

# Community Health Policy: Zero Open Defecation Implementation in Selected Barangays of Bauang, La Union.

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## ABSTRACT

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The study is about the implementation of the Zero Open Defecation (ZOD) Ordinance in Brgy. Pugo, Brgy. Sta. Monica, and Brgy. Santiago in Bauang, La Union. It aims to examine the level of awareness of the households and the level of implementation as perceived by the households, as well as the challenges encountered in its enforcement. An explanatory sequential design was used, through a survey questionnaire and interview to accumulate the needed data. It was conducted in the Municipality of Bauang, La Union, with 325 respondents and 10 key informants. The households have slight awareness on the provisions of the ordinance; the households perceived the extent of the policy's implementation as slightly implemented; inadequate regulatory actions and pervasive cultural and social norms were the general themes obtained; and the proposed information education VLOG and pamphlet can contribute to inform and encourage the residents to engage for the betterment of the implementation of ZOD Ordinance.

**Keywords:** Community Health Policy, Zero Open Defecation, policy challenges, policy implementation, community health

## SITUATION ANALYSIS

Understanding the array of perceptions and concerns on an issue helps an agency to further their interests by helping the public to feel involved and included meaningfully (United States Environmental Protection Agency, 2025). In view thereof, this paper aims to examine the level of awareness of the households and the level of implementation as perceived by the households, as well as the challenges encountered in the enforcement of the Zero Open Defecation (ZOD) Ordinance in Brgy. Pugo, Brgy. Sta. Monica, and Brgy. Santiago in Bauang, La Union. Understanding the perception of the inform and encourage the residents to engage for the betterment of the implementation of ZOD Ordinance.

One of the fundamental rights of every human being, regardless of race, religion, political belief, economic, or social condition, is the capacity to enjoy the highest attainable standard of health as provided in the Constitution of the World Health Organization.

Ensuring healthy living conditions remains in society's interest and ought to be fulfilled through public health, as the Centers for Disease Control and Prevention (2014) states. On that note, health development ensues from policies that focus on its promotion and implementation (de Leeuw et al., 2014). According to Dew (2017), through political processes, individuals experience unequal access to resources and exposure to health hazards.

Winslow (2014) defined public health as the science and art of preventing disease, prolonging life, and promoting health by consolidating the efforts and informed choices of society, organizations, public and

private communities, and individuals. Sanitation is embodied in public health conditions, which tackles the adequate treatment and disposal of human excrement and sewage as per the World Health Organization (2020). The United Nations Member States adopted the 2030 Agenda for Sustainable Development, which provided the blueprint for 17 Sustainable Development Goals (SDGs). Indicated on the sixth SDG is ensuring the availability and sustainable management of water and sanitation for all. Specifically, one of its targets is to end open defecation by achieving equal access to adequate and equitable sanitation and hygiene by 2030. Open defecation is a massive impediment to improved sanitation, with over 892 million people still practicing it and 2.3 billion lacking access to adequate sanitation facilities (Saleem et al., 2019).

Poor hygiene, sanitation, and water resources contribute to 2.4 million deaths annually. West and Central Africa account for 24% of the global open defecation rate, with Nigeria ranking second with 47 million people practicing it. The Nigerian government launched an action plan to provide accessible sanitation and hygiene services but faced challenges releasing funding, causing significant delays in its progress. The WHO and UNICEF (United Nations International Children's Emergency Fund, 2017) report highlights the need for urgent action to address this issue. Capone et al. (2020) found that 930,000 US citizens need primary sanitation access. The San Francisco Department of Public Works launched the Pit Stop Program in 2014, providing accessible public restrooms with attendants for safety and cleanliness. This led to a 12.47-per-week decrease in feces reports.

The Who/Unicef Joint Monitoring Programme (JMP) found that households with formal education are more empowered to demand fundamental rights like sanitation services. The Inter-American Development Bank (IDB) has implemented a crisis resolution strategy, focusing on vulnerable populations, improving wastewater treatment and sanitation, promoting flexible solutions, and improving governance.

In the pan-European region, 314,000 people in the pan-European region, primarily from small rural areas, continue to practice open defecation as per the WHO/UNICEF JMP report (United Nations Economic Commission for Europe, 2019). The report emphasizes the need to reform national and local governance frameworks to ensure equitable access for vulnerable and marginalized groups, emphasizing the significance of political, financial, and technical efforts in addressing these issues.

The highest contributors to the rates of open defecation are the South Asian countries. According to Vyas and Spears (2018), 60% of the global rate of open defecation burden was made up of the residents of rural South Asian regions. India and Nepal face high rates of rural open defecation, with poor sanitation causing economic losses in countries like Cambodia, Indonesia, the Philippines, and Vietnam.

In 2015, poor sanitation caused a global loss of \$222.9 billion, with Asia and the Pacific region suffering the most. Meanwhile, economic developments in countries like Japan, South Korea, Malaysia, and Thailand have been attributed to prioritizing sanitation investments in nation-building. Cambodian Local Governments are focusing on decentralization for successful sanitation promotion, allocating a portion of their budget to sanitation and partnering with Non-Governmental Organizations to participate in microfinance institutions. This helps reduce financial barriers and innovate latrines, lowering costs for cash-constrained families.

Open defecation is a prevalent practice in developing countries like India, Indonesia, Nigeria, Ethiopia, and the Philippines, leading to diarrhea and intestinal parasite infections among children. As of 2015, 7.5 million Filipinos lack sanitation facilities, potentially resorting to open defecation, which poses risks to health, malnutrition, and child stunting (Community-Led Total Sanitation Foundation, 2017).

This issue is anchored with the study of Latip et al. (2021) entitled "Factors Affecting the Achievement of Zero Open Defecation Program of the 16 Barangays of the Municipality of Kabuntalan." It revealed that the residents are well aware of the potentially hazardous effects of open defecation on their health. This entails that having a fundamental knowledge of the rationality behind the policy's execution helps individuals to be more sanitary, as having a basic comprehension allows citizens to appreciate the policy's objectives. The findings revealed that most respondents felt that having a hygienic toilet would enhance their community as it would not harm the environment. They also employ appropriate solid waste disposal and dump waste within 10 feet of the residence. The authors linked this level of awareness to the profound connection that exists

between the demographic profile of those surveyed in terms of age, gender, educational attainment, occupation, and household size and the factors influencing the achievement of the Zero Open Defecation Program in terms of financial aspect, resource availability, and waste disposal.

Likewise, Jeremias et al. (2019) suggested that despite widespread implementation of environmental policies, penalties must be adequately enforced, leading to frequent violations and hindering the efficient achievement of policy objectives, as per the primary informants. This emphasized the need for improvements as per the recent declaration of the Lanao del Norte governor on the covered interview of Luczon (2023), according to which the Lanao del Norte province administration seeks to extend the "Zero Open Defecation" or ZOD program, which the national government issued a directive for local government units (LGUs) to implement. According to a statement from the province's Governor, the ZOD initiative will include a budget for water testing, toilet provision, and other required tools to engage and empower communities to help tackle fundamental sanitation concerns.

The Philippine Statistics Authority (PSA) reports that 2.6% of people still practice open defecation, particularly in rural areas. This is lower than the 3.5% reported in the 2020 APIS. Approximately 84 percent of families either did not use an improved sanitation facility that was not shared with another household or had access to essential sanitation services in 2020. Additionally, one in ten families (10%) either used an enhanced sanitation facility shared by two or more households or had a limited-service level.

The Bangsamoro Autonomous Region in Muslim Mindanao (BARMM) has the highest percentage of families practicing open defecation without a toilet facility, followed by Region V (8.1%), Region VI (7.1%), and Region VII-Central Visayas (76.3%). The top three regions with the highest percentage of families having basic service sanitation facilities are Region III-Central Luzon (92.5%), Region IVA-Calabarzon (90.4%), and Region II-Cagayan Valley (89.8%). Access to these facilities is equally distributed between urban and rural areas. However, rural families (4%) were more likely to practice open defecation than in urban areas (1.2%).

