

The Stand and Perceived Solutions of Workers in the Threats of Climate Change to their Livelihood at Barangay Sarmiento Community

Mariel B. Alonsagay¹, Dominic B. Golpeo², Alnoury M. Cauring, LPT, MSCIED³

^{1,2}Student Researchers ARMM Regional Science High School, Department of Education Philippines-MBHTe BARMm.

³SST I, Doctor of Philosophy Student Bangsamoro Science High School, Ministry of Science and Technology Cotabato State University-Cotabato City

ABSTRACT: Climate change is one of hundreds of problems we are facing right now. It exists and it is a devastating crisis. The threats of climate change have a big impact on society, and it is horrifying to the environment we're living on. Also, it can destroy the rural and natural resources. This study was aimed to determine the stand and perceived solutions of selected workers in the threats of climate change to their livelihood in Barangay Sarmiento community.

The descriptive survey method was utilized in this study in which survey was taken among the 30 workers in Barangay Sarmiento year 2024 and involves their perceptions to their livelihood. Based on the result gathered, the participants tend to agree with the importance of climate change upon their own values, actions, and beliefs. Moreover, they tend to agree that they have been aware on the nature of climate change that it is really happening. Furthermore, 30.0% of them believed that the first reason why they are mitigating climate change is to save their money. In conclusion, workers value the importance of knowing in mitigating climate change and its threats to community, and they have positive general view in their environment which is also saving money is their main reason in preventing climate change.

KEYWORDS: climate change, threat, workers, stand, solution, livelihood

INTRODUCTION

Climate change is one of hundreds of problems that we're facing right now. It exists and is a devastating crisis. The threats of climate change have a large impact on our society, it is horrifying to the environment we are living on. Also it can destroy the rural and natural resources. Furthermore, climate change can affect the lives of billions of people around the earth. As years go by, the threats of climate change are spreading two times faster than ever anticipated. There are many kinds of threats that we don't know it's happening right now. However, some countries are still denying the existence of climate change, in addition many people have a lack of awareness about it. As a result's the climate change poses more threats to communities, species and people's livelihood. Example of it is the increasing of global temperature surface, some places are experiencing hot weathers along with heat waves (Letcher, 2021). The outcome of it is the increased of drought land so many people are facing the threats of not having enough food and water on a regular basis. The consequences of climate change to our livelihood in different group unequally or exacerbates the vulnerabilities that already existing among specific kinds such as they will lose assets, service, and livelihood opportunities (Mudde, 2019). Ecosystems provide services on poor communities rely disproportionately for their basic need which is its one of specific kinds that will affect the most (Amini, 2019). Awareness about the threats of climate change in Philippines is rising daily but it's not enough way to stop the crisis. Lots of need to be done in creating awareness and educating people about the threats, people should do the basic activities like planting trees, cleaning up the environment, good way of disposal wastes like recycling plastics, and creating biogas. Many Filipino workers especially those who work indoors are more likely to have knowledge on climate change than who work outdoors (Rosegrant, Sombilla, & Mercedita, 2018). Workers in many categories already experiencing climate and weather related hazards

The Stand and Perceived Solutions of Workers in the Threats of Climate Change to their Livelihood at Barangay Sarmiento Community

in their jobs. By that, the study examined the stand and perceived solution of selected workers in the threats of climate change to their respective livelihood.

LITERATURE REVIEW

Livelihood affects climate change because the threats of it become clear that many of the causes are anthropogenic in nature through our daily lifestyle. Lifestyle changes should be carefully monitored in the coming years, climate change will have detrimental effects upon agriculture and fisheries, also it may even collapse the ecosystem. Climate changes affect the livelihood of workers can be extensive and varied, and they differ from one region to another, depending on the type of workforce, industry, and geographic location. This can cause disruption in the lives of workers and their families, and also affect their productivity in the new location. People working in outdoor jobs such as construction may be at risk of injury or illness related to these extreme events. Additionally, warmer temperatures can increase the risk of heat stress, heat exhaustion, and heat stroke. Reduced productivity climate change can also have an impact on working conditions, such as reduced productivity due to hazardous weather events or the need to implement adaptation measures. Affected agriculture climate change can also impact crop yields and the availability of water for farming, which can have a ripple effect on the livelihoods of workers.

Overall, the effects of climate change on the livelihood of workers diverse and significant. Its important to take action to mitigate these impacts to protect the well- being if workers and their families (Latin, 2012).

