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## **Mapping Sustainable Institutions Towards Implementation of Plastic Ban Ordinance: A Case Study of San Fernando, Pampanga, Philippines**

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### **ABSTRACT**

*Plastic use have adverse consequences to the environment and thus to the public. San Fernando City, in the province of Pampanga, Philippines is among those which have carried out plastic boycott laws in their individual urban areas to help moderate the problems of plastic contamination. Borrowing from Ostrom's policy analysis and design framework, this paper maps out interactions between various political actors in the successful implementation of the plastic boycott mandate narrowed down to three variables as policy implementation structural elements: political actors, their action situations, and the expected results. This research uses a qualitative case study design focusing its lens on the model city of San Fernando to document and map the success of a policy which goes contrary to the original norms of blatant community plastic use. Thematic analysis examines separate interviews with selections ranging from citizens, civic groups, businesses, and local government officials to trace elements that can empower other local governments in the implementation of environmental laws. Findings include: (1) Actors were able to effectively implement the ordinance through the strong political will of the local government unit within the City of San Fernando, Pampanga; (2) Action situation is the way the political actors were able to effectively implement the ordinance through collaboration among actors; (3) The different political actors who were involved in the effective implementation of the ordinance include the Local Government Units starting from the barangay level to the city level, the different business establishments, as well as the various non-government organizations.*

**Keywords:** *Plastic Ban Ordinance, Sustainability, Institutions, Local Governance*

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## INTRODUCTION

For ordinances to be properly and fully implemented, there must be a sense of involvement and cooperation among the different political actors which comprises the local government unit and the society therein. Moreover, it must also be considered that the success towards effective implementation of an ordinance relies on the interaction and the response of the different institutions in a city. With the City of San Fernando, Pampanga being consistently recognized as a Zero Waste Model (Torrevillas, 2019; Ancheta, De Castro, Garcia, Garcia, & Castillo, 2020), the goal of this research is to provide answers to the following questions: (1) How are the actors able to effectively implement the ordinance?; (2) How can the action situation in San Fernando City Pampanga impact the implementation of the Plastic Ban Ordinance?; and (3) Who are the political actors who brought about the implementation of the ordinance? These three questions will structuralize how the plastic ban ordinance in the City of San Fernando Pampanga has been implemented effectively.

### **The Embodiment of Plastic into the Human Way of Life**

Inventions and innovations are supposedly for the promotion of the good, however, man's desire for improvement and productivity also carries with it a great threat to the environment. The intent on making lives convenient led to the drastic changes in the environment, among

these is the invention of plastic. Plastics indeed conveyed an optimistic impact. One is in fostering economic growth as the manufacture of plastics created employment that catered to the millions of individuals seeking a source of livelihood; another is the provision of convenience as an all-purpose tool. However, the negative effects cannot be disregarded, as plastic would take 1000 years to be decomposed (Leblanc, 2021) yet the masses continue to patronize and depend on the use of plastic (Roser, 2018). This plastic dilemma does not pertain to a single country alone, its continuous accumulation of plastic is evident across countries and through time (Parker, 2018). The Philippines is no exemption from the use of plastic; in fact, the country has been recognized as one of those countries who consumes a significant amount of plastic (Lavallée, 2019). The Philippines, considering its geographical position, is often affected by various natural disasters such as typhoons, volcanic eruptions, and the like. Typhoons are accompanied by immense flooding, a phenomenon bolstered by plastics clogging the waterways (Mayuga, 2018). During clean-up drives after a typhoon, it could be seen that the majority of the reasons which brought flooding in a particular area is through the large amount of plastic waste that has been clogging the drainage system thus blocking the smooth flow of water.

## **Social Response towards Plastic Pollution**

### *Plastic Ban Ordinance and the Human Ecosystem*

In a research by Pathak and Nichter (2019), it is articulated that the invention of plastics allowed economic augmentation. In addition, plastic also enabled nation states to flourish and develop (Pathak & Nichter, *The Anthropology of Plastics: Agenda for Local Studies of a Global Matter of Concern*, 2019). The creation of plastic resulted in the heavy reliance and dependency of humanity on plastic for the purpose of easy containment and for less burden in one's own reusable bag. Abueg, in his article entitled "A Survey of the Ocean's Plastic Waste Problem and Some Policy Developments of the Philippines," stated that upon the commencement of the Industrial Revolution the creation of plastic is among the trends to be considered in the 20<sup>th</sup> century (2019). Owing to the fact about the convenience that plastic brought humanity, people are the ones who will be accounted for the dreadful problem as the public continues to depend on plastic and dispose of it irresponsibly.

To address this increasing problem in plastic, several ways have been created including being able to recycle used plastics and engaging in a clean-up drive (Alegado, 2020) while some countries have imposed the usage of taxes and levies to help in the mitigation of the usage of plastic (Bharadwaj, Baland, & Nepal, 2019). Despite these methods, one tactic

proved to be the most effective and that is through the implementation of the plastic ban ordinance. The Philippines, being one of the top consumers of plastic, has also made use of the plastic ban ordinance in restricting the usage of plastic. However, the implementation of the ordinance is still yet to be considered in the entire country. Nonetheless, cities such as Marikina, Quezon, and San Fernando, Pampanga are known for having implemented such policies (Alegado, 2020).

San Fernando City, Pampanga is one of those cities in the Philippines hailed for having taken the responsibility in implementing the plastic ban ordinance to address the alarming situation of the usage of plastics in the country. The city government of Pampanga implemented the Ordinance No. 2014-008 or the Plastic Ban Ordinance in 2014. This ordinance mandates that any store will not be allowed to provide plastics to be used as primary or secondary packaging materials. Furthermore, the city also administered a contest in hand painting for the official design of the reusable bags. The implementation of the ordinance also empowered the women of the city as it provided livelihood for them (Sun Star Pampanga, 2016). The City of San Fernando, Pampanga has consistently been identified as a leading model of Zero Waste Management in the Asia Pacific (Dizon, 2019).