Therefore, several international and state laws guarantee health as a human right. Such laws formulate health as a human right and provide specific governmental obligations, which express the states' obligation to protect citizens' health. Pursuant to Article II, section 15 of the 1987 Philippine Constitution declares that the state shall protect and promote the people's right to health and instill health consciousness among them. Per Presidential Decree 856, often known as the Philippine Sanitation Code, DOH assists local health offices in creating public health initiatives. To help DOH and Local Government Units (LGUs) establish a comprehensive and sustainable sanitation program and accomplish national policy objectives, a monitoring and evaluation system must be implemented for sanitation.

Moreover, the occurrence of diarrhea, cholera, typhoid fever, and other infectious diseases in the Philippines is also associated with unsanitary conditions. The World Bank Organization also stated that health problems encountered during the stage of early-life development produce an adult workforce that is less economically productive and less healthy (Spears et al., 2013). This primary concern remains and ends up as a vicious cycle of repeated infection and chronic malnutrition. The UNICEF Representative calls for the assistance of the local governments in ensuring a clean and healthy environment for every child through investing and seeking out partnerships that will advance the efforts of numerous organizations.

In the last 2017 World Toilet Day celebration, former Health Secretary Dr. Francisco Duque III emphasized the significance of having a primary toilet facility to achieve universal health. Duque cited his agency's National Sustainable Sanitation Plan: "Our target is 100 percent coverage by 2022. Let us not wait till 2022. Nothing is stopping us from achieving this earlier than planned." The DOH has implemented the Zero Open Defecation Program (ZODP) to combat the problem. The ZODP uses the Community-Led Total Sanitation (CLTS) methods and techniques.

The government agency emphasizes the need to change sanitation methods involving collective behavior, robust supply systems, and enhanced public services. This transformation requires improving infrastructure and services provided by individuals, collectives, and corporations and general control of behavior compliance.

Following that, on the 2021 World Toilet Day celebration, the DOH and UNICEF commended 55 municipa-

-lities and cities certified Zero Open Defecation despite the pandemic. In the same year, the municipality of Bauang received recognition from the Provincial Government of La Union for its Open Defecation program, as posted on its official website. Zero Open Defecation certificates were also awarded in 2017 to the following barangays: Carmay, Pottot, Acao, Bagbag, Boy-utan, Pilar, Urayong, Guerrero, Bawanta, and Upper San Agustin. For a barangay to be certified as having ZOD status, the following characteristics should exist in the community at the time of the assessment towards certification: (1) use of a functional toilet; (2) availability of soap and water at or near the toilet; (3) proper disposal of babies and the elderly's feces; and (4) there are no visible feces in the surrounding.

To attain a ZOD status and resolve this concern, the Sangguniang Barangay of Santiago and the abovementioned Barangays in Bauang, La Union, adopted Barangay Ordinance No. 01, s. 2021 entitled, "An Ordinance Adopting the Zero Open Defecation (Zod), Imposing Fines and Penalties for Violation." As per the said ordinance, the barangay will promote Zero Open Defecation by allocating funds annually for Sustainable sanitation programs to safeguard all constituents' public health and well-being. Moreover, it also enumerated the prohibited acts and their corresponding penalties, which are the following: (1) Open Defecation in open places and (2) Throwing, leaving, or depositing fecal waste in open spaces exposed to the environment. A fine of Php 500.00 will be charged on the first offense, Php 1, 000.00 for the second offense, and Php 1, 500.00 for those caught violating this ordinance on the third and succeeding offenses. The ordinance adopted was from a municipal ordinance in Bauang congruent with the abovementioned Presidential Decree 856 or the Philippine Sanitation Code, as the Local Government Units (LGUs) need a practical and progressive program strategy to meet these policy aims and eventually achieve sustainable sanitation given the variability of sanitation conditions at the local level.

However, it is necessary to recognize that many households in the selected Barangays still need toilet facilities despite implementing the ZOD Ordinance. As per the Field Health Services Information System, Quarter 1 of the year 2023 in the said municipality demonstrates a massive surge in the number of houses with no toilet facilities. A survey conducted by the local government unit of Barangay Santiago, Bauang, revealed that about 482 homes still need toilet facilities. The number is half the estimated 977 houses in the said Barangay.

In addition, Barangay Pugo also needs help with the same concern, having 93 homes with no toilet facility; meanwhile, Barangay Sta. Monica recorded 100 houses with unsanitary practices since they had no toilet facilities. The local government's inability to address the sanitation issue at the government level hinders its ability to proceed on the policy development stage. At the government level, the core functions of public health are assessment, policy development, and assurance (CDC, 2014).

Despite extensive literature regarding open defecation, a research gap is evident in population, geographic, knowledge, and methodology since the selected locale of this study has yet to be explored by other researchers tackling this specific issue. To illustrate, while it is true that there were similar studies in the Philippines and other regions, such as in Ilocos, only a few studies have taken place. Previous studies on the subject left other areas underrepresented, like individuals residing in mountainous and coastal locations.

In addition, it rarely centers on implementing open defecation, as similar studies usually focus on implementing policies about anti-smoking, proper waste disposal, anti-plastic, anti-rabies, and such. Furthermore, the approach utilized in this study to collect data also differs from the earlier research conducted. While the majority of similar studies used quantitative methods, this study utilized a comprehensive design to answer the research problems indicated, especially in gathering data about the personal encounters of the implementers regarding the challenges experienced in enforcing the said policy. Most importantly, no existing literature in the Municipality of Bauang regarding the level of awareness and perceived level of implementation of the zero open defecation ordinance, along with the challenges encountered, is available.

This research is substantial to Don Mariano Marcos Memorial State University, for it will provide an additional research resource to the college department, university, and community.

This study is significant to the Political Science department as a program and discipline that hones students in critiquing, examining, and responding to contemporary issues and problems in the national and global arena by utilizing historical and existing changes as its cornerstone.



The issue of unsanitary practices has been present throughout history and needs to be addressed and resolved. As an academic institution that provides education and research, this study will serve as a catalyst and tool for the students, as citizens of the Philippines, to gain more profound knowledge on the subject matter.

In addition, this study will provide the local community with an in-depth grasp on the endemic problem regarding public health and incite their involvement, most notably the individuals who encounter the same concern due to various factors.

Lastly, suppose future researchers decide to conduct a study about the awareness and implementation of public health policies and other related studies. In that case, they may use this study as a reference in conducting their own.

## Research Question

This study aimed to examine the awareness of the households and the perceived level of implementation of the ZOD Policy in the households in selected barangays of Bauang La Union.

Specifically, it sought to answer the following:

1. What is the level of awareness of the households on the ZOD Ordinance in terms of the following:
  - a. Objectives
  - b. Coverage
  - c. prohibited Acts
  - d. penalties
2. What is the level of implementation of the ZOD Ordinance as perceived by the households in terms of the following:
  - a. Objectives
  - b. Coverage
  - c. Prohibited Acts
  - d. Penalties
3. What are the challenges encountered in the implementation of the ZOD Ordinance?
4. What output can be proposed to enhance the implementation of the ZOD Ordinance?

## METHODOLOGY

In determining the level of awareness and perceived level of implementation of the ZOD policy in the households of the selected barangays, the explanatory sequential design was utilized to strengthen and further explore the quantitative results through qualitative data. The design involves initially collecting quantitative data, followed by collecting narrative data that will expound the numerical results (Clark, 2011).

The suitability of explanatory sequential design is irrefutable since the researchers can refine and explain the general picture of the research problem following the quantitative data gathering (Subedi, 2016). The complementary approach is deemed appropriate for this study concerning public health policy as it maximizes the strengths of each data type and facilitates a more comprehensive understanding. The quantitative data collected was used to present the residents' level of awareness and implementation of the ZOD ordinance, as indicated in problems one and two of the study.

To collect a combination of data, the researchers utilized surveys through questionnaires and interviews. The flexibility of a survey questionnaire is best when administered to an enormous number of people when covering social science, politics, health care, and others (Walliman, 2011). Furthermore, George (2022)

defines an interview as a research tool that relies on asking questions to acquire data. The qualitative data was utilized to identify the challenges encountered in implementing the ZOD ordinance, which is specified in the third problem of the study. In addition, it was used to understand the informants' perspectives regarding their life experiences about the sanitation problem as expressed in their own words (Musa, 2015).

