bahay*)
- Three (*tatlo*)
  - Four (*apat*)
  - Five (*lima*)
  - Six (*anim*)
  - Seven and above (*pito at higit pa*)
7. Parent's/Guardian's Educational Attainment (*Antas ng pag-aaral na naabot ng mga magulang o tagapag-alaga*)
- None (*Wala*)
  - Alternative Learning System Elementary (*ALS, Elementarya*)

- Elementary (*Elementarya*)
- Alternative Learning System Secondary (*ALS Sekondarya*)
- High School (*Sekondarya*)
- Vocational/Technical course (*Bokasyonal/Teknical na kurso*)
- College (*Kolehiyo*)
- Others ( Please specify) \_\_\_\_\_

*At iba pa (Pakisulat na lang)*

8. Residence Location (*Lokasyon ng tirahan*)
  - Upland (*Nasa maatas na bahagi o kaya'y nasa bukid o bundok*)
  - Lowland (*Nasa kapatagan*)
9. School location (*Lokasyon ng paaralang pinapasukan*)
  - Barangay (*Baranggay*)
  - Town (*bayan*)

### Questionnaire on Socio-economic Variables

Name (Optional) \_\_\_\_\_

**Directions:** Put a check mark ( / ) on the circle of the option that corresponds to *Panuto: Lagyan ng tsek ( / ) ang bilog ng pagpipilian na tumutugma sa iyong pang-cultural perception. Please answer all items honestly. Your answer will be held Kuturang pananaw. Matapat na pakisagutan ang lahat ng bilang. Ang iyong sagot ay your strictly confidential and will be used for research purpose only. itatago ng pribado at sekreto na tanging gagamitin lamang sa pananaliksik.*

1. Which of the following environmental values could you classify yourself?  
*Alin sa mga sumusunod na pagpapahalagang pangkapaligiran maibibilang mo ang iyong sarili?*
  - My concern to the environment is for my own interest. **(egoistic)**  
*Ang aking pag-aalala sa kapaligiran ay para sa aking sariling kapakanan.*
  - My concern to the environment is for the welfare of other people. **(altruistic)**  
*Ang aking pag-aalala sa kapaligiran ay para sa kapakanan ng lahat ng tao.*
  - My concern is for the Earth's surface, atmosphere and sea that is inhabited by living things. **(Biospheric)**  
*Ang aking pag-aalala ay para sa mundo, sa kalawakan at karagatan kung saan pinanahanan ng lahat ng bagay na may buhay.*
  
2. What is your belief about the environment?  
*Ano ang iyong paniniwala sa tinatawag n kapaligiran?*
  - I believe in the interconnectedness of all organisms including human in the natural environment. **(Biocentric)**  
*Ako ay naniniwala sa pagkakakonekta ng lahat ng organism kasama na ang tao sa ating likas na kapaligiran.*
  - I believe that human and their existence is the most and central fact in the universe. **(Anthropogenic)**  
*Ako ay naniniwala na ang tao at ang kanyang presensya ang pinaka importanteng katotohanan sa buong mundo.*
  
3. Which of the two environmental norms do you follow?  
*Alin sa dalawang pangkalikasang pamantayan ang iyong sinusunod?*
  - I consider that natural environment of the Earth in common is for the past, present, future and future generation. **(Intergenerational Equity)**



*Kinokonsidera ko ang likas na kapaligiran ng mundo para sa nakaraan, kasalukuyan at sa susunod na henerasyon.*

- I consider that natural environment of the Earth in common is for the present generation. (Intragenerational Equity)

*Kinokonsidera ko na ang likas na kapaligiran ng mundo ay para sa kasalukuyang henerasyon.*

4. Which of the following languages do you use often at home?

*Alin sa mga sumusunod na lengwahe ang madalas mong ginagamit sa bahay?*

- Aklanon
- Hiligaynon
- Sibuyanon
- Filipino
- English
- Others (Please specify) \_\_\_\_\_

*At iba pa (Pakisulat na lang)*

5. Which of the literature and arts do you and your family members still practice at home?

*Anong literature at sining ang kasalukuyan ninyongginagawa sa bahay kasama ang ibang miyembro ng pamilya?*

- folksong - *composo*
- ethnic dance - *Kayutang*
- Paintings - *pakudos*
- Poetry - *Urukay*
- Others (Please specify) \_\_\_\_\_

*At iba pa (Pakisulat na lang)*

## Appendix B. Environmental Awareness Rating Scale

### ENVIRONMENTAL AWARENESS RATING SCALE

*(Eskalang Tayaang Pangkapaligirang Kamalayan)*

Name (Optional) \_\_\_\_\_

*Pangalan (Maaring huwag ng lagyan)*

Directions: Please evaluate the following items using the scale below. Encircle your rating.