Climate-related impacts are expected to reduce agricultural productivity in the Philippines. It adversely impacts agriculture, fisheries and forestry thereby limiting of production which affects availability of food and other daily needs. Whether it comes in the form or unbearable heat waves, harsh hurricanes or extreme weather event like the recent typhoon in Philippines (Bagyong Paeng) on October 29 2022 at Catanduanes , it brought heavy rains and strong wind and affected hundreds of people lives. It causes flooding and landslide around the country, as a result's many homes, works and building are damage due to the striking storm. Impacted health and safety conditions climate change can lead to extreme weather conditions such as hurricanes, floods, and droughts Climate changes puts people lives at risk by undermining development and creating shortages of basic necessities, threatens the cleanliness of our air, depletes our water source and limit food supply. It disrupts livelihood, forces families from their homes and pushes people into poverty. Because of climate change many workers lost their job. As these situation workers should apply and adopt their perceptions. It was found that, in the context of climate change, workers view solutions such as investment in renewable energy, improved soil fertility and water storage as essential in order to maintain or improve their livelihoods. In addition, it was also found that workers are concerned about the effects of climate change on their health, safety and economic stability (Reimers, 2020).

The stand of workers in the threats of climate change to their livelihood can be seen in how they perceive the solutions to their issues. The stand against climate change provides a clear, critically minded account of climate change from the perspective of workers. Perceived solutions to the threats of climate change for workers can include adapting to changing weather conditions, creating worker organizations to advocate for their interests, and investing in renewable energy sources (Weart, 2003).

METHODOLOGY

The descriptive survey method was utilized in this study which to determine the workers' perceptions and solutions about the threats of climate change to their livelihood. Through purposive sampling method, 30 different types of workers in the local of Barangay Sarmiento are the selected participants of the study who are the loggers, factory workers, vendors, and drivers. The study was conducted at the Brgy. Sarmiento, Parang, Maguindanao del Norte, Philippines. Barangay Sarmiento has a total of 12,290 workers population. The modified climate change survey questionnaire from Whitmarsh (2003) consisted of three parts which are statement on climate change, general views on environment, and reasons for the regular activity. This was scored using 5-point Likert scale. Then, it was examined, analyzed, and interpret using statistical tool.

RESULTS AND DISCUSSION

Table 1. Climate change views of 30 workers as participants

Statement	Mean	Interpretation
Value		
1. Personally, issues of climate change are quite important.	3.2	Neutral
2. Climate change will improve Philippine weather.	4.2	Agree
3. I tend to consider information about climate change one way or another.	3.4	Neutral
4. A daily basis contributes to the regulation of climate change.	3.3	Neutral

The Stand and Perceived Solutions of Workers in the Threats of Climate Change to their Livelihood at Barangay Sarmiento Community

5. Industry and businesses should be doing more to tackle climate change.	4.2	Agree
Overall Mean	3.7	Agree
Action		
1. We can all do our bit to reduce the effects of climate change.	4.4	Agree
2. People should be made to reduce their energy consumption if it reduces the climate change.	4.3	Agree
3. Climate change is just a natural fluctuation in earths temperatures.	3.4	Neutral
4. I would only do my bit to reduce climate change if everybody else did as well.	3.5	Agree
5. The Philippines should provide incentives for people to look after the environment.	4.3	Agree
6. I can make differences to climate change one way or another.	3.2	Neutral
7. Human activities like livelihood have no significant impact on global temperatures.	2.4	Disagree
8. Climate change is something that dies not frighten me.	3.4	Neutral
9. Radical Changes to society are needed to tackle climate change.	4.5	Strongly Agree
10. People are not too selfish to do anything about climate change.	3.3	Neutral
11. The Philippines should not take most of the blame for climate change.	4.2	Agree
12. The evidence for climate change is reliable.	4.2	Agree
13. If I come across information about climate change I willtend to look at it.	3.4	Neutral
14. Leaving the lights on in my home adds to climate change.	4.3	Agree
15. Climate change is a consequence of modern life.	3.2	Neutral
16. There is a point in me doing anything about climate change because no-one else is.	3.5	Agree
17. For the most part, the government honestly wants to reduce climate change.	3.4	Neutral
18. The government is doing enough to tackle climate change.	3.4	Neutral
19. I feel a moral duty to do something about climate change.	2.2	Disagree
Overall Mean	3.6	Agree
Belief		
1. Climate change is inevitable because of the way modern society works.	4.2	Agree
2. It is not too late to do anything about climate change.	4.3	Agree
3. I am uncertain about whether climate change is really happening.	3.2	Neutral
4. Claims that human activities are changing the climate is not exaggerated.	3.3	Neutral
5. The effects of climate change are likely to be catastrophic.	4.2	Agree
6. Pollution from industry is the main cause of climate change.	4.2	Agree
7. Recent floods in this country are due to climate change.	4.3	Agree
8. It is too early to say whether climate change is really a problem.	3.3	Neutral
9. The media is often too alarmist about issues like climate change.	3.2	Neutral
10. Flooding is not increasing, there is just more reporting of it in media these days.	3.4	Neutral
11. I agree that climate change is a real problem.	4.2	Agree
Overall Mean	3.8	Agree
Grand Mean	3.7	Agree

Legend:

5 – Strongly Agree 4 – Agree

3 – Neutral

2 – Disagree

1 – Strongly Disagree

Table 1 reflects the views of 30 workers on the climate change in terms of value, action, and belief. In the statements of value, statement 2 '*Climate change will improve Philippine weather*' and statement 5 '*Industry and businesses should be doing more to tackle climate change*' have the highest agreements with the mean of 4.2, which denotes that the people in Sarmiento, Parang, Maguindanao del Norte agreed about that climate change is improving the Philippine weather either by their personal gain or for the care of other people and wildlife. These show how our local climate could change dramatically if the global community fail to act towards greenhouse gas emissions (PAGASA, 2021). Also, as ensuring good information towards workers about climate change makes us prepared for the near, inevitable future (Porschen, 2017). Customers, capital markets, governments, and NGOs are outing more pressure on corporations to report on emissions and reduce them. Companies that fail to meet those expectations face

The Stand and Perceived Solutions of Workers in the Threats of Climate Change to their Livelihood at Barangay Sarmiento Community

serious consequences (Esty, 2002). Whereas statement 1 *'Personally, issues of climate change are quite important'* has the lowest mean of 3.2 denotes Neutral which indicated climate change is not important for them, the lack of information they receive is minimal and hence many people don't get how threatening the issues of climate change is. It is important that we understand how climate is changing, so that we can prepare for the future (NCAS, 2024). Overall, in the statements of value, with the overall mean of 3.7 means that they do agree about the value of climate change, it's not much but most of the respondents still agree that they knew and now know its value onto the Philippine and for the global weather (Searing, 2010).

For the statements of action, statements 9 *'Radical Changes to society are needed to tackle climate change'* have highest mean rate of 4.5 which denotes Strongly Agree. This means that the respondents would strongly agree that the community should change and do something about climate change as soon as possible for all of us. Radical, but achievable behavior change from dependent consumer to self-reliant producers has a chance of stopping the climate change (UNU, 2000). However, statements 1 *'We can all do our bit to reduce the effects of climate change'*, and 9 *'People should be made to reduce their energy consumption if it reduces the climate change'* have mean ratios of 4.4, and 4.3, respectively. It shows that the workers believed that they can all together make a change to climate change and as a community. The small changes they're doing now and have done so far is sort of like trying empty the ocean with a spoon of all the green efforts so far like using LED bulbs, recycling, improved MPG in cars, installed all the wind and solar farms, switched from coal to gas in some plants (Climate Action, 2023). The participants already knew that leaving lights on in my home adds to climate change which means the participants agreed that reducing electric usage is essential to do as it reduces climate change. Saving energy helps the environment by reducing the amount of carbon dioxide and other harmful pollutants in the atmosphere (Save On Energy, 2022). However, statement 19 *'I feel a moral duty to do something about climate change'* has the lowest mean of 2.2 which denotes Disagree, which showed that unfortunately, the participants feel like they aren't required to make initiative more, in most instances these actions are counterproductive to society as people want to help, but they wouldn't try. The attribution of moral responsibility to an action has most often been discussed in relation to individuals because it requires the intention, capacity, freedom and knowledge to do such action (Dienpedaele & Peeters, 2013). Overall in the statements of action, with the overall mean of 3.6 states that participants agree from the given statements and their opinions about what they can do for society (Somerville, 2020).

And for the statements of belief, the statements 2 *'It is not too late to do anything about climate change'* and 7 *'Recent floods in this country are due to climate change'* have the highest mean of 4.3 which denotes agree. Workers believe that there is a chance to fix climate change and it is not too late for change in actions in combatting climate change. Every little bit of avoided future temperature increases results in less warming that would otherwise persist for essentially forever (NASA Science, 2024). As perceived, the response of the respondents agreeing that the awful frequent floods are effects of climate change. Everyday rainstorm, as well as bigger storm such as hurricanes, are increasingly dangerous as a result posed by climate change (Hesher & Sommer, 2023). Whereas statement 3 *'The media is often too alarmist about issues like climate change'* has the least mean of 3.2 which denotes Neutral. This means that the social media for the participants are not overreacting enough as the lack of attention to climate change meant that it is the cause of lack of information about climate change in rural areas like Brgy. Sarmiento. The climate crisis and ecosystem collapse are the stories of our time, and the media is nowhere near where it needs to be on both the quality and quantity of their climate coverage (Hagen, 2023). In general, on the statements of belief, it has overall mean of 3.8 indicates that they agree about the following statements about their beliefs and personal opinions and ideas about climate change. Furthermore, it has the grand mean of 3.8 denotes Agree which indicates that the participants do tend to agree more than to disagree, yet all the results gathered in total ends in a neutral view. This may be due to the lack of public information drives onto the people of Brgy. Sarmiento about the threats of climate change. Certainly, through all of the 35 statements, most of the participants do know about climate change that it has negative effects onto society as we have observed. And the specified workers especially should have more knowledge about climate change and what to do about it. So by this result, it suggests that they need to be informed more and be alarmed about the certain issue regarding the changes of climate, by that workers could have a better livelihood (Worldbank, 2024). Yet, this implies that the 30 workers value the importance of knowing climate change, agree in mitigating and believe the effects of climate change.

