



Knowledge, Attitude, & Practice Regarding Environmental Hazards of Plastic Use

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ABSTRACT

This study looks into the knowledge, attitude, and practice of Barangay Bachao, Daram, Samar regarding environmental hazards of plastic use. Specifically, it aims to: 1) identify the knowledge or information that residents possess regarding the danger of plastic use; 2) find out their attitude towards the use of plastic and the hazards it carries; and 3) identify their practices that might mitigate or perpetuate the hazards. Both quantitative and qualitative research designs were employed in the study. A survey was conducted among the 78 residents of the barangay and non-numerical data were also gathered from unstructured interviews

Keywords: Plastic, Environmental Hazards

Introduction

It is a fact that the use of plastic is tantamount to convenience and an additional fact that people and institutions in all levels are using it substantially on a daily basis. The OECD (2018) reported that such convenience stems from the properties of plastic itself which include its high strength to weight ratio which can convert it to a number of shapes easily, being water resistant, and its ability to stand against physical and chemical degradation. The sectors that evidently show much use of plastic are packaging, textiles, consumer, transport, electrical, construction and industrial machinery. However, the same report also emphasized the downside and the scare of continuous and unmanageable use of plastics: greenhouse gas emissions and plastics pollution.

To give a quick figure, approximately 6,300 million tonnes of plastic waste have been generated from 1950 – 2015 and while 10% of global plastics waste generation in 2010 was mismanaged substantially by the following countries: China, Indonesia, Philippines, Vietnam, Sri Lanka, Thailand, Egypt, Malaysia, Nigeria and Bangladesh. On the other hand, the top countries identified as best recyclers are Germany, Wales, Singapore, South Korea, Taiwan, Netherlands, Austria, Slovenia, Belgium, Switzerland, Italy, Luxembourg, Sweden, Denmark, Scotland, Norway, England, Poland, and Northern Ireland, Australia, Finland, France, and Hong Kong (EEB, 2017).

It can be surmised that as a response to such challenge, sustainable consumption has, for

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more than a decade, strongly become an integral part of all levels of conversation, media, institutional advocacies, public policies, among others. It was in 1992¹ when the challenge on sustainable consumption surfaced as primary concern and after 10 years² the international community was called upon to establish a framework that promotes sustainable consumption (WBCSD, 2008). By definition³, *sustainable production and consumption is the use of goods and services that respond to basic needs and bring a better quality of life, while minimising the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardise the needs of future generations* (WBCSD, 2008). Meanwhile, in 2015, the United Nations pronounced the 17 Sustainable Development Goals (SDGs) upon its adoption of The 2030 Agenda for Sustainable Development which centres on the protection of the planet and the people. Relative to this, the Philippine Development Plan 2017-2022 also aligns its development path on the SDGs and puts forward weight of its implementation.

In fact, the SDG 12 is on *Responsible Consumption and Production* which puts emphasis on the health of the planet and the sustainability on the use of natural resources amidst scarcity as its nature (UN, 2020). A common action promoting this goal is on the mindfulness in the use of plastics. The public, private, and NGO sectors around the world have taken individual and collective efforts in order to mitigate the use of plastics. Hence, the call for awareness and discipline in the use of plastic is becoming very clear with its magnified perils to human health and to the environment and its repercussions to the economy as a whole should health and environment degradation persist.

¹ United Nations Conference on Environment and Development in Rio de Janeiro

² World Summit on Sustainable Development in Johannesburg

It is common knowledge that international and national policies are expected to be implemented at the local level so that reforms will commence at the single or individual units of the society in order to collectively reap its objectives. There is evidently a close correspondence of commitments and deeper understanding of the objectives of certain policy directions. A number of countries, both developed and developing have been paying so much attention on this. Some have even embarked on sustainable methods proven to be successful.

This study focuses on the awareness of the Barangay Bachao, Daram, Samar regarding the hazards of using plastic. It is interesting to look into this area in the said Barangay since aside from being located in an island, the biggest composition of its population⁴ is between 10-14 years old thus the necessity that awareness on the hazard be inculcated in the minds of the youth and that the residents should be alarmed of the hazards as to keep away from the dangerous habit of throwing plastic garbage into the sea or water channels.

Objective:

This study aims to assess the knowledge, attitude, and practice of Bgy, Bachao, Daram, Samar. Specifically, it aims to:

- 1) Identify the knowledge or information that residents possess regarding the danger of plastic use;
- 2) Find out their attitude towards the use of plastic and the hazards it carries; and
- 3) Identify their practices that might mitigate or perpetuate the hazards.

Methodology:

The study employed both quantitative and qualitative research designs. A survey was conducted among the 78 residents and non-

³ United Nations Commission on Sustainable Development (UNCSD), Symposium on Sustainable Consumption, Oslo, 1994.

⁴ 2015 Census

numerical data were also gathered from unstructured interviews. The selection was adopted from the study of Adane and Muleta (2011) in which the respondents were selected through random sampling. *The selection was made from neighboring households which were in the distance of 50 to 100 meters from each other. Among the visited households, at least one member of the family was picked randomly for the study regardless of his/her age, educational status. Sex and occupation as long as he/she was willing.*

The tool for this study is also aligned from the said paper.