*(Panuto: Paki taya ng mga sumusunod na aytem gamit ang eskalang nasa ibaba. Bilugan ang iyong sagot)*

Scale	Descriptive Rating
<i>(Eskala)</i>	<i>(Diskripyong Pagtataya)</i>
5 -	Extremely aware <i>(Mas malaki ang aking kamalayan)</i>
4 -	Moderately aware <i>(Di gaanong malaki ang aking kamalayan)</i>
3 -	Somewhat aware <i>(Kaunti ang aking kamalayan)</i>
2 -	Slightly aware <i>(Kakaunti ang aking kamalayan)</i>
1 -	Not at all aware <i>(Wala akong kamalayan)</i>

<b>A. Balance with Nature <i>(Balanseng Kalikasan)</i></b>		<b>Rating</b>				
1.	Living things cannot live without the environment. <i>Lahat ng nilalang na may buhay ay hindi mabubuhay kung wala ang kapaligiran.</i>	5	4	3	2	1
2.	Forest provides food, medicine and vital resources for man. <i>Ang gubat ay nakakapagbigay sa atin ng pagkain at gamot at iba pang pangunahing pangangailangan.</i>	5	4	3	2	1
3.	Resources are affected by population size and management. <i>Ang mga likas na yaman ay naapektuhan ng dami ng populasyon at paraan ng pangangalaga nito.</i>	5	4	3	2	1
4.	An appreciation of the beauty of nature enhances our commitment to protect it. <i>Ang pagtanaw natin sa kagandahan ng paligid ay nakakatulong sa ating obligasyong pangalagaan ito.</i>	5	4	3	2	1
5.	Our main concern is to preserve the quality and beauty of nature. <i>An ating pinakalayunin ang pangalagaan ang kalidad at kagandahan ng ating kapaligiran.</i>	5	4	3	2	1
6.	Our task is to help preserve the balance, harmony and completeness of nature. <i>Obligasyon natin na tumulong sa pagpapanatili ng balanse,</i>	5	4	3	2	1

	<i>kaaya-aya at kompletong kapaligiran.</i>					
7.	Our support to “Clean and Green” program will help to preserve the beauty of nature. <i>Ang ating suporta sa “Malinis at Berdeng” programa ay makakatulong sa pagpapanatili sa kagandahan ng paligid.</i>	5	4	3	2	1
8.	The Philippines is rich in natural resources. <i>Ang Pilipinas ay mayaman sa likas na yaman.</i>	5	4	3	2	1
9.	The balance of nature is very delicate and easily upset, therefore proper management is very important. <i>Ang balanseng kalikasan natin ay sobrang delikado at madaling masira kung kaya importante ang tamang pangangalaga.</i>	5	4	3	2	1
10.	The Department of Environment and Natural Resources is the primary government agency responsible for environmental management. <i>Ang Kagawaran ng Kalikasan at Likas na Yaman ay ang pangunahing ahensya ng gobyerno na responsable sa pangangalaga ng kalikasan.</i>	5	4	3	2	1
<b>B. Environmental Pollution</b>						
1.	We should be against the pollution of the environment; land, sea and air. <i>Dapat lahat tayo’y hindi sang-ayon sa polusyon ng kapaligiran na maaring mapunta sa lupa, hangin at tubig.</i>	5	4	3	2	1
2.	Chemical fertilizers and insecticides damage the vitamins and minerals of the soil. <i>Ang mga pataba at mga pamuksa sa insekto na gawa sa hindi organikong kemikal ay nakakasira ng mga bitamina ng halaman at minerals ng lupa.</i>	5	4	3	2	1
3.	Pollution not only diminishes the quality of life but it shortens life itself. <i>Ang polusyon ay hindi lang nakakapagpababa ng kalidad ng buhay, subalit ito ay nakakapagpaiksi ng buhay.</i>	5	4	3	2	1
4.	Pollution can be minimized if people give attention to it. <i>Ang polusyon ay maiiwasan kung ito ay binibigyan natin ng pansin.</i>	5	4	3	2	1
5.	The burning of garbage and waste products can contribute to the greenhouse effect. <i>Ang pagsusunog ng mga basura ay nakakadagdag sa maiinit na kapaligiran.</i>	5	4	3	2	1
6.	Using aerosol sprays contribute to ozone depletion. <i>Ang paggamit ng mga kemikal na pamuksa sa iba’t ibang insekto ay nakakadagdag sa pakasira ng natural at preskong hangin.</i>	5	4	3	2	1
7.	Smoking contributes air pollution that can cause diseases.	5	4	3	2	1