Table 2. General views about the environment of participants (N=30).

Statements	Mean	Interpretation
1. Jobs today are more important than protecting the environment for the future.	3.2	Neutral
2. I am willing to make personal sacrifices for the sake of the environment.	3.3	Neutral
3. If my job caused environmental problems, I'd rather be unemployed than to carry on causing them.	3.3	Neutral

The Stand and Perceived Solutions of Workers in the Threats of Climate Change to their Livelihood at Barangay Sarmiento Community

4. Having a car is part of having a good lifestyle.	4.2	Agree
5. Humans have the right to modify the natural environment to suit their needs.	3.2	Neutral
6. Humans are not severely abusing the planet.	3.3	Neutral
7. Plants and animals have the same rights as humans to exist.	4.2	Agree
8. Nature is strong enough to cope with the impact of modern industrial nations.	4.3	Agree
9. Humans were meant to rule over the rest of nature.	3.3	Neutral
10. The balance of nature is very delicate and easily upset	3.3	Neutral
Overall Mean	3.6	Agree

Legend:

5 – Strongly Agree 4 – Agree

3 – Neutral

2 – Disagree

1 – Strongly Disagree

Table 2 reveals the general views of 30 participants about their environment. Statement 8 '*Nature is strong enough to cope with the impact of modern industrial nations*' and 7 '*Plants and animals have the same rights as humans to exist*', and 4 '*Having a car is part of having a good lifestyle*' have highest mean ratio of 4.3, 4.2, and 4.2, respectively which denote Agree. The participants agree that the nature can withstand the modern innovation, the workers implied that the current forests could combat the effects of climate change and global warming which are doing fine enough. Nature is inert, inarticulate, and naturally efficient to people especially workers who rely on environment (Gani, 2006). Moreover, having a car is part of having a good lifestyle, the high number of agreements meant that having a car or any vehicle in general gives you the freedom of travel and the convenience of having decisions of driving without stress of waiting for a vehicle for commute. Having a vehicle in their life makes their lives easier because it does not only convenience for workers but to people as well needs to day-to-day demands (Scanafrica, 2022). And it has shown that the workers of Brgy. Sarmiento community understand that all plant life and animals deserve a health amount of space and freedom in which all of animals, humans and even plants should be respected as we all are living on the same planet. Animals should have the basic rights as humans do, they should live, not to be tortured, neglected, or abused because animals also feel and have mental capacity (Blahova, 2000). And for the least amount of agreement is the statements 1 '*Jobs today are more important than protecting the environment for the future*' and 4 '*Humans have the right to modify the natural environment to suit their needs*' both with the mean of 3.2; the workers agreed that their jobs are more important than to give up especially because they have no other job options to choose from furthermore due to poverty and hardship they all are forced to do, even if they don't want to do. Without jobs and the economy there would be no study of the environment therefore could not know the damage being cause with greenhouse effect (Foss, 2018). This also explains that the workers are neutral about utter dominance over nature. All human beings depend on the environment, a safe, clean, healthy and sustainable environment is integral to the full enjoyment of a wide range of human rights (OHCHR, 2024). The result show on average, workers tend to Agree with an overall mean of 3.6 as that participants have been aware on the nature of their environment as climate change is happening. Thus, the workers view the possible threats of climate change to their livelihood and community. Some may appreciate the positive and the contribution of environment in their lives, while others may express concerns about the threats of climate change that may impact them specially their safety and their jobs. Generally, the participants have positive views in their environment.

Table 3. Regular activities done by participants as ways to prevent climate change.

Regular Activities	Conven- ience	To save Money	To Protect Environment	For my Health	Habit	Moral Obligation
1.Walk or cycle to work	0%	34.8%	9.3%	39.3%	6.6%	10%
2.Use public transport	61.8%	0%	0%	5.8%	25.4%	7%
3.Turn off lights I'm not using	0%	44%	28%	0%	8.5%	19.5%
4.Buy energy efficient light bulbs	6.6%	33.1%	38.4%	16.6%	0%	5.3%
5.Buy organic food	0%	22.8%	13.8%	40.8%	15%	7.6%
6.Recycle glass	0%	46.6%	32.2%	3%	5.1%	13.1%
7.Recycle other items	6.3%	54.5%	26%	0%	13.8%	4.4%
8.Take part in a campaign about environmental issue	0%	4%	52%	14%	0%	30%
Total Mean Percentage	9.3%	30.0%	25.0%	14.9%	9.3%	12.1%

The Stand and Perceived Solutions of Workers in the Threats of Climate Change to their Livelihood at Barangay Sarmiento Community