Results and Discussion

Table 1

Age	Frequency	Percentage
10 - 15	5	6.41
16-20	29	37.18
21-25	9	11.54
26-30	10	12.82
31-35	12	15.38
36-40	7	8.97
41-45	4	5.13
46-50	2	2.56
50 above	0	0

The age distribution of the respondents is highly concentrated between 16-20. This is partly because this cohort is relatively immediately available during the survey amid the pandemic related stay at home restriction. They may also be the ones interested on social and environmental issues being a topic in mainstream academic instruction. On one hand, this is interesting since it was reported that a survey commissioned by RECOUP and PlasticsEurope, found out that young people show lack of awareness on plastic waste recycling with reasons like lack of information and confusion as to how to deal with plastic wastes.

Table 2

Highest Educational Attainment	Frequency	Percentage
Elementary	18	23.08
High School	51	65.38
College	9	11.54

Corresponding to the age distribution in the previous table, Table 2 shows that majority of the respondents have completed high school or continuing high school. For the latter, this is a potential ground to inculcate significant awareness regarding the hazards of plastic usage.

Table 3

Civil Status	Frequency	Percentage
Single	37	47.44
Married	41	52.56

As shown, majority of the respondents are married.

Table 4

What are the types of plastic products that you commonly used?	Frequency	Percentage
Plastic bags	78	100
Plastic bottles	78	100
Kitchen/Household wares	78	10

Table 4 shows that the respondents have used all the enumerated plastics perhaps often, sometimes, or most of the time. What is clear is that the use of plastics has grown on them – making it an essential part of their everyday. And even enough to say that their everyday errands and chores have been attached to plastic products.

Table 5

Why do you use plastic products?	Frequency	Percentage
Low price	46	58.97
Easy availability	56	71.79
Light weight	69	88.46
No alternative	52	66.67
Durability	66	84.62

When asked as to why they resort to plastics. Each of the choices were considered and maybe not to anyone's surprise but the choice for each reason if a considerable weight. When asked if they assessed these benefits before attempting to use plastics, the respondents said that they did not necessarily have doubts since they have long observed that the use of it has been a way of life already. But when asked upfront as to why use it and what benefits do they get, they can certainly put on a list.

Table 6

How do you dispose your plastic waste	Frequency	Percentage
Open dumping	65	83.33
Burning	25	32.05
Burying	26	33.33

When asked about disposal, most of the time they resort to open dumping. However, a significant percentage resort to burning and burying which clearly contributes to environmental degradation. This is aligned to the pronouncement of the National Geographic that a lot of plastics, especially single use plastics end up in the environment. Specifically, as of today, 12 percent of plastic wastes are incarcerated while 79 percent are accumulating in landfill, dumps and open environment. It also mentioned that of the 8.3 billion tonnes of plastic produced since the 1950s, 60% of which ended in a landfill or a natural environment.

Table 7

What problems associated with plastic wastes are you aware of?	Frequency	Percentage
Animal death	34	43.59
Blockage of sewage systems	67	85.90
Destruction of the natural beauty of the environment	72	92.31
Human health problems	75	96.15

When finally asked if they are aware of problems associated with plastic waste disposal, the response is appreciable especially that almost all of the respondents claim to know the danger towards sewage systems (as they said floods are always blamed on the improper disposal of plastic); to the destruction of the natural beauty of the environment (respondents claim that when heat is too much to bear, if oceans or bodies of water are dumped with plastic wastes, they would always revert to the irresponsible plastic waste management); and more importantly to human health – they said that humans breathe the secretions of the plastic wastes and breathe as well the fumes after burning it.

Table 8

Where do get information about problems associated with plastic wastes?	Frequency	Percentage
Radio/TV	73	93.59
Professionals	1	1.28
Word of Mouth	34	43.59
School	39	50.00
Published materials	0	0.00

In terms of sources of information, most say that they get it from television and radio. This is

understandable since these are the common appliances left turned on to convey news of all kind. But worth it to note that significant bulk of information come from the academe (since most of the respondents have finished or are continuing high school) and from word of mouth. This goes to say that the issue is not dormant and it is immersed into the different levels of the society.

Table 9

Do you believe that lack of awareness on the danger of plastic use is the reason why people are still dependent on it?	Frequency	Percentage
Yes	11	14.10
No	2	2.56
Undecided	65	83.33

On their assessment if the lack of awareness on the hazards of using plastic is the reason why people still use plastic, most of the respondents are undecided. When asked, they said they know the hazards and are also afraid of the danger but they are still into using plastic even on a daily basis. It is a practice that they cannot easily forgo.

Table 10

Are you willing to limit your use of plastic products?	Frequency	Percentage
Yes	23	29.49
No	12	15.38

Consistent with previous table, some of the respondents withheld to answer if they are unconditionally willing to deter plastic usage for to contribute to the campaign against its hazard. Perhaps, it is very telling that they have been

accustomed to the convenience of the use of plastic.

Conclusion:

The respondents acknowledge that their dependence on plastic products is significant owing to the kind of convenience that it provides. They also are aware of the hazards that it brings and the danger it causes. However, they admit to the fact that despite and in spite of it all, they still continue their practices and are even aware that their disposal is one which renders so much danger. But it is important to note that this study is focused on the household level. It is unarguably right that the local government are rising to the expectations on answering to the call of mitigating plastic usage and saving the environment. Perhaps what is necessary is a deeper awareness campaign and understanding among the locals to foster collaboration towards the objectives.

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