### **Instrumentation and Data Collection**

To gather quantitative data, questionnaires were the initial method for accumulating detailed information on the level of awareness and perceived level of implementation regarding the ZOD Ordinance concerning the selected barangays in Bauang. A questionnaire formulated by the researchers using Barangay Ordinance No. 01, s. 2021 entitled, "An Ordinance Adopting the Zero Open Defecation (Zod), Imposing Fines and Penalties for Violation," as its cornerstone. The questionnaires were distributed to the respondents to learn their perspectives. Moreover, the researchers also utilized the study conducted by Musa (2015) in Finland entitled "Addressing Open Defecation Sanitation Problem: The Case of Dry Toilet Implementation in the WA Municipality, Ghana," in framing the interview questions. Both research instruments are written in English and Iloko language.

Before that, to attest to the accuracy of the research instruments, the survey questionnaire was validated by a Councilor in charge of the Committee on Health and Sanitation, a Municipal Sanitary Engineer, a Qualitative Research Expert, and an English Critic. Moreover, the interview guide was validated by two instructors who have expertise in qualitative research and an English critic. Afterward, the researchers conducted a sample test in the selected barangays of the Municipality of Caba to gauge the instrument's reliability.

The researchers sought consent from the said municipality to permit them to conduct the sample test. The evaluated questionnaires were administered to thirty (30) residents of the selected barangays in the municipality of Caba, La Union, composed of individuals residing in urbanized, coastal, and highland areas. Before the researchers formally conducted the survey and interview, an Ethical Clearance was sought from the DMMMSU Research Ethics Committee. Additionally, permission was sought from the research proponents' thesis adviser, and a letter authorizing the researchers to conduct the study was approved by the chairperson of the Bachelor of Arts in Political Science and the dean of the College of Arts and Sciences. In pursuit of establishing the formality and legality of the researcher's consent to conduct their study, the permission letter mentioned earlier was prepared. Moreover, the researchers conceptualized additional inputs from their research adviser, books, journals, articles, research studies, and online resources.

To generate the formality in administering the study, the researchers provided and printed letters requesting to conduct a survey and interview addressed to the local government unit of Bauang, specifically its honorable Mayor and Barangay Chairman of the selected barangays. Following the approval of the request, the researchers organized, reproduced, and disseminated the survey questionnaires to the eligible participants. The questionnaires were distributed physically by the researchers, who also served as facilitators. The researchers guaranteed that the respondents were briefed that their participation in the survey was entirely at their discretion.

Following that, an in-depth interview was utilized to gear for the participants' elucidated point of view. In their words, the informants' reflections on their life experiences or events regarding the problem they faced regarding open defecation, the procedures they have in place to address such issues, and the difficulties they confront in resolving these issues were collected through interviews. Moreover, the primary informants determined the interview's time and location. The researchers informed the participants about the study and sought their consent before starting the interview in which their responses were recorded.

The key informants were interviewed using a semi-structured interview guide. Moreover, they were allowed time to rest and to request pauses if they could not withstand a lengthy interview. The interview occurred outside the primary informants' working hours, and the researchers ensured their productivity was not interfered with. Throughout the research, the confidentiality of all key informants was secured; only the research team that conducted the study and the key informants possessed access to the documents that included private and sensitive data.

## Analysis of Data

Several statistical procedures were employed to interpret the collected data and analyze the study's quantitative findings. For Problems 1 and 2, which determine the level of awareness and perceived level of implementation of the ZOD policy in the households, the median was used to compute the central value. Dudovski (2022) defined median as the value found in the middle when the data is arranged in numerical order. This method is appropriate in this study for its effectiveness in comparing various data sets. To interpret the level of awareness and perceived level of implementation of the ZOD policy, the households of the selected barangays were surveyed using the 4-point Likert Scale. Microsoft Excel was utilized to store and organize the gathered data. It is a spreadsheet software program providing powerful data visualization and analysis tools.

The 4-point Likert scale below was used to evaluate the responses in terms of the level of awareness on the ZOD Ordinance.

Point Value	Descriptive Rating	Qualitative Description
4	Extremely Aware	Fully Aware – The respondents are aware 100% of the ZOD Ordinance.
3	Moderately Aware	Satisfactorily Aware – The respondents are aware 51%-99% on the implementation of the ZOD Ordinance.
2	Slightly Aware	Partially Aware - The respondents are aware 1%-50% on the implementation of the ZOD Ordinance.
1	Poorly Aware	Not aware - The respondents are not at all aware on the implementation of the ZOD Ordinance.

Point Value	Descriptive Rating	Qualitative Description
4	Extremely Implemented	Very High Degree of Implementation – The respondents believe 76%-100% on the effectiveness of the implementation of the ZOD Ordinance.
3	Moderately Implemented	High Degree of Implementation – The respondents believe 51%-75% on the effectiveness of the implementation of the ZOD Ordinance.
2	Partially Implemented	Low Degree of Implementation - The respondents believe 26%-50% on the effectiveness of the implementation of the ZOD Ordinance.
1	Poorly Implemented	Very Low Degree of Implementation - The respondents believe 1%-25% on the effectiveness of the implementation of the ZOD Ordinance.

To interpret the data collected from the perceived level of implementation of the Ordinance, a separate 4-Point Likert Scale above was used.

For the third problem, thematic analysis was employed to interpret the data gathered from the interviews. Calzon (2023) defined thematic analysis as a method that examines large portions of text data, such as focus group transcripts or interviews, and clusters them into themes or categories that come up frequently within the text. The initial step requires looking for broad themes in the gathered data wherein the audio data is converted to text through transcribing; this also involves re-reading the transcribed responses to become acquainted with the data. Second, the initial codes were generated, wherein the researcher began thoroughly coding and organizing the data. The third stage requires searching for themes that capture something remarkable or significant about the data. Following that, the articles were reviewed, and the researchers attempted to change and develop the first themes identified, which was accomplished through the copy and paste tool in Microsoft Excel or any word processing program. During the data evaluation, sub-themes

focusing on the principal component were considered. The fifth phase is to create labeled themes to identify the essence of each topic and verify the collected data's reflection on the research problem (Maguire & Delahunt, 2017).

The final stage was writing up the information acquired to generate an Information Education Campaign Material, formulated by applying the study's findings to satisfy the fourth problem.

## RESULTS AND DISCUSSION

### Level of Awareness of the Households on the ZOD Ordinance

#### Objectives

Table 2 shows the households' awareness of the objectives of the ZOD Ordinance. With a grand median of 2.00, the respondents' level of awareness of the ZOD ordinance in terms of goals is slightly high. This implies that some of its clauses are still unfamiliar, while the residents are familiar with this specific provision.

However, with a total median of 3.00, the provisions stating that the ordinance promotes ZOD and the goals of ZOD policy, which aims to safeguard all constituents' public health and well-being, garnered a descriptive rating of moderately aware.

Furthermore, there is a slight level of awareness regarding the provision of the ZOD ordinance, which mandates the local government units of barangay to allocate funds annually to sustain sanitation programs. With a garnered median of 2.00, this implies that despite having an average level of awareness of the ordinance's objectives, the respondents need to be more aware of the topic regarding the allocation of funds.

Table 2. Level of Awareness of the Households on the ZOD Ordinance in terms of: Objectives

	Median	DE
1. The ordinance promotes Zero Open Defecation.	3.00	MA
2. The ZOD Ordinance aims to safeguard public health and well-being of all constituents.	3.00	MA
3. The ZOD Ordinance mandates the local government units of each barangay to allocate fund annually intended to provide sustainable sanitation programs.	2.00	SA
Overall	2.00	SA

Legend: GM-Grand Median Median-Median, DE-Descriptive Equivalent, EA-Extremely Aware, MA-Moderately Aware, SA-Slightly Aware, PA-Poorly Aware

These findings are supported by Lukama (2022) which showed that 51.5% of the participants in the Bunga community in Zambia possessed a poor level of awareness on the policy; hence the study highlighted the need of a better level of knowledge about the goals and importance of the Community-led total sanitation policy imposed in their locality. However, it is also closely tied, with 48.5% showing good knowledge. The study aimed to determine the knowledge, attitude, and practices regarding community-led total sanitation in the Bunga community of Twapia, Ndola.