In table 3, it shows the regular activities done by participants as ways to prevent climate change in their livelihood at Barangay Sarmiento community. The first activity results that 39.3% of workers say that *'walk or cycle to work is for their health'*. Walking is one of exercises that people usually do because it helps to improve their muscle and bones for a healthy lifestyle. Walking or cycling to work are great ways to fit a little exercise into your daily routine (Sustrans, 2018). While none of the workers says that *'walk or cycle to work'* for them is not convenient which means inconvenience to do extra work to go to a place consuming strength and stamina. People nowadays specially workers are too lazy to walk to their work because they think it is time consuming however as technology goes by in our lives we forget our obligations as humans do. Everyone can afford walking it has many beneficial impacts on our lives (Maan, 2023). The second activity *'Use public transport'* has 61.8% for convenience since time is gold for workers they believe that using public transportation makes them easier to get in their workplace. Using cars or transportation save and manage their time because of basic work and travel needs (Industry Insight, 2021). While in *'to save money'*, and to *'protect environment'*, hence, the participants believe that using public transportation is not to save money due to the high price of fuel nowadays. As a result, vehicles decrease as of today, the lack of affordable and sustainable transportation creates noticeable financial burden on average households (ITDP, 2024). Moreover, using public transportation may cause air pollution because of vehicles produce black smoke that can harm the air we are breathing through. It contributes to various form of pollution such as noise, vibration, and emissions of solid and liquid waste that results climate change (SCISPACE, 2024).

And the next activity: Turn off lights I'm not using has the highest mean *'to save money'* with the percentage 44%, it shows that the participants generally turn off lights when not in use to save money, some mostly to save the environment and a few people it is an obligation embedded in their daily routine. Turning off lights can reduce electricity bills and extend your light bulbs life (Gobler, 2023). And *'Convenience'* and *'for my health'* have the least amount of mean percentage of 0% which may denote that the participants don't agree that turning a light switch off is inconvenient and wants you to waste energy. The participants also feel that turning light when not in use has no connection with their health whatsoever. Turning off lights has many negative effects on environments and health, but it focuses on nature that can be damage by this activity (Murdoch, 2016). For the next activity *'Buy energy efficient lightbulbs'* has the highest percentage of 38.4% by *'protecting the environment'* followed by *'to save money'* with the mean of 33.1%; they both show that energy efficient lightbulbs such as LEDs for people gets them to help protect the environment by reducing the needs for carbon emissions and to save money as these lightbulbs can minimize the usage rate of electricity whilst these lightbulbs can sometimes last up to 25 years. Buying energy efficient is environmentally friendly it can reduce greenhouse gas emissions, water usage, and dependency on fossils fuels and oils, these actions are benefits to fight against climate change (Safdie, 2024). And for the least percentage of uses for is *'Habit'* with the percentage of 0% denoting that the participants don't buy energy efficient lightbulbs as a habit as the normal, cheaper, higher quality lightbulbs are more logical for their perspective. Consumer are choosing quality product than efficient and eco-friendly (Vista Energy, 2024). The next activity *'Buy organic food'* which has the percentage of 40.8% in *'for my health'* means that the respondents usually buy organic food either from pure plants or fresh natural meat for their health, for essential nutrients and as required for a healthy wellbeing. Promote more humane treatment of animals, as well as providing meat that is free from hormones and antibiotics (Health Harvard, 2015). On the other hand, the lowest mean is *'convenience'*, just like the last statements, people are not required to buy organic food and would rather eat canned goods etc. as people often choose what's convenient for them and they are not always doing the same ways as people do in centuries (Heming, 2000).

And for the next activity: Recycle glass, contributes to climate change due to excessive atmospheric emissions from melting activities. The activity has the highest percentage of 46.6% in *'to save money'* which implies that the specified workers recycle used glassware mostly to save money so people wouldn't buy a new one sooner. Recycling glass has significant effects on people lives instead of buying new ones they recycle glass to use it in their daily life (Glass Recycling Facts, 2024) And *'convenience'* has the percentage of only 0% as the motivation for recycling glass is decreased as buying other alternatives than risking time to recycle and getting cut by the glass shards may also pose possible health risks. Some glass is not suitable for recycling; some glass will cost more resources to recycle than the creation of new product (Irellan, 2019). For the next activity: Recycle other items, which includes items that are other than glass, or any kinds of glass items. which has the most percentage of 54.5% in *'to save money'* with the same reasons of just recycling glass as recycling items make these items usable for the future, making use of what we got to an extent so in which we can have a controlled environment and for to reuse these items to re- serve and serve newer purposes trough modification and innovation. Recycling can be less expensive than landfilling because it avoids disposal cost and extend the life of existing landfills (Nationwide, 2018). For the lowest percentage 0% is *'moral obligation'*, again as people were not informed from the benefits of recycling and some of them were not obligated to be recycler for the community. There is not enough profit to use recycled products and to make new products from used items such as plastics it is hassling and not necessary to do (Reis,

The Stand and Perceived Solutions of Workers in the Threats of Climate Change to their Livelihood at Barangay Sarmiento Community

2021).