### **Collaboration of the Different Political Actors**

To arrive at an effective implementation of an ordinance, it is

necessary to consider that all the voices and opinions from different sectors will be heard to devise a plan that would be inclusive for all (McCullough, 2017). The City of San Fernando, Pampanga was able to achieve such by asking the opinion of the business sectors. The business sectors play a significant role in the implementation of the ordinance since they are the largest sectors where the use of plastics is greatly prevalent. Further illustrating that the city government then, prior to the implementation of the Plastic Ban Ordinance, has coordinated with the business sector about their sentiments toward the implementation of the ordinance. The business sector, therefore, which comprises both macro and micro businesses, came into a consensus that they are willing to comply with the implementation of the Plastic Ban Ordinance. Furthermore, even before the implementation of the ordinance, there are already business sectors that are incorporating zero waste or environmentally friendly products. Due to this zero waste lifestyle being integrated into the citizens of the City of San Fernando, Pampanga even before the implementation of the Plastic Ban Ordinance, the ordinance did not greatly affect the business sectors, rather they themselves are waiting for the ordinance itself. *"Honestly, the business sector is not greatly affected since it's a part of a zero-waste lifestyle. So, our brands are catering products that can help minimize or reduce single use products or single use plastics."* - (Interview Participant, Business Owner).

### **Institution and Policy Mapping**

The need for a network approach echoes in various studies on plastic pollution around the world. Carman, Machain, & Campagna (2015), advocating for marine life in Argentina noted the insufficiency of the legal framework which needs a strengthening of enforcement through cooperation between the government, NGOs, and the residents. Chudhary and Dutta (2021) scoured Indian laws and jurisprudence. Both posit the need for extended producer responsibility as a necessary addition to complete the network of stakeholders participating in protecting the oceans from pollution. Osorio (2021) analyzed Philippine ecological laws pertaining to marine pollution. Focusing institutional lens on both the wording of the law and on the framework, Osorio identified lack of coordination between institutions as break within the network.

Governance of the environment can also be strengthened through the extension of policy networks both horizontally and vertically. Kandziora, van Toulon, Sobral, Taylor, Ribbink, Jambeck, & Werner (2019) suggested a collectivist network spanning across local and international members of society. Wienrich (2021) and Wysocki, & Le Billon (2019) proposed new treaty obligations to bolster policy networks on environmental protection.

There is also a need to look deeper into the relationships within the policy network. Policy network analysis was used by 'van Meerkerk, Edelenbos, & Klijn (2015) on the governance of water management. Using a different approach, their study identified the

significance of legitimacy of managers as a resource which helps strengthen the capacity of the network to work and facilitate the implementation of policy. In contrast, using a wider scope of research, Olmstead & Zheng (2021) compared cases of developing countries in terms of water pollution governance. Significant among their findings are problems such as conflicts or overlaps between institutions, the potentiality for rent-seeking within the policy framework, and lack of monitoring structures. Springel (2021) describes the experience of Norway's environmental policy as creating motivation through the incentives. The experience in Vietnam regarding plastic pollution is similar but with additional components. Nguyen (2021) analyzed existing legal frameworks which facilitate innovative policy use. In this particular case, the policy itself has merit for bringing about a sharing of burden on the price and on the risk on doing sound environmental practice. Vietnam's framework, according to the study is still incomplete, but the addition of shared economic burdens facilitated through public-private partnerships binds the network through a financial bond among stakeholders.

These timely literatures glossed over the study of policy networks, analyzing the lack or need of identifying structural arrangements towards successful environmental protection. This study on plastic ban legislation in the City of San Fernando, Pampanga, Philippines attempts to address the gap by bridging findings from a model city known for their zero-waste practices.

## METHODS AND MATERIALS

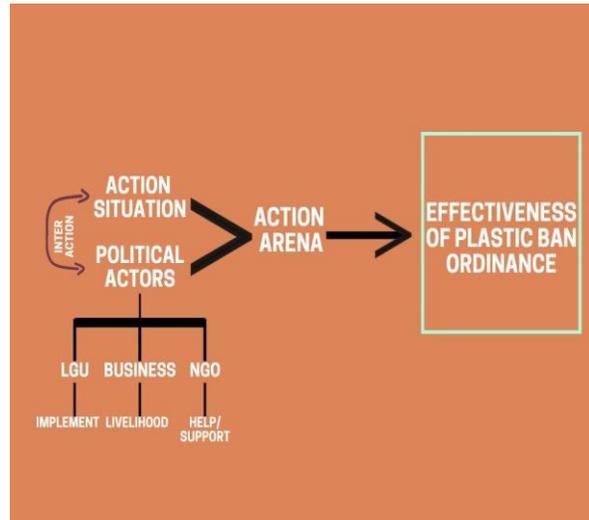


Figure 1. The proposed conceptual model in determining the process of interaction among political actors as adapted from Ostrom 2011 for use in the Philippine Local Government.

The institutional analysis and development framework designed by Ostrom (2011) comprises two sections. The first section tackles concepts of framework, models, and theories and the second section tackles the different processes within an institution and the way these can be analyzed. In this paper, the second section is chosen to help frame the thesis of institutional arrangements as means to help better implement policies. It comprises two significant concepts: action arena and action situation. *Action arena* pertains to both the situation and the actor. The actor involves the different political actors that include the different local government units, the business sector, and the non-government organizations. *Action situation* includes the different political spaces where the different political actors interact with one

another. This highlights the relationship and the interaction that transpires within the local governments in terms of policy implementation.

In Ostrom's framework (2011), seven indicators are used in exploring institutions. However, in this study, the authors chose actors and the potential outcomes, which are then described in terms of action arena and action situation. The two indicators are utilized as they portray an important role in implementing an ordinance effectively. The political actors include the different local government units (LGUs), business sector, and the non-government organization (NGO) and how they interact with one another to arrive at an effective implementation of the ordinance. Potential outcomes on the other hand refer to the outcome of the interaction of these political actors which then lead to the effective execution of the Plastic Ban Ordinance in the City of San Fernando, Pampanga.

### **Data Gathering Method**

This research incorporated a qualitative method where the goal would determine the process of interaction between the different political actors such as the LGU, business sector, and the NGOs in San Fernando City, Pampanga. This process of interaction would entail the way these political actors would lead to the effective and sustainable implementation of the ordinance. The researchers used the qualitative method since there are limited resources which pertain to the process of how a

particular ordinance is effectively implemented.

This research's aim is to determine the process of interaction among the different political actors primarily the LGU, business sector, and the NGOs in the City of San Fernando, Pampanga utilizing the qualitative method. Furthermore, this research study was made possible using interviews to each of the political actors mentioned.

### **Individual Interviews**

The researchers made use of a semi-structured, in-depth interview via online platforms such as Zoom and Facebook Messenger. This type of data collection is valuable to this research as the respondents play a significant role as political actors, more so their interviews were done separately to avoid collusion of answers.

Interview participants comprise of LGU officials such as representative from the city council, a representative from the city environmental and natural resources office, and a barangay official from the city. From the business sector, the set of respondents consists of the regional director of San Fernando, Pampanga and two business owners. Lastly, for the NGOs, there were two interviewees: A Mother Earth Foundation member and a Zonta Club International member. These respondents were chosen since they are the political actors who play significant roles towards the effective implementation of the ordinance.