The data mentioned above was compared to the previous study which showed that most respondents had yet to see, hear, or receive information about sanitation from radio, newspaper, or road shows. It emphasized how the absence of decisive government intervention and measures significantly affects whether the residents will have a poor or good grasp of the policy. Moreover, the author also considered the probability that the study



participants were not just exposed to the information. Looking into a wider arena of literature, Lukama's findings concerning whether or not they had toilets in their compounds presented advancement as compared to the studies conducted in the rural areas of Ethiopia.

The results discussed earlier further provided that aside from their difference demographically, several factors continue to shape the present circumstances of the respondents as availability of local materials for latrine construction, continuous training, and support and follow-up of health extension professionals remains to be an impediment. Akros Media in 2015 provided that almost 40 children die each day in Zambia, while 40% of those affected individuals are stunted tracing its leading cause with diarrhea, cholera and other disease outbreaks in the community. The results linked these outcomes with the inaccessibility of sanitation and hand washing facilities, and lack of sources of clean water. Aside from health issues, ZMW 946 billion is lost annually by Zambia due to poor sanitation. It also negatively implicates the women in Zambia as additional risks disproportionately target them when defecating outdoors. This signals that the practice of open defecation is more than just a health issue; it has also become an economic hurdle for developing countries like the Philippines.

The results were also in agreement with Bokea (2014) indicating that more than half of the respondents, or 68.3%, possessed a low knowledge level on the importance of adequate hygiene practices to achieve the Community Led Total Sanitation Program goals in Kajiado County, Kenya. It suggested a significant statistical association between the level of knowledge or awareness and the success of the implementation. One major hindrance in encouraging the community to abide by the policy was that the residents did not see the need for sanitation programs, as evidenced in the result indicating that 239 (78.9%) of respondents do not agree that proper handwashing will prevent diarrheal diseases. In the discussion, the scholar attributed the low rates of CLTS implementation to their knowledge level. Furthermore, the data revealed that the majority of the respondents need to be made aware of the significance of making use of latrines instead of openly defecating as cases of cholera and other diarrheal diseases continue to increase.

The findings were negated by Odoom et al. (2023) which presented that the respondents are generally highly aware of Sustainable Development Goal No. 6, which refers to clean water and sanitation. This advancement is brought upon by the periodic presentations of the SDGs in radio and TV programs, along with the aid of the Ministry of Finance. Albeit in the same continent as the previous literature, Ghana's public awareness level is significantly higher as it became the first nation in Sub-Saharan Africa to reduce poverty. The literature cited Ghana's vibrant media as one of the key players in setting agenda subjects with critical importance, sustaining effective communication, and catalyzing change. According to Afrobarometer, citizens are more motivated to engage through radio and television to gather news. Young and well-educated citizens also observed growing engagement in social media and the internet.

Furthermore, in the Philippine settings, the majority of the respondents agreed that the households in the Municipality of Kabuntalan, Maguindanao, have awareness about the barangay resolution imposed regarding proper waste disposal, which goes differently from this study's findings (Latip et al., 2021). The findings indicated that the residents are knowledgeable enough about the effect of open defecation on their health.

The findings indicated that having a fundamental consciousness of the rationale behind the policy's implementation encourages the people to be more hygienic, as having basic knowledge capacitates the citizenry to understand its objectives. The data provided that most respondents also believe that having a sanitary toilet will improve their community as it will not pollute the environment. They also practice proper solid waste disposal and dump waste within 10 feet of the house. The researchers linked this level of awareness to the profound connection between the demographic profile of those surveyed in terms of age, gender, educational attainment, occupation, and household size and the factors that impact the achievement of the Zero Open Defecation Program in terms of financial aspect, availability of resources, and waste disposal.

Meanwhile, according to the London School of Hygiene & Tropical Medicine (2011), several cities in the Philippines generally show excellent awareness of the significance of proper feces disposal and the usage of latrines. The project report examines the progress of hard-to-reach communities wherein the communities still need interventions applied despite sharing common characteristics with the locale of this study, such as the fact

that data were collected in areas along the way and communities that are hard to reach. In relation to the study's findings, the result of this project report both supports and negates the findings. To begin with, Sitio Guilon needs access to clean water, and 85% of the community still uses open pits that are rarely kept clean. Data also presented that 34.62% of children would defecate openly even when at home. Meanwhile, the latter is located on the main highway, where clean water sources are accessible, per the authors. Correspondingly, the modest level of awareness of the participants of this study on the objectives of the ZOD policy can be traced to several barriers, such as financial and cultural. Although a minimal level of awareness of the policy exists, it is still alarming as it is almost similar to data by the United Nations Children's Fund Philippines (2014) indicating that most households in the Philippines are unaware of the actual costs of inadequate sanitation and hygiene; thereby, priority is not given the improvement of sanitation and hygiene facilities.

The Civic Engagement Model pioneered by Pancer and Pratt (1999) is a clear theoretical perspective that can elucidate the underlying process. This theory aims to provide answers on how people can improve their level of participation in political engagement and procedures, which occur on two complementary levels: the individual and the systems. According to the proponents, factors concerning personal attributes, resources, values, and personal influences affect the extent to which people become civically engaged. Aside from that, demographic attributes and private resources can also be taken into account concerning the willingness to join and participate in civic activities. In relation to the findings of the study, as education increases the level of awareness of public issues, the barriers to engaging and participating in the objectives of the communities decrease. It also tackles the importance of the intensity of social connections. The proponents instigated that information about public matters also increases through socializing.

Meanwhile, the system level refers to the social structures such as families, schools, communities, and societies where we belong. At this level, awareness can be increased through programs that provide positive experiences to those participating. Another factor that may directly or indirectly affect the citizens' engagement is the income disparity that erodes the confidence of low-income people to participate. Thus, it discourages civic engagement on their part.

Therefore, awareness of policy objectives is the most fundamental step to triumphantly implement policies, as accentuated by Spencer (2012) in his discussion about the importance of environmental sanitation education. He postulated that sanitation awareness campaigns can capacitate the public to know the value of ecological sanitation management and identify the necessary actions to improve sanitation for environmental justice and sustainable development.

This proposition is also supported by Saei (2012), instilling that education on environmental education changes the perspectives of individuals, ethics, values, attitudes, and behavior, which will help in the success of policies. Hence, having a good level of awareness of this study will urge individuals to take the necessary actions concerning public issues, specifically the ZOD implementation.

## Coverage

Table 3 presents the level of awareness of the households on the ZOD ordinance in terms of its coverage. The data shows that the grand median is 2.0 with a descriptive equivalent of slightly aware. This suggests that the respondents have a minimal knowledge on the scope of the ZOD ordinance, thus there is still room to improve the general awareness of the households.

Table 3. Level of Awareness of the Households on the ZOD Ordinance in terms of Coverage

	Median	DE
1. The ZOD Ordinance applies to all persons, natural or judicial residents, as well as non-resident within the jurisdiction of each barangay.	2.00	SA

Legend: Median-Median, DE-Descriptive Equivalent, EA-Extremely Aware, MA-Moderately Aware, SA-Slightly Aware, PA-Poorly Aware

Specifically, the respondents are marginally aware regarding the provision that states the ordinance applies to all persons, natural or judicial residents, as well as nonresidents within the jurisdiction of each barangay. The results serve as a basis for the development of targeted awareness-raising activities, which ultimately contribute to the successful implementation and fulfillment of the provisions of the regulation.

This finding coincides with the study of Shaibu et al. (2014) which revealed that households barely discern two of Ghana's seven sanitation by-laws. One of these was the respondents' unfamiliarity with a provision that states that the occupiers of any premises shall clear and keep free from all offensive matter such as rugs, broken glass, and others. Their data revealed that 57.1% are unaware of the said provision regarding the occupants. This implies that households are more likely to commit violations against an ordinance, given that they have little to no knowledge of its application scope.