And for the last activity of to take part in a campaign about environmental issue, 52% of the respondents shown that they'd take part in a campaign mostly 'To protect the environment' for the sake of the inhabitants of planet earth including every human, plants and animals. It aims to raise awareness among ordinary people and encourage more ecologically responsible behavior (Shroff, 2017). However, it has the lowest mean of 0% from '*convenience*' and '*habit*' denoting that taking part in a campaign would be inconvenient as it may be a waste of time and effort as it would take a large group to do something. As the participants affirm, it is not convenient because for them environmental issue is a nonlinear problem which results that climate change are distant from people, and they would rather put themselves first than for the future of mankind and nature. Also, it is not a habit that they would take as they would rather do it once as it may or may not be suited to do in a community which heavily relies on emitting climate change. They're not responsible to do such complicated and controversial campaign, so whenever they want to join, they would just simply help the campaign, but it is not a habit people do since nowadays their priorities is to survive in this world (Markman, 2018).

Above all, '*to save money*' has the highest total percentage of 30.0%. among 8 activities stated that doing all the activities may result in saving their money and decreasing cost of their bills, which may also help and mitigate climate change as well.

Furthermore, the study recommends to further study the negative and positive effects of climate change in the worker's lives, it is a big help for them to know more about climate change since majority of the Philippine workers rely on nature.

CONCLUSION

The study concludes that workers are the most affected ones when it comes to climate change. The stand and perceptions help them to realize and be alarmed in how dangerous climate change is. The workers agree to the stand and perceived solutions to climate change in terms of their value, belief, and action as they experienced and feel the impact of climate change to their livelihood. They have also agreed that the climate change in their general view is a real threat and by their regular activities, they help to mitigate climate change by saving money.

REFERENCES

- 1) AMINI, A. 2019. Global climate change effects. Retrieved on June 8, 2023 from https://books.google.com/books?id=NBT8DwAAQBAJ&printsec=frontcover&dq=climate+change&hl=en&newbks=1&newbks_redir=1&sa=X&ved=2ahUK EwjvmunFodyFAxX5R2wGHRUuBOMQ6AF6BAgNEAI.
- 2) BLAHOVA, B. 2000. The rights of animals on environment. Retrieved on April 15, 2024 from <https://www.ifp.co.in/1992/the-right-to-live-should-animals-be-given-the- same-rights-as-humans>
- 3) CLIMATE ACTION WALES. 2024. Climate Change. Retrieved on April 27, 2024 from <https://www.climateaction.gov.wales/>
- 4) DIEPENDAELE, L. and A. PEETERS. 2013 Climate change. Retrieved on April 19, 2024 https://books.google.com/books?id=Vj94BgAAQBAJ&printsec=frontcover&dq=responsibilities+to+climate+change&hl=en &newbks=1&newbks_redir=1&sa=X&ved=2ahUKEwihgYukm_CFAxUo7jgGHdBcBagQ6AF6BAgGEAI
- 5) ESTY, C. 2009. Green to Gold: how smart companies use environment. Retrieved on April 22, 2024 from https://books.google.com.ph/books?id=2NJ9fWqXLdWC&printsec=frontcover&dq=esty+c.+daniel&hl=en&newbks=1&newbks_redir=1&sa=X&ved=2ahUKEwj1s-HLn_CFAxUte2wGHWdWC48Q6AF6BAgMEAI
- 6) FRONTIERSIN. 2024. Retrieved on April 25, 2024 <https://www.frontiersin.org/journals/climate/articles>
- 7) FOSS, A. 2018. Greenhouse Effects. Retrieved on April 22, 2024 from HcrVGILIC&q=greenhouse+effect&dq=greenhouse+effect&hl=en&newbks=1&newbks_redir=1&printsec=frontcover&sa=X&ved=2ahUKEwjFzqGktvCFA xXLT2wGHYYdABkQ6AF6BAgBEAI.
- 8) GANI, L. 2006. Working for people and the Environment. Retrieved from April 21, 2024 from https://books.google.com/books?id=uIjJAQAIAAJ&q=workers+rely+on+environment&dq=workers+rely+on+environment &hl=en&newbks=1&newbks_redir=1&printsec=frontcover&sa=X&ved=2ahUKEwirs5qPtCFaxW82TgGHVGOCHsQ6AF6BAgKEAI
- 9) GLASS RECYCLING FACTS. 2024. Retrieved on April 25, 2024 <https://www.gpi.org/glassrecyclingfacts#:~:text=Recycling%20glass%20containers%20promotes%20efficiency,and%20160%20pounds%20of%20feldspar>.
- 10) GOBLER, B. 2022. The benefits of turning off lights. Retrieved on April 16, 2024 from <https://www.thisgreenlifestyle.com/all-articles/the-benefits-of-turning-your- lights-off>.