**Ethical Consideration:**

The researchers informed the respondents of the project and asked for consent to do an interview through letters of request via email. With the attached letter are the interview questions for better informed consent. Upon their approval, the researchers coordinated the convenient online platform to be utilized. After which, the respondents were asked if they were willing to be identified in the research paper. If the identity of the respondents cannot be used in the study, codenames will be applied to identify their responses. Only the necessary data will be included in this research, in adherence to the Data Privacy of 2012.

**RESULTS**

Through the response of the interviewees, the researchers were able to determine three significant elements that lead to the effective implementation of the Plastic Ban Ordinance in San Fernando City, Pampanga. These three elements include the political actors, interaction, and the political will.

**Table 1 Political Actors that help in the implementation of the Ordinance**

Significant statements	Number of responses	Emerging theme
- Investment Office	2	<b>Political Actors</b>
- City Government	9	
- Community	9	
- NGO	8	

Referring to Table 1, there are four key actors who contributed to a better ordinance implementation. These four key figures include the LGUs, the business sector, the NGOs, and the community. In Table 1, the Investment Office, city government, and the community are significant statements derived from the respondents. The investment office is part of the LGU or the city government where they are in authority to implement and monitor the implementation of the ordinance, as what has been discussed in the results part of this study. The investment office is to be considered as part of the LGU as they are the ones who are providing livelihood and investments to help the city in further boosting their economic growth.

*“Right now, the investment office is providing the budget for livelihood program especially some are affected by this pandemic to support their livelihood. So, we have to eradicate their hunger, so we need to help the city investment office.”* - Interview Participant, Business Owner

Among the city government or the LGUs are different sub-offices where they are also in charge of monitoring the effectiveness of implementation of the ordinance; first of which is the City Environmental and Natural Resources Office (CENRO). According to McCullough (2017), the different institutions such as the LGUs, community, and the like play a fundamental role for ordinances to be implemented effectively. Similarly, the effective implementation of the Plastic

Ban Ordinance in the City of San Fernando, Pampanga was brought about by having a robust foundation of their CENRO. *"We have a strong CENRO in the city of San Fernando."* - (Interview Participant, City Councilor). Another significant political actor towards effective implementation of the ordinance are the NGOs. These NGOs help the LGUs in terms of information dissemination campaigns and conducting various trainings in order to make the communities aware of the significance of the implementation of the Plastic Ban Ordinance. *"The NGOs are helpers of the LGU."* - (Interview Participant, City Councilor). In addition to helping the LGUs, NGOs were also established to provide livelihoods that would further help to make the implementation of the ordinance more effective. As discussed, some NGOs, apart from giving orientation or training to the different barangay levels, also provide livelihood for the people most especially for the women.

Finally, the last chunk of the political actors that play a significant role towards effective implementation of the ordinance are the community. *"The schools should have waste holding area with signages biodegradable, recyclable, and residual."* - (Interview Participant, Business Owner). The community is a big institution comprised of schools, markets, business sector, and of course the household. Each of these individual actors play a significant role in the Plastic Ban Ordinance implementation. For the part of the school, at an early age, students must be able to recognize the necessity to take care of the

environment. Hence, schools in the City of San Fernando, Pampanga, are mandated to have a designated area where they can properly dispose their trash.

The business sector on the other hand, is also responsible in ensuring that the packages where their products would be placed are in environmental-friendly packages. In addition to the businesses in San Fernando, Pampanga are participants in trade fairs as they showcase their different environmental products without the need to compromise the environment through the different pouches in packaging. *"What we do is as much as possible we want our clients to come over to our trade fairs or buy in bulk to minimize the use of pouches in form of plastic."* - Interview Participant, Business Owner

In the community, the component actor is the household. It is in the household where participation begins. Its members are part of the compliance team whereas the local government units oversee the implementation of the ordinance. The household members are also consumers who patronize the use of plastic for the sake of convenience. Therefore, besides Plastic Ban Ordinance, Plastic Waste Management has also played an integral role in managing the implementation of the ordinance. Similarly, with schools, households are obliged to have a proper waste disposal area. Likewise, they are also mandated that their trash be separated according to biodegradables, non-biodegradables, and recyclables. If such an arrangement is not followed in

the household, the waste collector will refuse collecting the garbage.

*“They have here in the barangay itself, it is because here in our barangay they will not be collecting your waste disposal unless these trashes are segregated. This turns out to be the main protocol here or you can have someone you need to pay in order to segregate the trashes for you if you want.”* – Interview Participant, Business Owner

To address the first sub-question of this research, where the goal is to determine the different political actors who help in the implementation of the Plastic Ban Ordinance, four primary actors take the place of supporting institutions and are structural components in the system: The Local Government Units, the business sectors, different Non-Governmental Organizations, and the community. Each of these political actors play a significant role in ensuring that the effectiveness of the implementation of the ordinance is effective.

### Interaction

Table 2 LGU-Society Relations Towards Effective Implementation

Significant statements	Number of responses	Emerging theme
- <i>checking who is complying or not</i> - <i>complying City different actors that monitors the ordinance is the committee on Solid waste management with our collectors of waste materials with</i>	2 2	<b><u>Monitoring</u></b>

<i>the help of CENRO personnel</i>		
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In Figure 1, Ostrom (2011) defined *action situation* as the way different political actors socialize, engage, and do business with one another. In other words, *action situation* refers to the way the different political actors interact with one another within the political arena. Most blatant LGU-Society interaction is the compliance of residents to the implemented ordinance.

Along with the strict monitoring of the compliance of the ordinance, also comes the different sanctions that could be imposed to the violator, as further illustrated in Table 2 where monitoring has been an emerging theme from the responses of the interviewees. These in turn can be considered as part of the complementing strategy on why the communities in San Fernando, Pampanga have strong compliance to the said ordinance. Constant efforts and monitoring of the barangay to have an effective implementation of the ordinance are narrated as practiced in the barangay. *“We provide them information dissemination through a copy of the ordinance the barangay kagawad is providing dissemination on the committee on Solid waste management.”* – (Interview Participant, Barangay Official). The barangay officials play a key role in ensuring that their constituents are adapting and complying with this ordinance, since these barangay officials are the front liners in terms of regularly

reminding their people through constant information dissemination.