It is also affirmed by the Ethiopian Demographic Health Survey which publicized a growing tendency of open defecation, showing 32.9% in 2000, 38.3% in 2005, 61.9% in 2011, and 81.9% in 2016. It indicates Ethiopia's population needs to be made aware of open defecation policies, with 35.6% engaging in such practices and showing slow progress toward achieving the Sustainable Development Goal. Half the population relies on unimproved sanitation facilities, and 50% latrine utilization. One factor that hugely influences such a crisis is that the residents remain unaware of the policy that concerns them; consequently, this creates risks and worsens health hazards.

In the Philippine context, this result was also in line with study of Tabuga (2013) most specifically in a rural setting, which revealed that only about 3 out of 10 are aware of any policy that concerns them in Rosario, Batangas. The author elaborated on the Discussion Paper of the Philippine Institute for Development Studies regarding the awareness of Persons with Disabilities on disability laws and participation in discount privileges, that the multifaceted interplaying factors continue to hinder the citizens to benefit from legislations and other programs that are intended to advance their general welfare. In line with this, Mojares et al. (2014) indicated that the residents need to familiarize themselves with the specific boundaries and scope of the ordinance with a composite mean of 2.48, which equates to a less aware description. The concerning finding is that 90% of the respondents defecate in public areas, which contaminates water and increases the likelihood of contracting water-borne illnesses. A record 32% prefer to urinate in agricultural fields, 25% next to water sources, 21% by prickly plants, and the remaining individuals are in open drainage systems and streets. People have yet to show much interest in individual toilets, which is reflected in survey results that reveal 18% of respondents use separate toilets, of which 20% use septic tank toilet models. The most often cited explanation for not building toilets is a lack of funding, followed by a small percentage who blamed space constraints in their homes and the remaining portion that cited cultural difficulties. The poll also revealed that 18% of respondents expressed interest in having a personal restroom, while 51% had no interest in having a toilet at home.

A clear theoretical perspective traced this prevalence back to a model of selective attention theories proposed by Donald Broadbent (1957). According to him, the public tends to process information from one aspect of the environment more than another and exclusively orient themselves toward that aspect. It depicts how people are inclined to filter and select certain stimuli to pass through while the other information available is blocked. In relation to our study, this theory explains why the residents hold a different level of awareness regarding other indicators, like the policy objectives. Hence, the respondents are only partly aware of the policy's coverage, considering they only processed a limited amount of information.

Another piece of literature that affirms the finding was the study of Anuradha et al. (2017), indicating that out of 103 persons who did not have a sanitary latrine at home, 91 conducted open air defecation, while the remainder utilized communal toilets. According to the results of this survey, 33.1% (91 out of 275) of people defecated in the open as 240 of the respondents continue to be unaware regarding the spread of disease through practicing open defecation. The scholars emphasized that open defecation used to be thought of as the "way of life" in the majority of developing nations. Undoubtedly, it is a part of people's daily lives, particularly in rural and urban slums. People's opinions of open defecation, which they perceive to have been practiced for generations, are more challenging to alter. However, the need to be more familiar with this specific indicator was highlighted as the households processed only selected parts of this provision.

## Prohibited Acts

Table 4 presents the households' awareness level of the ZOD ordinance regarding prohibited acts in which the grand median resulted in 2.00 with a descriptive equivalent of slightly aware. This means that the respondents are slightly aware of prohibited acts, particularly under the provision that enumerates the acts declared unlawful, prohibited, and deemed punishable.

The respondents were not able to identify the prohibited acts that are under the provision, such as open defecation in public places that are open to the people, namely the playgrounds, public plazas, school grounds, church grounds, and the sea or lake, and throwing, leaving or disposing of fecal waste in open spaces exposed to the environment resulting to the ignorance of the respondents.

Table 4. Level of Awareness of the Households on the ZOD Ordinance in terms of Prohibited Acts

	Median	DE
1. The ZOD Ordinance enumerates acts which are declared unlawful, prohibited, and deemed punishable by the said ordinance.	2.00	SA
2. The prohibited acts include open defecation in public places.	2.00	SA
3. The prohibited acts include throwing, leaving or depositing fecal waste in open spaces exposed to the environment.	2.00	SA
Overall	2.00	SA

Legend: Median-Median, DE-Descriptive Equivalent, EA-Extremely Aware, MA-Moderately Aware, SA-Slightly Aware, PA-Poorly Aware

Moreover, the respondents also have the same level of awareness regarding the provision stating that open defecation in public places is prohibited. Likewise, regarding the requirement that outlines the prohibited acts, including throwing, leaving, or depositing fecal waste in open spaces exposed to the environment, a grand median of 2.0 is computed, which equates to a slight level of awareness. This implies that the respondents are aware of the ZOD ordinance, which may result in the likelihood of committing violations of these prohibited acts.

This finding was affirmed by the data of the Ministry of Local Government and Rural Development by the Government of Ghana (2001) which revealed that there is a prevailing high level of illiteracy and low level of public awareness regarding acceptable hygienic practices, sanitary inspection, and the enforcement of sanitary regulations. This is generated from the Community-Led Total Sanitation (CLTS), which focuses on community mobilization and behavior modification to attain and maintain open defecation-free status. Its primary goal is to raise awareness about the health concerns of inadequate sanitation and inspire communities to take collaborative action. Community-Led Total Sanitation (CLTS) is a rural sanitation technique that mobilizes communities to attain open defecation-free (ODF) status. Rather than simply building sanitary infrastructure, it seeks to foster social transformation within communities by supporting collective behavior change.

It begins with a large-scale community mobilization effort. Trained facilitators interact with people in the community to promote awareness about the relationship between open defecation and disease transmission. The purpose is to instill revulsion and humiliation over open defecation behaviors. Triggering activities, sometimes known as "walks of shame" or "triggering exercises," include a group of community members investigating the sanitary conditions in their neighborhood. These activities are facilitated to help community members comprehend the health dangers of open defecation and instill a desire for change.

CLTS depends on recognizing and strengthening natural community leaders. These individuals are critical in rallying others, instilling a feeling of community responsibility, and leading the communal effort to eliminate



open defecation. Communities produce maps that show areas where open defecation is frequent. This graphic depiction assists community members in comprehending the problem's scope and planning for installing sanitary facilities in crucial areas. Moreover, it has been adopted in several countries as part of attempts to enhance rural sanitation and hygiene. It is known for its community-driven strategy, which emphasizes behavioral change and community empowerment to create long-term improvements in sanitation practices.

The results were also in line with the findings of Linda (2015) stating that a lack of assistance from community leaders and religious authorities, such as counseling and information on good latrines, as well as a call to refrain from open defecation, are indications that these prohibited acts mentioned in the ordinance are far from the grasp of the residents of a community. These prohibited acts are to be upheld not only by the residents but also by the community leaders. These acts are restricted for the residents' information to confirm that they understand and are expressed according to the manner of the provision. These leaders are committed to improving sanitation and motivating other community members.

The study of Toduho et al. (2019) also affirms the findings as it disclosed that a community leader rarely defecates in their family house's toilet and that the community leader prefers to defecate on the beach regardless of whether their family house has a toilet of their own. As a community leader or a public servant, it is within their authority to control the people's violation of the prohibited acts stated by the said provision; however, the results provided the contrary. In line with this, Solomon (2011) also highlighted that environmental sanitation education should be seen as a fundamental element of a triumphant enforcement of ecological sanitation activities. Moreover, it emphasized a commonly committed mistake regarding hygiene and environmental sanitation education. This proposition was also supported by Harun et al. (2011) who said that knowledge of environmental concerns is required to stimulate environmental concern or awareness. One's reasonable acts toward the environment are translations of one's knowledge, and a greater understanding produces pleasant attitudes toward the environment.

The finding is also parallel with the findings of Jeremias et al. (2019). Regarding environmental knowledge, 72% of families needed to be aware of where their garbage went after disposal. Because household engagement is confined to trash generation, segregation, and source reduction, it is only natural that they have little knowledge of waste disposal operations. According to the findings, families had average environmental understanding and awareness. In terms of ecological knowledge, the results indicated that 42% of families needed help understanding the distinction between recycling and reusing. Eighty-one percent of homes confuse biodegradable garbage for eco-friendly waste, which may impact how they handle biodegradables. According to the waste hierarchy, 48% of households believe that waste disposal is the most preferred method of waste management, which may result in a lack of engagement in waste management after they have disposed of their waste.