The Stand and Perceived Solutions of Workers in the Threats of Climate Change to their Livelihood at Barangay Sarmiento Community

- 11) HAGEN B. 2023. Public perceptions of climate change. Retrieved on April 15, 2024 from https://books.google.com/books?id=FrnhCgAAQBAJ&printsec=frontcover&dq=Hagen+climate&hl=en&newbks=1&newbks_redir=1&sa=X&ved=2ahUK Ewjz3JmFqvCFAxVI-DgGHW0uCmsQ6AF6BAgMEAI
- 12) HEATL HARVARD. 2015. Positive Impact of Buying Organic Food. Retrieved on April 18, 2024 from <https://www.colorado.edu/center/2021/03/17/positive-impact- organic-foods>.
- 13) HEALY, J. 2018. The climate change crisis. Retrieved September 24, 2023 from [mxoAEACAAJ&dq=climate+change&hl=en&newbks=1&newbks_redir=1&sa=X&ved=2ahUK EwjvmunFodyFAxX5R2wGHRU uBOMQ6AF6BAgEEAI](https://books.google.com/books?id=mxoAEACAAJ&dq=climate+change&hl=en&newbks=1&newbks_redir=1&sa=X&ved=2ahUK EwjvmunFodyFAxX5R2wGHRU uBOMQ6AF6BAgEEAI)
- 14) HEMING, G. 2000. Why I don't buy organic food. Retrieved on April 19, 2024 from <https://www.forbes.com/sites/stevensavage/2016/03/19/why-i-dont-buy- organic-and-why-you-might-want-to-either/>
- 15) IRELLAN, 2019. Recycle glass. Retrieved on April 20, 2014 from https://books.google.com/books?id=nIj4tjxDkMC&dq=RECYCLING+GLASS&hl=en&newbks=1&newbks_redir=1&sa=X&ved=2ahUK EwiLwqHwvCFAxX_- DgGHZ-TCnYQ6AF6BAgJEAE
- 16) ITDP, 2024. Institute for transportation and development. Retrieved on April 20, 2024 from <https://itdp.org/>
- 17) LATIN, L. 2012 Climate change policy. Retrieved on January 15, 2023 from https://books.google.com/books?id=PVz_rULibMoC&printsec=frontcover&dq=climate+change&hl=en&newbks=1&newbks_redir=1&sa=X&ved=2ahUK Ewiit YvMotyFAxVXcGwGHQ2ADUc4FBDaXoECACQAg
- 18) LOOS, 2003. Saving money. Retrieved April 25, 2024 from https://books.google.com/books/about/Saving_Money.html?id=ivAMWv5ydiA
- 19) LETCHER, L. 2021 The impacts of climate change. Retrieved on January 4, 2023 from https://books.google.com/books?id=_I5uDwAAQBAJ&printsec=frontcover&dq=climate+change&hl=en&newbks=1&newbks_redir=1&sa=X&ved=2ahUK Ewi ytsLwodyFAxUqSWwGHZRTctk4ChDoAXoECAUQAg
- 20) MARKMAN, J. 2018. Why people aren't motivated to address climate change. Retrieved on April 22, 2024 from <https://hbr.org/2018/10/why-people-arent- motivated-to-address-climate-change>
- 21) MAAN, L. 2023. The impact of walking in our lives. Retrieved on April 22, 2024 from <https://www.betterhealth.vic.gov.au/health/healthyliving/walking-for-good- health>
- 22) MUDDE, M. 2019 The discovery of global warming. Retrieved on September 10, 2023 from https://books.google.com/books?id=hZJSAQAAIAAJ&dq=climate+change&hl=en&newbks=1&newbks_redir=1&sa=X&ved=2ahUK Ewiilf6wotyFAxVqUGch HYPvC9M4ChDoAXoECAUQAg
- 23) MURDOCH, A. 2016. When to turn off your lights. Retrieved on April 21, 2024 from <https://www.energy.gov/energysaver/when-turn-your-lights>
- 24) NASA science, 2024. Climate change evidence. Retrieved on April 20, 2024 from <https://science.nasa.gov/climate-change/evidence/>
- 25) NCAS. 2024. Climate change. Retrieved on April 20, 2024 from <https://nca2023.globalchange.gov/>
- 26) PAGASA. 2021. Retrieved on April 22, 2024 from <https://www.pagasa.dost.gov.ph/information/climate-change-in-the-philippines>
- 27) PORSCHE P. 2017. Decent work, Green Jobs and the Sustainable Economy Retrieved on April 18, 2024 from https://books.google.com/books?id=eKo0DwAAQBAJ&printsec=frontcover&dq=peter+poschen&hl=en&newbks=1&newbks_redir=1&sa=X&ved=2ahUK Ewi 3xIOoo_CFAxXCbmwGHQLfAowQ6AF6BAgMEAI
- 28) RICHARD, C. and SOMERVILLE J. 2020. Communicating the science to climate change. Retrieved on April 21, 2024 from <https://research.fit.edu/media/site-specific/researchfitedu/coast-climate-adaptation-library/climate-communications/messaging-climate-change/Somerville--Hassol.-2011.- Communicating-Science-of-CC.pdf>
- 29) REIS, N. 2021. Positive and Negative effects of recycling items. Retrieved on April 22, 2024 from <https://helpsavenature.com/positive-negative-effects-of-recycling>
- 30) REIMERS, F. Education and climate change. Retrieved on December 27, 2023 from https://books.google.com.ph/books?id=DyKKGnlgANIC&printsec=frontcover&dq=climate+change&hl=en&newbks=1&newbks_redir=1&sa=X&ved=2ahUK EwiE8qjyotyFAxWOXGcHHVn4DrM4HhDoAXoECAwQAg
- 31) ROSEGRANT, M. A. SOMBILLA, and, B. MERCEDITA, 2018 Climate change effects Retrieved on February 12 2024 from https://books.google.com/books?id= zcb_GpH15wC&printsec=frontcover&dq=climate+change+effects&hl=en&newbks=1&newbks_redir=1&sa=X&ved=2ahUK Ewjz1-6lo9yFAxWebmwGHWbQAnQQ6AF6BAgHEAI