	<i>Ang paninigarilyo ay nakakadagdag ng polusyon sa hangin na nagiging sanhi ng maraming sakit.</i>					
8.	Many diseases are cause environmental pollution. <i>Ang polusyon sa kapaligiran ang naging sanhi ng maraming sakit ng tao.</i>	5	4	3	2	1
9.	Many species of plants and animals have become endangered or are now extinct because of pollution. <i>Marami sa mga uri ng halaman at hayop ang kakaunti na lamang ang bilang dahil sa polusyon.</i>	5	4	3	2	1
10.	Highly industrialized nations bear much responsibility of the pollution of the sea. <i>Ang mga mauunlad na bansa ang may pinakamalaking responsibilidad sa polusyon sa dagat.</i>	5	4	3	2	1
<b>C. Stewardship (Tagapagpangalaga)</b>						
1.	Every individual is a steward of nature. <i>Ang bawat isa ay tagapangalaga ng kalikasan.</i>	5	4	3	2	1
2.	Large and rapid population growth puts pressure on the environment. <i>Ang lumalago at dumaraming bilang ng tao ay nakakadagdag sa bigat ng kapaligiran.</i>	5	4	3	2	1
3.	The environment can catch up the population's demand if people know how to manage resources. <i>Ang ating kapaligiran ay kayang ibigay ang pangangailangan ng tao kung tayo ay marunong mamahala nito.</i>	5	4	3	2	1
4.	Every man is accountable for the proper management of the Earth. <i>Ang bawat isa ay may kaukulang responsibilidad sa tamang pamamahala ng mundo.</i>	5	4	3	2	1
5.	Stewardship makes people aware of the proper utilization and preservation of environment. <i>Ang pagiging tagapangalaga ng kapaligiran ay nagbibigay ng kaalaman sa tamang paggamit at pagpapanatili nito.</i>	5	4	3	2	1
6.	Irresponsible stewardship will result to poverty. <i>Ang hindi tamang pangangalaga ng kapaligiran ay magreresulta sa kahirapan.</i>	5	4	3	2	1
7.	Nature provides everything that is necessary to sustain life; therefore people should properly manage it. <i>Ang ating kalikasan ay nagbibigay ng lahat ng kailangan ng tao para mabuhay, kaya dapat natin itong pangalagaan.</i>	5	4	3	2	1
8.	Some of the natural resources are diminished and destroyed by irresponsible people. <i>Ang ibang likas na yaman ay nagiging kakaunti at nasisira dahil sa mga iresponsableng tao.</i>	5	4	3	2	1
9.	Children at their young age should be taught of					

	environmentally friendly practices. <i>Ang mga bata sa kanilang murang edad ay dapat nang turuan ng mga makakalikasang gawain.</i>	5	4	3	2	1
10.	Indigenous communities are partners of the government in conserving and protecting the ancestral sites. <i>Ang mga komunidad na binubuo ng mga katutubo ang katuwang ng pamahalaan sa pagprotekta ng mga lugar na minana mula sa mga ninuno.</i>	5	4	3	2	1
<b>D. Solid Waste Management</b>						
1.	Kitchen garbage and garden waste can be made into compost. <i>Basurang mula sa mga balat ng gulay at prutas sa kusina ay maaaring gawing pataba sa mga pananim.</i>	5	4	3	2	1
2.	Improper handling of toxic and hazardous waste can create harm to human beings and to the environment. <i>Ang hindi maingat na pagtapon ng nakalalason at delikadong mga basura ay makapagbibigay ng panganib sa tao at sa kapaligiran.</i>	5	4	3	2	1
3.	Buying environmentally friendly products (not pack in disposable or plastic bags) can lessen waste accumulation. <i>Ang pagbili ng mga produktong hindi nababalot sa mga "disposables" o plastic ay nakakabawas ng pagdami ng basura.</i>	5	4	3	2	1
4.	Bottles, cans and plastics can be recycled instead of throwing them away. <i>Gumawa ng kapakipakinabang na mga bagay mula sa mga bote, lata at plastic sa halip na itapon.</i>	5	4	3	2	1
5.	Some waste products can be recycled into useful materials. <i>Ang ibang mga basura ay pwede nating gawing kapakipakinabang na mga bagay.</i>	5	4	3	2	1
6.	More solid waste generated will lead to raise the atmospheric temperature. <i>Kung mas maraming basura ang nabubuo sa paligid, magiging dahilan ito ng pagtaas ng temperatura sa kapaligiran.</i>	5	4	3	2	1
7.	It is best to minimize the waste generation at home level. <i>Pinakamainam na bawasan ang dami ng mga basura na nabubuo sa ating mga tahanan.</i>	5	4	3	2	1
8.	Segregation of biodegradable and non-biodegradable is a good practice. <i>Ang paghihiwalay ng mga nabubulok sa di-nabubublok ay</i>	5	4	3	2	1