*“For the violators, we have a penalty. So, for the 1<sup>st</sup> offense it is the 1<sup>st</sup> time that they were to commit an offense to the ordinance the first to be conducted is the values formation or the seminar so they have to attend, they have to go to the office to attend the values formation seminar. Why values formation seminar? Because one of the most common reasons they often use is that they are not aware in the implemented ordinance just to go away with them being ticketed by the officials if they will not be monitored they will not be made aware in ordinance despite through the IDC campaign of our office. 1<sup>st</sup> offense seminar for them to be informed properly that’s our goal, that’s our objective to inform them properly about the ordinance. For the 2<sup>nd</sup> offense if you still haven’t learned your lesson 1000 pesos will need to be paid, they have to pay 1000 pesos. For the 3<sup>rd</sup> offense they have to pay 3000 pesos and for the 4<sup>th</sup> and succeeding offenses the business establishment will be recommended for their license to be revoke.”* – Interview Participant, CENRO Officer

Furthermore, due to the strict monitoring and execution of the sanctions to those who will be violating the ordinance, the community or the society is prompted to strictly follow the protocols of the said ordinance. *“If you see one that are using plastic you can text them call them they will really go to the establishment to give them sanction either by ticketing them or through education.”* – (Interview Participant, Business Owner). Therefore, even the people within the

community are already monitoring one another; when they see someone carrying or using plastic, they will already be the ones who would report it to the LGUs, particularly in the barangay level.

**Table 3 Joint Responsibility in Achieving an Effective Implementation**

Significant statements	Number of responses	Emerging theme
- responsible towards complying the ordinance that are implementing in the city	<u>1</u>	<b><u>Joint Responsibility</u></b>
- plus factor is makikita mo naman sa mga tao na dinadala na nila is yung mga eco bags nila they now bring their own eco bags add ko lang na naging indicator na naging effective or properly implemented yung plastic free ordinance natin	<u>1</u>	

Another result brought by the action situation or the interaction within the political actors is the theme of Joint Responsibility as indicated in Table 3. Even with the strict monitoring conducted by the LGUs, the implementation of the ordinance cannot be effective if not through the combined efforts of the community. Norris and Newton articulated that for an effective implementation of the ordinance, there must be the foundation of trust between the implementer which is the LGU and the society. Moreover, if the society does not trust their government, they will not cooperate with the platforms or projects

that are presented to them. As for the case of San Fernando, being consistently hailed as a “Zero Waste Model” (Dizon, 2019) it is apparent that they gave their trust to the bureaucracy which then yielded to productive results. The role of the different political actors as they responded to this call of complying with the ordinance was fundamental in having an effective implementation of the ordinance.

Furthermore, in the City of San Fernando, Pampanga, the family, which is the smallest unit of the institution, adheres to the protocols of the ordinance starting from the separation of their waste disposal. Moreover, in response to the ongoing pandemic, different households are looking for new ways that could help preserve the environment. Some even tried planting their own vegetable garden and would allow the localities within the vicinity to collect some of the crops that can already be consumed. This shows that the people in San Fernando, through the collective efforts of the LGU, business, and the NGOs, achieved their goal of having a healthy environment as the communities thought of their own ways of protecting and preserving the environment.

*“Here in our barangay, some are also persistent since the others are also into gardening. So, for some I could see that they are not really into preserving the environment it is most likely in the middle class wherein they really are persistent to composed or are into planting or gardening or make something from recycled use. Because if they planted they were able*

*to save money so there is no longer the necessity to go to the market and if you recycle this you don't need to buy this, having that kind of mindset or perspective.” - Interview Participant, Business Owner*

In addition to the efforts of the LGU, NGOs, and the community, the business sector also contributes to promote a healthy environment. They likewise have platforms where they monitor every micro, small, and medium enterprises regarding their use of plastic in their packaging. The efforts made by the political actors in a political arena like San Fernando, Pampanga, led to the promotion of having a plastic free environment.

*“But then we the Department of Trade and Industry we also have our own program we call it “Promotion of Green Economic Development”, this is a program of DTI, that started in 2015 but then the participants of the program are our micro small and medium enterprises so the intention of the program is to enhance their competitiveness by adapting environment friendly and climate smart strategies. Included in this program of course are the usage of plastics. So, through the different trade fairs definitely they will not be permitted to use plastic bags for their packaging material”. - Interview Participant, Department of Trade, and Industry Regional Director in Pampanga*

**Table 4 Institutional Networks Leading to Effective Implementation**

Significant statements	Number of responses	Emerging theme
- NGO, katulong ng LGU, local government may iba't-ibang levels yan for example ang DILG of course galling yan sa national, the linkage between mother earth foundation and the city government of San Fernando Pampanga or CSFP, tapos ang pinaka coordinate namin si Mayor si Councilor Lagman who was in charge of environment and also the CENRO.	<u>1</u>	<u>Network</u>

Table 4 shows that networked institutions also play an integral role in the effective implementation of the ordinance. The effectiveness of the implementation of an ordinance also relies on the network that would be able to help in managing the implementation such as those of the different NGOs. One of these is the Mother Earth Foundation. It assists the LGUs in devising a suggestion that could help further achieve an effective implementation of the ordinance, which then leads to the provision of incentives given by the LGUs to the barangay that complied most to the ordinance. *“We are helping to formulate the suggestion. But the ones who are granting the incentive is through the mayor the city government of San Fernando.”* (Member of the Mother Earth Foundation). The support of the different institutions must also be noted to have an effective implementation of the ordinance. If not through the

support of these institutions and without proper and close coordination, the implementation of the ordinance will be fragmented leading to a failure in its implementation. Institutional networks and support must also be considered in formulating a plan towards achieving any goal even beyond the implementation of the ordinance. *“We have the full support institutionally coming from the different institutions of San Fernando.”* - Member of the Mother Earth Foundation.

**Political Will and Lifestyle**

**Table 5 Leading by Example**

Significant statements	Number of responses	Emerging theme
- although sa palengke yun pero yung nga lead by example - even yung mga councilor ni mayor with bj tiger lagman iba rin kung baga they are leading by example	<u>1</u> <u>1</u>	<u>Leading by example</u>

Recalling the rationale of this study, the researchers had this aim seeking how the City of San Fernando, Pampanga was able to effectively implement the Plastic Ban Ordinance. This part of the research addressed the third sub-question for this study. The implementation of the Plastic Ban Ordinance in the Philippines as a whole has not yet been considered, therefore, the ordinance governs only particular cities in the country (Rola, 2019). The same situation can be considered in the City of Nagoya in Japan where no

nationalized plastic ban policy has been implemented (Kaminaga, 2018).