The Stand and Perceived Solutions of Workers in the Threats of Climate Change to their Livelihood at Barangay Sarmiento Community

- 32) SAFDIE R. 2024. Buying energy efficient Retrieved on April 21, 2024 from <https://greenly.earth/en-us/blog/company-guide/all-you-need-to-know-about-energy-efficiency#:~:text=Clearly%2C%20energy%20efficiency%20is%20environmentally,to%20fight%20against%20climate%20change>.
- 33) SAVE ON ENERGY, 2022. Saving energy. Retrieved on April 15, 2024 from <https://www.saveonenergy.ca/>
- 34) SEARING, L. 2010. The Philippine strategy on Climate Change Adaptation. Retrieved on April 17, 2024 from https://books.google.com.ph/books?id=gzdPpQoP7WIC&q=Lucille+I.+sering&dq=Lucille+I.+sering&hl=en&newbks=1&newbks_redir=1&printsec=frontcover&sa=X&ved=2ahUKEwj-ruKGpPCFAxVUcfUHHQP6DBAQ6AF6BAgEEAI
- 35) SCISPACE. 2024. The negative effects of public transportation. Retrieved on April 25, 2024 from <https://www.educba.com/advantages-and-disadvantages-of-public-transport>
- 36) SHROFF, M. 2017. The importance of climate change education. Retrieved on April 19, 2024 from <https://www.iberdrola.com/social-commitment/climate-change-education>
- 37) SCNAFRICA. 2022. How have cars makes our lives easier. Retrieved on April 19, 2024 from <https://www.quora.com/How-have-cars-made-our-lives-easier-the-world-better>
- 38) SUSTRANS, M. 2020. How Does Walking Help to Protect Environment. Retrieved on April 20, 2024 from <https://www.sustrans.org.uk/our-blog/get-active/2020/in-your-community/how-does-walking-and-cycling-help-to-protect-the-environment>
- 39) OHCHR. 2023. Climate Change. Retrieved on April 18, 2024 from <https://www.ohchr.org/en/climate-change>
- 40) UNU, 2000. Retrieved on April 22, 2024 from <https://unu.edu/topics/climate-change-x>
- 41) VISTA ENERGY. 2021. 10 ways to save energy. Retrieved on April 19, 2024 from <https://greenly.earth/en-us/blog/company-guide/all-you-need-to-know-about-energy-efficiency#:~:text=Clearly%2C%20energy%20efficiency%20is%20environmentally,to%20fight%20against%20climate%20change>.
- 42) WEART, S. 2003, Discovery of global warming. Retrieved on November 7, 2023 from https://books.google.com.ph/books?id=DyKKGnlgANIC&printsec=frontcover&dq=climate+change&hl=en&newbks=1&newbks_redir=1&sa=X&ved=2ahUKEwiE8qjyotyFAxWOXGcHHVn4DrM4HhDoAXoECAwQAg
- 43) WORLD BANK. 2024. Retrieved on April 17, 2024 from <https://www.worldbank.org/en/topic/climatechange>



There is an Open Access article, distributed under the term of the Creative Commons Attribution – Non Commercial 4.0 International (CC BY-NC 4.0) (<https://creativecommons.org/licenses/by-nc/4.0/>), which permits remixing, adapting and building upon the work for non-commercial use, provided the original work is properly cited.