	<i>isang mainam na Gawain</i>					
9.	Throwing waste in rivers, lakes and seas causes water pollution. <i>Ang pagtatapon ng basura sa ilog, laot at dagat ay nagigigng sanhi ng polusyon sa tubig.</i>	5	4	3	2	1
10.	Plants and animals are affected by waste accumulation. <i>Ang mga halaman at mga hayop ay naapektuhan sa mga basurang nakatambak.</i>	5	4	3	2	1
<b>E. Biodiversity and Stability</b>						
1.	Mount Guiting-Guiting is one of the world's highest concentrations of biodiversity. <i>Ang bundok ng Guiting-Guiting ay isa sa may pinakamataas na bilang ng iba't ibang uri ng hayop at halaman sa mundo.</i>	5	4	3	2	1
2.	Establishment of natural parks can conserve wildlife habitat. <i>Ang pagtatatag ng mga parkeng kalikasan (hal. Mount Guiting-Guiting Natural Park) ay nakapagpapanatili sa mga tirahan ng mga ligaw na hayop sa gubat.</i>	5	4	3	2	1
3.	Wise utilization of natural resources will provide prosperity throughout generations. <i>Ang tamang paggamit ng ating likas na yaman ay makapagbibigay ng kasaganaan sa lahat ng henerasyon.</i>	5	4	3	2	1
4.	A sustainable society is one that satisfies its needs without putting at risk the future generation. <i>Ang pamilyan na may balanseng kalikasan ay natutustusan ang lahat ng pangailangan na hindi nasasakripisyo ang susunod na henerasyon.</i>	5	4	3	2	1
5.	Habitat destruction and pollution are reducing the Earth's biological diversity. <i>Ang pagsira sa mga tirahan ng mga hayop at ang polusyon ang napagpapababa ng dami ng organismong may buhay sa mundo.</i>	5	4	3	2	1
6.	Clean rivers will provide freshwater fishes and shellfishes. <i>Ang malinis na ilog ay makapagbibigay ng mga isda at iba pang yamang tubig na nabubuhay dito.</i>	5	4	3	2	1
7.	The careless cutting of trees and kaingin has resulted in the reckless destruction of our forest. <i>Ang walang habas na pagputol ng kahoy at ang kaingin ang daging dahilan ng walang kabuluhang pagkasira ng kagubatan.</i>	5	4	3	2	1
8.	Wildlife habitat is endangered due illegal logging. <i>Ang tirahan ng mga ligaw na hayop ay nanganganib mawala dahil sa patuloy na pagputol ng kahoy na hindi</i>	5	4	3	2	1

	<i>pinahihintulutan ng batas.</i>					
9.	Tree planting program develops deep sense of responsibility in building a healthful environment. <i>Ang programang pagtatanim ng kahoy ay nakapagpaunlad ng kamalayan ng tao sa kanyang responsibilidad sa sa pagbuo ng isang malusog na kapaligiran.</i>	5	4	3	2	1
10.	Preserving wildlife areas are of great value in perpetuating endangered species. <i>Ang pagprotekta sa mga lugar na pinanahanan ng mga ligaw na hayop at halaman ay isang mainam na gawain upang mapanatili ang mga nanganganib mawala na mga hayop.</i>	5	4	3	2	1
<b>F. Climate Change</b>						
1.	Climate change is a global problem. <i>Ang pagbabago ng klima ay problemang pandaigdig.</i>	5	4	3	2	1
2.	Global climate change and loss of biodiversity is due to destruction forests. <i>Ang pandaigdigang pagbabago ng klima at pagkawala ng maraming uri ng hahop at halaman ay dahil sa pagsira ng kagubatan.</i>	5	4	3	2	1
3.	Crop production is at great risk during extreme weather event. <i>Nagiging delikado ang dami ng ani sa agrikultura sa sobrang init at sobrang ulan.</i>	5	4	3	2	1
4.	Landslides and flash floods destroy the land houses. <i>Ang pagguho ng lupa at biglaang pagbaha ay nakakasira ng lupain at mga bahay.</i>					
5.	Climate change increases weed and pest population. <i>Ang pagbabago ng klima ay nakakadagdag ng dami ng mga damo at peste sa sa mga taniman.</i>	5	4	3	2	1
6.	The Philippines is highly vulnerable to the adverse impact of climate change. <i>Ang Pilipinas ay marupok o may mahinang depensa sa negatibong epekto ng pagbabago ng klima</i>	5	4	3	2	1
7.	Climate change's impact on the country is often associated with extreme weather disturbances such as typhoons and floods. <i>Ang epekto ng pagbabago ng klima sa ating bansa ay karaniwang nauugnay sa sobrang mapinsalang kalamidad na tulad ng bagyo at baha.</i>	5	4	3	2	1
8.	Climate change alters crop suitability.					