The implementation of the Plastic Ban Ordinance in the City of San Fernando, Pampanga entails a strong and firm political will. There are three significant elements that influence an important role, which leads to having a robust political will. The first is the common experience shared by the constituents in the City of San Fernando, Pampanga. Those in the low-lying areas are always inundated whenever there are typhoons and the common cause of this flooding are the different plastic residues clogging the smooth flow of the water through the different canals. This constant inundation provoked the political will of the citizens to stop or somehow mitigate the flooding in the area. This has been an integral role in the formulation of the ordinance.

The second significant element is the influence of the political leader to incorporate the preservation and protection of the environment as part of the advocacy program in the city. Plastic residues, despite the convenience they provide to the people, pose a great threat to the environment. This caused the city government to prioritize the preservation of the environment. Prior to the implementation of the ordinance, taking care of the environment has been part of the priority program and part of the top 10 agenda of Honorable Mayor Edwin Santiago.

The third and final element that equates to having a strong political will is the constant monitoring conducted by the City Environment and Natural

Resources Office (CENRO). The monitoring steered by the CENRO is not a one-time undertaking since it is connected to the license renewal of the business establishments. The business establishments depict a significant role towards the implementation of the plastic ban ordinance. The fact that they agree with the implementation of the plastic ban ordinance, they also influence the consumers to refrain from using plastics in terms of containing things. Part of the political will of these establishments is that they were able to integrate a zero-waste lifestyle thus incorporating eco-friendly products rather than the usage of plastic as packaging material. Therefore, it can be observed that the cooperation and willingness of all the actors in achieving the goals of the program are apparent in their actions. This resulted to its success and efficiency in the implementation of the Plastic Ban Ordinance, as shown by the award that the Mother Earth Foundation has granted them which measures the success and efficiency of the Plastic Ban Ordinance.

The City of San Fernando in Pampanga, along with Marikina City, Quezon City, Siquijor, and San Carlos in Negros Occidental, is among those cities that has implemented a plastic ban ordinance (Alegado, 2020). The difference between San Fernando and these cities is the recognition of the city as a model for the "Zero Waste Campaign." Therefore, the researchers sought how the cities were able to do it particularly in the implementation of the Plastic Ban Ordinance. One of the key reasons they were able to effectively

implement the ordinance is through leading by example as illustrated in Table 5. As mentioned in the interview, *“Even the different councilor of the mayor with BJ Tiger Lagman they are different. In other words, they are really leading by example the zero-waste lifestyle is really being implemented and considering it a lifestyle.”* - (Interview Participant, CENRO Official). This is because they themselves are incorporating and practicing the ordinance which led to their constituents following their actions.

The same respondent also stated the implementation of the plastic ban ordinance does not entirely feel mandatory. This was brought about by the way the different LGUs are adhered to the said ordinance as opposed to other cities where it is not often casual to see the officials complying with the ordinance that they just crafted. *“The implementation of the ordinance does not really feel that it’s mandatory because of the government here in San Fernando this ordinance is already being practiced as a lifestyle.”* - (Interview Participant, Resident)

Furthermore, another reason these officials are leading by example stems from the fact that they are incorporating this ordinance in their lifestyle. Instead of using the plastic bottles that are bought from different convenient stores, employees of the LGUs tried to make use of their own bottles. *“Instead of using the plastic bottles it started within the city so that 2500 city hall employees.”* - (Interview Participant, City Councilor). Because of this, the people in San Fernando, Pampanga now

abhor the use of plastic and they themselves would be the ones to report if an individual is using plastic. Even in the markets, the LGUs are strict on the implementation of the ordinance. Plastics will only be allowed for wet goods and should not be used with dry goods. If they monitor that some of the market vendors are not complying with this protocol, they have no choice but to strictly place a sanction on these market vendors.

*“You know the community itself are already used to this kind of practice. We often say here in San Fernando if you are holding a plastic bag or sando bag “jologs” ka. It is just like that when you are holding a sando bag you yourself will feel that you are out of place as if you don’t belong here because here in our city the use of sando bag is being prohibited that’s why when you are walking on the streets you would often see the community already bringing eco bags instead of plastic bag.”* - (Interview Participant, CENRO Officer)

Another factor to consider is the lifestyle. *“Honestly, the business sector is not greatly affected since it’s a part of a zero-waste lifestyle. So, our brands are catering products that can help minimize or reduce single use products or single use plastics.”* - (Interview Participant, Business Owner). As discussed in the previous paragraphs, the officials are following this ordinance as part of their lifestyle which then brings to another point i.e., the zero-waste lifestyle. Being

consistently hailed as a Zero Waste Model even businesses have incorporated this zero-waste lifestyle enabling the business sector in San Fernando, Pampanga to not be greatly affected by the implementation of the ordinance. Because they are practicing the zero-waste lifestyle, businesses in the city established a business where they created an environment-friendly product and through time communities now are patronizing these products instead of items fabricated from plastic. Furthermore, the mayor of San Fernando, Pampanga, Honorable Mayor Edwin Santiago, has a ten-point agenda, wherein part of this agenda is taking care of the environment. *“But it’s also the priority of our good mayor and it’s one of top ten agenda of taking care of the environment.”* - (Interview Participant, City Councilor)

One of the key elements that brought an effective implementation of the Plastic Ban Ordinance in the City of San Fernando, Pampanga is the integration of the zero-waste lifestyle and their LGU was able to lead by example. The officials themselves are following the ordinance, therefore, no reason should be made for those citizens who are resistant and not complying the implementation of the ordinance in the City of San Fernando, Pampanga.

**Table 6 Strict Implementation of the Plastic Ban Ordinance**

Significant statements	Number of responses	Emerging theme
<i>Large role of the local government unit</i>	<u>13</u>	<b><u>Political Will/Strict Implementation of the Ordinance</u></b>
<i>Execution of sanction</i>	<u>2</u>	

Another factor to consider as the reason for effectively implementing the plastic ban ordinance is the large role of the LGUs in terms of their strict and rigid implementation of the ordinance. The first task of the LGU towards the implementation is through IDC or the Information Dissemination Campaign. Part of the LGUs are the different barangay officials, who are also responsible towards effective implementation of the ordinance.

*“So, the first strategy that we incorporated is that firstly we created the ordinance itself the plastic free ordinance of the city of San Fernando and then after finishing the ordinance and after the approval of the ordinance we started with the widespread dissemination for the public awareness like we had different idc campaigns specially for the business establishments and of course for the community also.”* - Interview Participant, CENRO Officer

It must be considered that proper public awareness should be ensured to propel the community to comply with this ordinance.