This is corroborated by Geetha et al. (2014), wherein it was learned that 90% of responders defecate in public open spaces, which causes water to become polluted. Incidents of water-borne illnesses are prevalent. They chose to defecate in agricultural fields 32% of the time and near the water 25% of the time. According to the poll, open defecation and its associated medical concerns were widespread in the community, with no one caring to do anything to address it. While open defecation was practiced, many women, particularly mothers, did not know how to dispose of their children's feces appropriately, and most individuals defecated on roadsides, bushes, near water sources, and agricultural fields.

The "social menace" of open defecation is difficult to eradicate in a wider culturally connected community. Thus, the goal of "health for all" is a pipe dream and becomes a complicated aim to fulfill without the effort put forth. This study shows the rampant open defecation in the area that resulted from cultural obstacles and insufficient information about open defecation and the provision along with it. Lastly, water shortages are also a common issue in India. The findings indicated that the respondents are aware of the ordinance; however, only a few clauses of the policy.

San Jose et al. (2019) upholds the finding as it presented that the respondents are aware of some prohibited acts, such as slaughtering and selling dog meat; however, in terms of the enactment of the law, the respondents are unaware. According to Pattanayak et al. (2009), Information, Education, and Communication activities



increase attitudes and understanding about how sanitation, clean water, and hygiene affect health. The statement was affirmed by Sriram et al. (2013), who stated that communication strategy addresses knowledge, attitudes, behaviors, and skill gaps in people, families, and communities. As a result, it necessitates a thorough understanding of the target audience and the utilization of an appropriate mix of communication channels, including interpersonal, group, community, and mainstream media.

In addition, the need for more awareness of the respondents is influenced by the dissemination of information by public servants. Hughes et al. (2006) supports the scheme providing that leaders differ from their followers, and good leaders differ from ineffective leaders regarding various personality traits, cognitive abilities, talents, and values. It was undertaken due to the worrying issue that leaders are competing with their teams and need to be aware of and know how to efficiently fulfill their tasks and obligations alongside their colleagues, impacting the organization's effectiveness, efficiency, and performance.

In the Philippine settings, the finding of Quiñones et al. (2014) is evidently negates the data as it indicated that most households are aware of the penalties imposed by Anti-Plastic Ordinances in Agoo, Naguillian, and Bauang. Through information campaigns in mass media and community assemblies, the locals could abide by other sanitation ordinances, such as the implementation of Anti-littering and Anti-smoking. The researchers emphasized that public awareness contributes to the active participation of the community in policy implementation as it fosters a sense of responsibility and proactive environmental citizenship.

The level of awareness is one indicator of whether or not the goals of a specific policy will be accomplished. This connotation is discussed by Endsley's three-level framework of the Situational Awareness Theory in 1995. According to him, individuals should satisfy his framework's three components: perception, interpretation, and prediction. Therefore, human error is the result of needing more situational awareness. Panda et al. (2017) acknowledged the figures as it provided that the majority of the participants in the inquiry, 109 (70.3%), had sanitary latrines in their homes. The prevalence of open defecation was 23.2% in the research region. Approximately two-thirds (65.2%) of survey participants were unaware of the spread of illness caused by open-air defecation. This was affected by the fact that the residents needed to gain awareness of the importance of properly disposing of feces. To illustrate, the cases of open defecation either end or continue to prevail depending on how the households view the sanitation issue, interpret the importance of solving the problem, and be capable of foreseeing the future after coming up with a decision to be taken. Thus, the probability of committing the prohibited acts is high since the households are unaware of the sanitation problem and fail to recognize its hazards.

## Penalties

Table 5 presents the households' awareness level of the ZOD ordinance regarding terms of penalties. Showing a grand median of 2.00, the respondents are generally aware of the provisions enumerating the penalties that will be imposed. The data provides that the respondents are moderately aware that there are corresponding penalties imposed to the violators, however they are uncertain on the amount enumerated. Furthermore, when it comes to the number of charges based on the number of offenses committed the respondents are slightly aware, which indicated an amount of Php 500.00 for the first offense, Php 1,000.00 for the second offense. Similarly, the respondents are also slightly aware with a median of 2.00, Php 1,500.00 for the third offense.

Table 5. Level of Awareness of the Households on the ZOD Ordinance in terms of Penalties

	Median	DE
1. The ZOD Ordinance charges a corresponding penalty on any individual caught violating the ordinance.	3.00	MA
2. The ZOD Ordinance charges Php 500.00 for the first offense by any individual caught violating the ordinance.	2.00	SA
3. The ZOD Ordinance charges Php 1,000.00 for the second offense by any individual caught violating the ordinance.	2.00	SA

4. The ZOD Ordinance charges Php 1,500.00 for the third offense by any individual caught violating the ordinance.	2.00	SA
Overall	2.00	SA

Legend: Median-Median, DE-Descriptive Equivalent, EA-Extremely Aware, MA-Moderately Aware, SA-Slightly Aware, PA-Poorly Aware

A piece of literature affirming this finding is provided by Schwartz (2020) who stated that some cases of animal neglect are caused by ignorance. Therefore, a call to educate people about the animals in their care and instilling public awareness among pet owners is critical to ensure compliance with animal welfare laws. In line with this, San Jose et al. (2019) also discussed the implementation of the Anti-Rabies Act (RA 9482) in Magalang, Pampanga, revealing that despite almost a decade since its effectivity, the respondents remain unfamiliar with the corresponding penalties outlined by the said statute.

To further elaborate, the results revealed that pet owners in Magalang needed better knowledge of the Anti-Rabies Act (65.5%), and the majority (71.3%) were unaware of its existence and the penalties imposed by the law on non-compliant pet owners. Moreover, results indicate that pet owners in urban places have higher odds of having above-median knowledge of the law than those in rural areas. This could be because urban places are more accessible, unlike rural places.

Similarly, Marzan et al. (2021) also uphold this finding as the study revealed that the respondents are familiar with the penalties imposed; however, when it comes to different degrees or several offenses, the level of awareness of the respondents is low regarding the understanding of pet owners in San Fernando City, La Union on the implementation of the Animal Welfare Act. It generally reveals that many pet owners from urban and rural barangays are aware of the Provision of Basic Needs, as the findings show all the indicators have a high percentage, with at least an 85.4% rating and the highest percentage of 96.5%.

Mojares et al. (2014) negates the data as it posited that the respondents exhibited a fair level of awareness regarding the penalties imposed with a composite mean of 2.64 which is verbally interpreted as aware. The result showed that male college graduates and undergraduates, mostly private employees, dominate the respondents. They agreed that they are aware of the implementation of anti-smoking ordinance no. 1S 2012 because the ordinance was clearly stated and well disseminated, authorities are prohibiting it, and there is a usage of signage. But they also agree that they need to be made aware of the specific boundary that the ordinance covers, which provides that there is regular monitoring. There are enough personnel implementing the ordinance.

To solidify the findings of this study, the social norms theory proposed by Perkins and Berkowitz (1986) will be utilized to back the claims. This theory is typically applied in resolving a broad scope of public health challenges such as tobacco use, prevention of driving under the influence of alcohol, seatbelt use, as well as sexual assault prevention. According to this concept, misperceptions of how our peers think and act heavily influence an individual's behavior. Hence, to effectively change a person's behavior, one must aim to comprehend the environment and interpersonal influences that significantly affect individual decision-making. Relating the said theory to this study, the level of awareness of the households on the penalties of the ZOD Policy might be driven by the common connotation that a particular behavior, which in this case refers to open defecation, has already been established as the norm or openly accepted within a specific social group. Consequently, it creates a tendency for households to be more motivated to know the potential penalties that correspond with a particular behavior.