	<i>Ang pagbabago ng klima ay nakapagbabago din ng uri ng panamin na maaaring itanim sa isang uri ng lupa.</i>	5	4	3	2	1
9.	Seasonal changes in rainfall and temperature could alter growing seasons. <i>Ang panapanahong pagbabago ng pagbagsak ng ulan at pagbabago ng temperatura ay nakapagbabago din sa panahon ng taniman.</i>	5	4	3	2	1
10.	Climate change can impact the marine, terrestrial, agricultural systems. <i>Ang pagbabago ng klima ay nakakaapekto sa karagatan, kalupaan at sistemang pang agrikultura.</i>	5	4	3	2	1

## Sources:

Environmental Awareness Questionnaire by Napere as cited by Ejem and Bello, 2013.  
Structured Questionnaire on Farmers Awareness and Knowledge on Climate Change by Ngilangil et al., 2013.





Republic of the Philippines  
ROMBLON STATE UNIVERSITY  
Odiongan Main Campus  
Odiongan, Romblon

February 19, 2015

ROGER F. CAPA  
Schools Division Superintendent  
Division of Romblon  
Romblon, Romblon

Dear Sir:

Greetings!

In line with the requirements for the degree Master of Arts in Education major in Science, I am currently working in my thesis entitled "Socio-economic and Cultural Variables and Level of Environmental Awareness of Mangyan Tagabukid High School Students of Sibuyan Island: A Case Study" at Romblon State University Odiongan, Romblon.

In this connection, I would like to request permission from your good office to allow me to conduct research in eight secondary schools in Sibuyan Island where Mangyan Tagabukid students are enrolled.

I believe that your cooperation will be of great help for my study and I will be grateful if you will permit me to do so.

Your kind support and action in this most-valued request will be highly appreciated.

Thank you and more power.

Very truly yours,

ROSEMIN F. RABIDA  
Researcher

Noted:

MELBA M. MADEJA. Ph.D.  
Thesis Adviser

Approved by:

ROGER F. CAPA  
Schools Division Superintendent

**Appendix D. Letter of Request to the Principals and Heads of School**

Republic of the Philippines  
ROMBLON STATE UNIVERSITY  
Odiongan Main Campus  
Odiongan, Romblon

February 22, 2015

NAZARINE R. ROMANO  
Principal II  
Don Carlos Mejeias Memorial National High School  
Panangcalan, San Fernando, Romblon

Sir:

I am a Masteral Student of the College of Graduate Studies of Romblon State University, Odiongan, Romblon. At present, I am working in my Masteral Thesis entitled "Socio-economic and Cultural Variables and Level of Environmental Awareness of Mangyan Tagabukid High School Students of Sibuyan Island: A Case Study".

In lieu of the above mentioned study, I respectfully request your good office to permit me to distribute the questionnaire and environmental awareness rating scale to your Mangyan Tagabukid students.

Attached herewith is the approved request from the Schools Division Superintendent.

Your immediate and favorable action regarding this matter will be appreciated.

Thank you and more power.

Very truly yours,

ROSEMIN F. RABIDA  
Researcher

Noted:

MELBA F. MADEJA, Ph.D.  
Adviser

Approved by:

NAZARINE R. ROMANO  
Principal II

**Appendix E. Letter of Request for the Respondents**

Republic of the Philippines  
ROMBLON STATE UNIVERSITY  
Odiongan Main Campus  
Odiongan, Romblon

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February 22, 2015

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Dear Respondent,

Greetings!

The undersigned is presently conducting a study on “Socio-economic and Cultural Variables and Level of Environmental Awareness of Mangyan Tagabukid High School Students of Sibuyan Island: A Case Study” as my thesis.

In this connection, may I request you to accomplish the attached questionnaire and Environmental Awareness Rating Scale.

Your cooperation will certainly contribute to the success of this study.

Rest assured that the information gathered will be held in strict confidence.

Thank you very much.

Sincerely yours,

ROSEMIN F. RABIDA  
Researcher