*“The first step really is the public awareness that’s where you will*

*begin through the proper information dissemination. Proper awareness is what the people need so there is really a need to teach them and to make them realize the significance of why you are implementing this ordinance not just the plastic ordinance but even other environmental laws or ordinances as well. Proper education is needed towards the communities.”* – Interview Participant, CENRO Officer

The next step towards the effective implementation of the Plastic Ban Ordinance is the constant and strict monitoring. *“Always our frontliners ang lead office is the CENRO ang ating mga enforcers.”* (Interview Participant, City Councilor). The CENRO has a particular team tasked to monitor the compliance of the community. This includes the household and the business. These CENRO officials are considered to be the frontliners towards achieving the effectiveness of this ordinance.

Besides the CENRO officials, there are also volunteers from different barangays who are tasked in monitoring who are violating the said ordinance. *“We activated the kawal ng kalikasan these are volunteers coming from the different barangays of the city to help us or assist us in checking whose complying or not complying especially the retail stores the sari sari stores.”* (Interview Participant, City Councilor). These volunteers are called the “Kawal ng Kalikasan” and they focus mainly on the retail or the sari-sari stores.

Part of having strict monitoring is the sanctions to be placed whenever there are individuals or business establishments who would be caught in the act of violating the ordinance. Alongside are the incentives to be given when a barangay complies with the ordinance. Firstly, the violators of the law will attend a seminar regarding the ordinance to avoid using the reason that *“Hindi sila aware dun sa ordinance”* (CENRO Representative). For the second and third offense, if the individual still violates the Plastic Ban Ordinance, the individual must pay 1000 pesos and 3000 pesos, respectively. Finally, if they continue violating the ordinance, these individuals may be imprisoned and be charged with a criminal or civil case. On the other hand, for business establishments who would still be violating this ordinance, their business license will be revoked. The strict monitoring and execution of the sanction towards the violators must be one of the reasons why San Fernando, Pampanga has an effective implementation of their ordinance.

The city government of San Fernando, Pampanga does not apply incentives to individuals alone but rather as a community or their barangays. To those barangays that have been diligent towards the compliance of the ordinance, a monetary incentive is given to them. These may not be directed towards the individual, instead it is directed towards the barangay which may aid them to economic prosperity or other aspects that they want to improve on.

*“The dump trucks are capable of going to the barangay since the waste being collected is just a few every day. This causes the city hall to spend little amount of money only which then brings the extra funds of the city hall which then leads to monetary incentives.” - Member of Mother Earth Foundation*

The Plastic Ban Ordinance in San Fernando, Pampanga has been implemented since 2014 and until now the effectiveness of the implementation is evident considering the recognition lauded to them (Dizon, 2019). Thus, the sustainability of the Plastic Ban Ordinance relies heavily on the institutions. The effectiveness of the ordinance implementation has been sustained because the protection and the preservation of the environment are enshrined to the different institutions and that they are recognizing the dire need to rehabilitate the environment once again. Moreover, these institutions also highlighted the necessity to balance economic growth and take care of the environment.

*“Yes, very much because we are all stakeholders in taking care and preserving our environment especially now in this time of pandemic because of the quick turn of time comes along the rapid evolution and development progress that we often forget to balance economic growth with the environment the hard-hit industries now during this pandemic are tourism industry specifically the beach because they forgot to balance the economic development with*

*taking care of the environment.” - City Councilor of San Fernando Pampanga*

All in all, having a strict implementation and monitoring of the Plastic Ban Ordinance coupled with the integration of the ordinance in their way of life yields to a more effective implementation of the ordinance. When their constituents see that their government officials are following this kind of ordinance, they will be left with no choice but to follow them. Likewise, the sanctions being imposed to the violators led the society or the community to be aware and conscious of their actions most especially when using the plastic.

## DISCUSSION

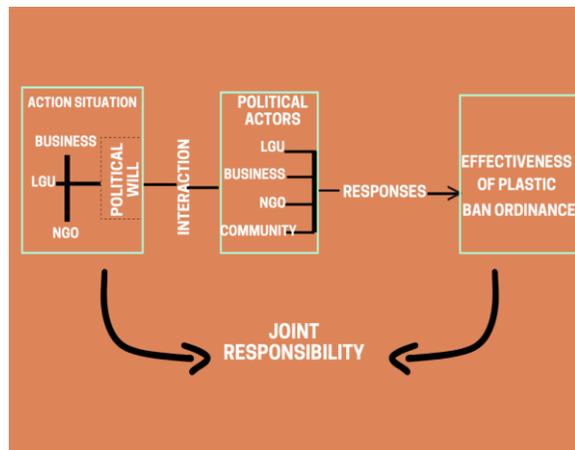


Figure 2 Simulacrum of Data Gathered

## Effectiveness of Plastic Ban Ordinance

The City of San Fernando, Pampanga in 2014 has implemented Ordinance No. 2014-008 or the Plastic Ban Ordinance. The effectiveness of an ordinance does not equate only through the interaction among the different

political actors. As illustrated in the diagram, a series of political phenomena and institutions are necessary and must be considered to arrive at an effective implementation of the ordinance. Various responses have been taken into consideration by the different political actors in order to arrive at an effective implementation of the ordinance. Various elements or subcategories that have been illustrated in the diagram is explained throughout this section of the study.

### **Interaction**

The interaction of the different political actors in the action situation led to the different responses of the LGUs, the business sector, and the NGOs. The LGUs, aside from their tasks in ensuring that the ordinance is implemented effectively, also ensured not leaving anyone behind. In relation, the city government of San Fernando, Pampanga entered a bilateral contract with some business establishments, particularly the Republic Cement. The agreement between the two goes, with every plastic collected, this would be exchanged for a bag of cement that would help in the development of the city government.

*“Recently, last pandemic the city of San Fernando Pampanga with partnership to republic cement for plastic neutrality last July 17, 2020, of course together with our mayor they had a memorandum of agreement in exchange to the plastic bags. These plastic bags will then be converted by the republic cement into bags of cement. These bags of*

*cement will then be used in the construction of the rehabilitation center projects of the city government.”* - Interview Participant, Business Owner

Furthermore, the interaction among the LGUs also facilitated women empowerment. *“For the reusable bags on the other hand, the women in San Fernando Pampanga what they did is to create eco bags and reusable bags”*. (Interview Participant, City Councilor). This is because through the implementation of this ordinance, the city government was able to generate livelihoods for the women in creating reusable bags to be used in the city to replace the use of plastic.