Awareness about a Zero Open Defecation Ordinance is crucial for several reasons, contributing to public health, environmental sustainability, and overall community well-being. First, open defecation can lead to the spread of waterborne diseases, posing significant health risks. Awareness helps educate the community about the importance of proper sanitation to prevent illnesses. Second, it has an environmental impact, such as open defecation contaminating water sources, affecting water quality, leading to spreading diseases and awareness, promoting responsible waste disposal practices, and safeguarding environmental health. Also, ZOD initiatives

aim to preserve human dignity by ensuring individuals have access to safe and private sanitation facilities. Awareness helps in fostering a sense of pride and self-respect within the community.

Moreover, in ordinance adherence, awareness ensures that community members understand the implications of the ordinance, fostering compliance and reducing the likelihood of legal consequences for violators. Furthermore, access to proper sanitation facilities enhances the overall quality of life. Finally, increased awareness may attract support from governmental organizations, leading to the allocation of resources for sanitation infrastructure and educational programs.

## Level of Implementation of the ZOD Ordinance as Perceived by the Households

### Objectives

As shown in Table 6, the perceived level of implementation of the ZOD policy on the households in terms of objectives garnered a grand median of 2.00 with a descriptive equivalent of slightly implemented. Meanwhile, the respondents perceived the first provision indicating that the ordinance promotes the Zero Open Defecation as moderately implemented after garnering a 3.00 rating. In addition, it implies that the respondents consider the implementation of the objectives, especially the provision regarding the allocation of funds as mandated by the ZOD ordinance, as partially implemented with a computed median of 2.00. Likewise, the provision stating that the ordinance aims to safeguard public health and well-being of all constituents received a descriptive equivalent of partially implemented with a computed median of 2.00.

This finding was affirmed by Tuli et al. (2017) who provided similar findings that indicate many communities still practice open defecation due to the fact that sanitation policies were not well implemented, specifically regarding the assessment of the achievements of CLTS in Ethiopia.

Table 6. Perceived Level of Implementation of the ZOD Ordinance on the Households in terms of Objectives

	Median	DE
1. The ordinance promotes Zero Open Defecation.	3.00	MI
2. The ZOD Ordinance aims to safeguard public health and well-being of all constituents.	2.00	PaI
3. The ZOD Ordinance mandates the local government units of each barangay to allocate fund annually intended to provide sustainable sanitation programs.	2.00	PaI
Overall	2.00	PaI

Legend: Median-Median, DE-Descriptive Equivalent, EI-Extremely Implemented, MI-Moderately Implemented, PaI-Partially Implemented, PI-Poorly Implemented

Tuli et al. presented noticeable progress, such as that the majority (62.3%) of the households already had access to latrines, which was credited to the availability of local materials to construct toilets, continuous training, support, and consistent monitoring by health extension professionals. On the other hand, the relatively modest implementation of different policies was brought upon by the need for more access to improved water supply sources and a lack of awareness towards using improved water sources. Among the 594 interviewed households, 91.4% of the participants responded that the community-led total sanitation has yet to be fully realized.

The unsuccessful implementation of the program looks into the possible causes, such as lack of community mobilization, no bylaws, less community conversation regarding CLTS, and inadequate support and monitoring activities from health extension workers. In connection with the findings on this indicator, this literature provides both similarities and differences. Initially, both respondents perceived the extent of the policy objectives as needing improvement. However, bylaws were enumerated in the ZOD ordinance to instill the provisions clearly in the households. However, what seems to be the problem was similar to what was

mentioned above, such as lack of awareness, lack of community corroboration, and others.

Additionally, it is supplemented by Walker (2016), who revealed that many citizens are not satisfied with the implementation strategies executed by the government in addressing the issue in Africa. The data indicates that 55% of the citizens rated "fairly bad" or "very bad" on average across 35 countries. The negative public ratings were brought upon the low performance in water and sanitation services since 2005. Linking to the study's findings, while some expressed dissatisfaction with the implementation, improvements in basic service infrastructure were observed, with a 14% increase in the availability of piped-water systems. In comparison, an 8% increase was shown for sewage systems. However, it is essential to note that urban areas are about twice as likely to have piped-water infrastructure compared to rural areas. Moreover, the data gleaned from the survey depicted that rural residents commonly use toilets/latrines outside their compounds, or worse, no access at all, compared to the people living in the city. Therefore, a dissatisfaction rating is unsurprising as one factor contributing to this was the difficulty in obtaining water and sanitation services. These challenges continue to pose challenges in achieving a ZOD status.

Latip et al. (2021) in Kabuntalan, Maguindanao, also supported the result as mentioned in the previous indicators, showed a similar finding, particularly on the provision wherein the government will allocate funds. The 320 selected residents of the said municipality disagreed that government agencies provided financial support in achieving the ZOD Program. In addition, as part of the government's implementing programs, the residents strongly disagreed that there is an active sanitation group in the area, with an overall mean of 1.00. A high perceived level of implementation of the ZOD policy on the households is being deterred by problems such as natural disasters, drainage issues, and the complex processes of acquiring funds for toilet construction, financial problems, and difficulties in transporting the needed materials to construct toilets. Analyzing the pattern, this literature presents similarities as the study occurred in rural areas. This challenge calls for a stricter implementation to achieve the National Sustainable Sanitation Plan (NSPP) goal, which states that by 2022, all barangays or villages in the Philippines must obtain a certified zero open defecation status.

On the other hand, the partially perceived level of implementation of the ZOD policy indicates that while some implementation strategies are not fully implemented, several provisions were implemented as a minimum level of service was provided. This finding parallels to the study of Dinsa Sori (2012), the persistent existence of slums in which people continue to reside in areas that lack access to basic needs, adequate sanitation, improved water supply, durable housing, sufficient living space, and a secure tenure is one factor that hinders the success of the policy. The data revealed that several policies aimed at improving the lives of slum dwellers have been initiated in several urban interventions.

On the other hand, these implementations showed no significant progress as several cases in different cities worldwide suffer statically and sometimes even worse. To illustrate, overall progress toward improved living conditions for slum dwellers presented the least favorable results in the sub-Saharan Africa region.

Moreover, the data also instigated that only a few interventions were implemented piecemeal. This minimal perceived level of implementation of the ZOD policy is attributed to the lack of coordination between governmental and non-governmental stakeholders concerned with slum upgrading. Aside from that, public and private officials still need to be made aware of which interventions are most effective in producing maximum benefit with the least effort. Governments in localities generally lack the expert capacity and reliable data required to address the world's growing urban slum problems.

Numerous non-governmental organizations (NGOs) working in poor urban neighborhoods face similar challenges. As a result, low-income housing programs and providing basic amenities and facilities must catch up with the growing population and massive demand for basic needs. Most importantly, the author also emphasized that the absence of political will undoubtedly hinders the implementation of interventions that seek to combat the present conditions of the dwellers.

Linking this piece of literature to the findings of this study implies that a minimal perceived level of implementation of the ZOD policy rarely solves problems, especially health and sanitation issues. It also presents direct consequences on the physical and psychological well-being of the urban population. Thus,



there is a collective backlash to the community, not just a minor discomfort to the individuals. Without resolving the issue, the current growth rate of slum dwellers increases.

To augment this finding, a theory developed by Herbert A. Simon (1955) named the theory of bounded rationality reflects the modest perceived level of implementation of the ZOD policy, which posits that individuals are prone to opting to create simplified models of the natural world, such as shortcuts or the rule of thumb when it comes to informing their decisions. Agents settle for an unacceptable solution that either meets or exceeds specific criteria. Unlike rational choice theory, bounded rationality seeks "satisficing" behaviors.

The said behavior prioritizes a satisfactory outcome that is good enough rather than maximizing utility. Thereby, in connection with the study, the modest perceived implementation of the ZOD policy on the households in the selected barangays reflects the level of performance exerted by Brgy. Officials and other persons in authority when it comes to the coverage. The respondents possess a slight awareness and uncertainty about this specific provision; thus, it is not surprising that they perceive and only felt minimal implementation. To illustrate, if a shopper's expectations are met by one brand of jam, she may buy that jam every month instead of discovering every option on the store's shelves.