For the LGUs, these are some of the responses that they were able to create in order not to leave anyone behind despite the implementation of the Plastic Ban Ordinance. Businesses also have their own way of adapting to this ordinance. The ordinance that was implemented in the city did not greatly affect the business sector as some of these businesses are already incorporating it due to the zero-waste lifestyle. *“Honestly, the business sector is not affected since it’s a part of a zero-waste lifestyle. So, our brands are catering products that can help minimize or reduce single use products or single use plastics.”* (Interview Participant, Business Owner).

Similarly, the LGUs and the business sectors are also taking steps to help the women in the city. A particular business establishment is hiring women, particularly mothers, to help earn a little stipend, enabling them throughout this

pandemic. These livelihood platforms include mothers as part-time sewers as they are also tasked in the shipping out of different job orders. This particular business establishment is teaching women hand-embroidery to help them earn an ample amount of salary.

*"In the year 2020, we are planning to empower women. At this current situation, we are still empowering women however I have part time sewers and they are also moms. So, they are the ones in charge in the shipping out of the job orders. So, we are planning to create within the vicinity of our barangay to have woman empowerment to help to the different household wives to have minimal job orders. Because as a mom the schedule of being a mom is very hectic but that little thing that could empower them to earn even though just a little stipend to those little jobs. Also, in training them how to sew or how to hand embroidered".* - Interview Participant Business Owner

The NGOs play a significant role to help in the effective implementation of the Plastic Ban Ordinance in the City of San Fernando, Pampanga, as it has been consistently hailed as a zero-waste model. The city also has a zero-waste advocacy that serves as a platform together with the Mother Earth Foundation. This program is being consistently executed through different partner barangays that are mandated to be in - charge of taking care of the waste of the community. They are motivated through the utilization of incentives and recognition for the different barangays.

Furthermore, there must be a constant dialogue between the LGUs and among the NGOs in order to address problems that may arise.

For the NGOs, several responses state that they were able to perform that through interaction with the different institutions, affirming the existence of networks. Although there are some NGOs that are independent in terms of monetary funding, they still interact with the LGUs in terms of asking permission if they could go to a particular barangay that is in need of assistance.

*"We have our own funding, but then we have to seek first the approval of the local government unit that we are going to a particular barangay when they recognized that there are several of them that needs guidance and assistance." - Interview Participant, Civil Society*

Furthermore, for this independent NGO they also disseminate information about the Plastic Ban Ordinance and how it would be beneficial for the society. Likewise, in response to this information dissemination drive being conducted by the NGO, they will also be providing livelihood for them. *"Yes, the Zonta Club International women organization. I am one of its members. I am doing a livelihood program for them."* (Interview Participant, Civil Society)

NGOs, through their interaction with the LGUs, assist the city government in the implementation of the ordinance by conducting evaluations of communities. They also

provide trainings to the different barangays pertaining to the implemented ordinance to escalate the awareness of the community. *“Then aside from the training we are also going back to evaluate on the condition of the training that we conducted last time. This is in order to check and monitor if there are progress or changes with the implementation of the ordinance in the City of San Fernando.”* (Interview Participant, Civil Society). On the other hand, evaluation, seminar/training, and livelihood are some of the responses of the NGOs coming from their interaction with the different institutions.

Finally, the last political actor that also plays a significant part in these implementations of the ordinance is the community. Two interconnected sub-themes, which are their compliance and resistance to the ordinance, were attributed to the community. The first time that the Plastic Ban Ordinance was created, the community resisted the ordinance since these ordinances would not be accepted by the community and they would only criticize it.

*“Number 1 is the resistance of the people, they are afraid. First, so many individuals are criticizing that this ordinance will not be accepted by the community since it will be a difficult situation for us if we will not be using plastic. So, it is more on the resistance of the people towards acceptance of our ordinance.”* - Interview Participant, CENRO Officer

However, due to the constant Information Dissemination Campaign

conducted by the CENRO, a part of the LGU to the different barangays, the people in the community complied with the ordinance as they are made aware of the importance of the implementation of this ordinance.

*“The first step really is public awareness. It is really important to start with this first. Proper information dissemination, proper awareness towards the people you have to impart on them, and you have to make them realize the importance of why you are implementing this kind of ordinance not only regarding plastic ban ordinance even other environmental laws or ordinances. Proper education must be given to the communities.”*

- Interview Participant, CENRO Officer

Moreover, the compliance of the society or the community towards this ordinance allowed the low-lying areas to reap the benefits of the Plastic Ban Ordinance. Whenever the rainy season arrives, they no longer have the fear of being flooded as the canals have already been cleaned due to the managed plastics in the ecosystem brought by the ordinance implementation.

### **Action Situation**

The action situation as defined in Ostrom’s Institutional Analysis and Development Framework (2011), refers to how political actors in a society would interact or socialize with one another. Part of having an effective implementation of the ordinance would depend on what would transpire within and among different political actors. As

it can be seen in the action situation, three political actors engage with one another to arrive at an effective implementation of the ordinance. These political actors are the LGUs in the City of San Fernando, Pampanga, the business sector, and the NGOs. The LGU, being the head towards the effective implementation of this ordinance, would then direct its implementation to the business sector and the NGOs. Furthermore, the city government of San Fernando, Pampanga has the task of implementing the ordinance and monitoring their constituents on whether they are complying or not. For the implementation of the ordinance, a team from the CENRO would be implementing the ordinance up to the level of the barangay.

Part of the implementation of the ordinance is the Information Dissemination Campaign (IDC) of the LGU to increase the awareness of the public regarding this Plastic Ban Ordinance.

*“So, first yung naging strategy natin so syempre unang una is we created the ordinance itself. The plastic free ordinance of the city of san Fernando and then after finishing the ordinance and after the approval of the ordinance we started with the widespread dissemination for the public awareness like we had different idc campaigns specially for the business establishments and of course for the community also”*  
*“Before, our low-lying areas here in San Fernando, it would only be raining for just a bit or even*

*typhoons they will already be flooded. But now in the low-lying areas of San Fernando they are already testifying, our community that they are no longer prone to flooding and this means that the clogs of the different canals and also the different clogs in our streams that was brought upon by the use of plastic are now already cleared and the usage or the creation of the plastics are now being lessened.”*  
(Interview Participant, CENRO Officer)

Another task of the LGU in San Fernando, Pampanga is their strict monitoring of the implementation of the ordinance. The monitoring team also comes from the CENRO where they would be monitoring the establishments.

*“And of course, right after the IDC or the information dissemination campaign we will go straight to the monitoring. So, we have a monitoring team in the city government through the city environment and natural resources office. One is the idc which was the first one, second are the inspectors and enforcers. For our inspectors, they are monitoring the business establishment while for the enforcers they are monitoring the community itself, they are also the ones in charge in monitoring the barangays. So, it is just a cycle starting from information dissemination together with continuous monitoring and continuous implementation in our ordinances.”* - Interview Participant, CENRO Officer

*"Before, our low-lying areas here in San Fernando, it would only be raining for just a bit or even typhoons they will already be flooded. But now in the low-lying areas of San Fernando they are already testifying, our community that they are no longer prone to flooding and this means that the clogs of the different canals and also the different clogs in our streams that was brought upon by the use of plastic are now already cleared and the usage or the creation of the plastics are now being lessened." - Interview Participant, CENRO Officer*

The business, as stated by the respondents, has not been greatly affected by the implementation of the Plastic Ban Ordinance. During the crafting of the ordinance, the LGU of San Fernando, Pampanga requested the business sectors to join to know their opinions on the implementation of the ordinance. This was participated by the business sector who showed willingness for the implementation of the Plastic Ban Ordinance. *"Honestly, the business sector is not greatly affected since it's a part of a zero-waste lifestyle. So, our brands are catering products that can help minimize or reduce single use products or single use plastics."* - (Interview Participant, Business Owner). Furthermore, the collaboration of the LGUs together with the business sector helped in the strict implementation of the Plastic Ban Ordinance in the city.

*"Because maybe during the crafting of the ordinance we involved businesses specially the big*

*businesses especially the malls, the big operators there are multinationals that are already here in the city. They really are the big sector that are using plastic bag so they can really resist on the ordinance. So, what we did is that during the crafting we involved them, we accompanied them in the formulation of the ordinance and surprisingly these big companies are ready to adapt this change in banning the use of plastic bag and encouraging consumer to use reusable bags."* - Interview Participant, City Councilor

The business sector was not greatly affected because when the ordinance was created, the city government of San Fernando also asked the opinion of those in the business sector where the latter agreed to the implementation of the ordinance; and that they were simply waiting for the ordinance to be fully created. As exclaimed by a city official, *"Surprisingly these big companies are ready to adapt this change in banning the use of plastic bag and encouraging consumer to use reusable bags."* (Interview Participant, City Councilor).

Furthermore, the action situation that transpires within the business sector led to a different set of responses, which is further discussed in the next section of the study. Lastly, the NGOs are also part of the institutions that likewise play a significant role in the action situation. The NGO on the other hand, together with the LGUs, does the monitoring and the evaluation of the ordinance that is being implemented.

In summary, the action situation pertains to the process of the effective implementation of the Plastic Ban Ordinance in the locale of the research, which is in the City of San Fernando, Pampanga. The process begins with the crafting of the ordinance then this ordinance will be directed to the business sector and to the different NGOs. These three political actors have their own tasks to ensure the proper and strict implementation of the ordinance.

### Joint Responsibility

The effectiveness of the implementation of the Plastic Ban Ordinance was brought upon by the proper compliance on the process of the implementation of the ordinance starting from the LGUs down to the barangay level. *“The city of San Fernando Pampanga is a class-A city that’s why all actors are responsible towards implying the ordinance what are implementing in the city.”* (Interview Participant, Business Owner). Coupled with the proper implementation of the ordinance is the necessity for the continuous monitoring and evaluation to ensure that the society or the community is complying with the plastic ban ordinance. The effectiveness of the implementation of the ordinance was brought by both the cooperation of the community and strict implementation and monitoring of the LGU.

### CONCLUSION

The researchers’ goal of determining the political actors, the impact of the action situation towards implementation, and how they were able to effectively implement it rests on three concepts: **Institution, collaboration, and political will.** **Institution** plays a significant role in the effective implementation of the Plastic Ban Ordinance. Without a strong foundation of their CENRO, they will not be able to perform the different tasks needed to effectively implement the ordinance. Moreover, the compliance of the community also plays a significant part here as they are the main consumers of plastic. It is also important to note the discernment towards the compliance of the ordinance. If they would be complying, then it would lead to positive and fruitful results. However, if they continue to resist the implementation of this ordinance then they are not taking into consideration the immense effect of using plastic towards the environment in addition to the experiences of the low-lying areas every time there would be flood. The next concept is **collaboration.** The implementation of an ordinance is no docile task. This is the reason the LGUs must also relate to other institutions in order for them to have more productive results towards the implementation of this ordinance. There must also be other actors who

would help the LGUs to provide other suggestions that would be beneficial to the community, and to the effective implementation of the ordinance. The final concept is **political will**. These institutions must have a strong sense of political will for them to implement the ordinance effectively. They must be firm in the execution of the sanctions and must not be blinded by the "under the table" system. When these three are present then any ordinance that needs to be implemented will be effective.

## RECOMMENDATIONS

**For the Local Government.** The researchers recommend that the implementing ordinance should be equipped with the necessary evaluation tools conducted at both the trial phase and its actual implementation. These tools, monitoring and evaluation, will prove to be very helpful in the long run as new ordinances are expected to experience "birth pains" and need appropriate adjustment in both concept and actual practice of implementation. The strong political will of the LGU in terms of monitoring and implementation is also a big factor needed to arrive at an effective and positive response to the ordinance. Another significant element of implementation is that the LGU must have an effective system of adjustment. The system must be capable of changes or renovations such as suggestions, responses, and negative reactions from people. This will make the ordinance stronger and acceptable to the people as their participation is recognized and

will eventually contribute greatly to its success. In other words, the ordinance must be flexible enough to endure the test of innovation and time, for it to be considered effective.

**For the School.** Schools are part of the community and institutions and next to home. This is where an individual spent most of one's life. It is important to consider that ordinances that would be implemented or ordinances that have already been implemented should be taught in schools. This will also assist the LGUs towards information dissemination thus starting at a young age the youth already have proper awareness and information on the ordinances implemented.

**For the Community.** The researchers would like to recommend for the communities of other cities with implemented Plastic Ban Ordinance to adopt a zero-waste lifestyle. Furthermore, the insights and perspectives of the different members of the community should also be taken into consideration.

**For Future Research.** The researchers would like to recommend exploring the effectiveness of the implementation of the Plastic Ban Ordinance based on the various cities mentioned in this study and taking into account the event of the pandemic. Future researchers should ask if the implementation of the ordinance still exists despite the pandemic. In addition, the researchers recommend the use of the other five indicators in reference to Ostrom's Institutional Analysis and Development Framework.



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