On the other hand, one should strive to meet only the basic profit expectations of the company's owners to preserve a more pleasant workplace. Moreover, the policy implementers are not adamant regarding its enforcement as sanitation policies are often neglected despite being a component of the right to an adequate standard of living, as emphasized by Aidara (2016), a policy specialist at the Water Supply and Sanitation Collaborative Council.

This theory posits that the implementers may only provide the bare minimum, which the residents are not pleased with, and enforcing it does not secure a certified ZOD status for their community.

## Coverage

Table 7 presents the perceived level of implementation of the ZOD policy on the households concerning its coverage, focusing on respondents' perceptions, which garnered a grand median of 2.00.

Table 7. Perceived Level of Implementation of the ZOD Ordinance on the Households in terms of Coverage

	Median	DE
1. The ZOD Ordinance applies to all persons, natural or judicial residents, as well as non-resident within the jurisdiction of each barangay.	2.00	PaI

Legend: Median-Median, DE-Descriptive Equivalent, EI-Extremely Implemented, MI-Moderately Implemented, PA-Partially Implemented, PA-Poorly Implemented

This data implies that respondents have a partially positive stance regarding the extent to which the coverage of the policy, providing that the ordinance applies to all persons, natural or juridical residents, including non-residents within the jurisdiction of each barangay, is being implemented.

Chang et al. (2011) negates the finding as a general awareness of smoke-free workplace legislation rose dramatically from 28.5% in July 2008 to 87.6% in December 2008 to 93.6% in March 2009. Exposure to secondhand smoke in the workplace fell from 28.5% in July 2008 to 24.9% in December 2008 to 7.3% in March 2009, and household secondhand smoke exposure decreased from 36.8% to 34.3% to 21.3%, respectively, during the same period. There was also an indication that media campaigns, smoke-free ordinance implementation, having higher education, and having higher income were associated with more awareness of the smoke-free workplace legislation. Briefly, smoke-free ordinance implementation and media campaigns were effective in raising public awareness of the new law and reducing secondhand smoke exposure in workplaces, in public places, and at home.

Tangcharoensathien et al. (2018) also contradicts the data as the study stated that since the 1970s, Thailand's



health development has been centered on investments in health delivery infrastructure at the district and sub-district levels, as well as health worker training. Deliberate strategies boosted domestic training capacity for all health worker cadres and disseminated it to rural and neglected regions. Since 1975, specific insurance systems for certain demographic groups have improved financial access to health care until the implementation of universal health coverage in 2002. The program has also significantly decreased provincial disparities in child mortality. Adults' lives have been spared by measures such as antiretroviral therapy and renal replacement therapy. Strategic purchasing that is well-planned contributes to efficiency, cost reduction, and equity. Preparing for an aging society, primary prevention of noncommunicable illnesses, legal enforcement to reduce road traffic fatality, and effective diabetes and TB control are among the remaining problems. In parallel with this study, to overcome any ordinance or problem, the residents need to cooperate and obey every ordinance that is implemented.

The data corroborates with the study piloted by Schachter and Karasik (2022) regarding the regulations on single-use plastics substantiates the finding as their data showed that despite the implementation of such policy, 5 out of 18 cities in Metro Manila which are deemed to be the most densely populated region of the country, are still not fully successful in implementing the bans on plastic bags.

This phenomenon has its roots in a selective attention theory model put forth by Donald Broadbent in 1957. He asserts that people have a tendency to focus only on one aspect of the environment and process information from that one aspect more than others. It illustrates how people tend to filter out and choose which stimuli to let through, blocking out other information that is available. This theory explains why the residents perceive varying levels of implementation about other indicators, such as the policy objectives, in relation to our study.

As a result, it is possible that the respondents only view the implementation process as a portion of the policy's coverage, leading one to believe that they are only partially aware of it. The statement suggests a theoretical explanation for the varying levels of perception among residents regarding the implementation of the ZOD Ordinance, particularly in relation to other indicators, such as policy objectives. In summary, the theory suggests that varying levels of perception among residents about the ZOD Ordinance's implementation, particularly in relation to policy objectives, may be attributed to partial awareness.

## Prohibited Acts

Table 8 displays how the respondents perceived the level of implementation of the ZOD policy on the prohibited acts. The respondents needed clarification about its implementation within their barangay. With a grand median of 2.00, this indicates that the prohibited acts enumerated by the ordinance are partially implemented. In addition, implementing the policy by prohibiting open defecation in public areas received a descriptive equivalent of partially implemented. The same level of implementation was gleaned on the prohibited acts, which include throwing, leaving, and depositing fecal waste in public areas exposed to the environment, with a median of 2.00.

Table 8. Perceived Level of Implementation of the ZOD Ordinance on the Households in terms of Prohibited Acts

	Median	DE
1. The ZOD Ordinance enumerates acts which are declared unlawful, prohibited, and deemed punishable by the said ordinance.	2.00	PaI
2. The prohibited acts include open defecation in public places.	2.00	PaI
3. The prohibited acts include throwing, leaving or depositing fecal waste in open spaces exposed to the environment.	2.00	PaI
Overall	2.00	PaI

Legend: Median-Median, DE-Descriptive Equivalent, EI-Extremely Implemented, MI-Moderately Implemented, PaI-Partially Implemented, PI-Poorly Implemented

The result on implementation of the provision is in lined with the findings of Thomas et al. (2014), stating that the quality of facilitation is a factor of sustainability since it measures how completely engaged the community was in the triggering process and consequently how effective it was. Monitoring facilitation quality is difficult, but indicators such as the number of triggered villages that have become ODF, the emergence of natural leaders, the extent to which communities are developing improved latrines, the degrees of collective actions undertaken as a result of heightened 'awareness' of the community following triggering, and the degree of rapport created have been proposed. The mentioned indicators complete the total implementation of the ZOD ordinance.

Aligned with the finding is a study by Mensah et al. (2022) which supported the indication that despite the power vested in local authorities to fine the violators, the organization of Water and Sanitation for the Urban Poor stated that prosecuting the cases of the violators would be costly. Due to the slow enforcement process, it would also take a long time before the desired results are arrived at. The enforcement process after the provision has been implemented can cause low compliance on the part of the residents.

The slow implementation process by the reinforcement of the provision is by the implementation theory. Implementation theory is an interdisciplinary branch of research that seeks to comprehend and explain the processes, variables, and obstacles associated with implementing policies, programs, or plans. It aims to bridge the gap between policy formulation and policy implementation. The contrast between policy formulation at the macro level and policy execution at the micro level is recognized by implementation theory. It aims to investigate how policies are implemented and how they unfold in real-world contexts. Policymakers, administrators, frontline workers, and the target population are all involved in the implementation process at various levels. Implementation theory investigates these players' linkages and networks, focusing on how their interactions impact the implementation process.

Contextual elements such as the political climate, corporate culture, social conventions, and economic situations frequently impact implementation success or failure. Understanding these contextual factors is critical for successful implementation. Different policies may need other tools or procedures to ensure their successful implementation. Regulations, incentives, communication techniques, and capacity-building programs are examples of instruments studied by implementation theory. Each step comprises unique processes and problems that influence the overall success of implementation. Continuous assessment and monitoring are essential components of implementation theory. Assessing progress, recognizing obstacles, and making changes based on feedback are critical for increasing the success of implementation tactics.

Locally, this finding parallels a result discussed by Jeremias et al. (2019), which provided that the penalties still need to be fully implemented despite their enactment as per the key informants of the study. It entails that the objectives of the environmental policy cannot be fulfilled optimally since violations of the said policy go unpunished, thus encouraging repeated abuses. This negates the recent claim of the Lanao del Norte governor in the covered interview of Luczon (2023); the Lanao del Norte provincial government wants to expand the "Zero Open Defecation" or ZOD program, which the national government has mandated for local government units (LGUs) to adopt. According to a statement from the Lanao del Norte Governor, the ZOD project will have a budget for water testing, toilet provision, and other necessary tools to mobilize and empower communities to help solve fundamental sanitation problems.

Another indicator that is present in the partial implementation of ZOD is the culture of the residents. Eassom et al. (2014) affirms this pointer as implementing family engagement poses additional problems besides those linked with turning research into reality. Implementation may need a cultural and organizational shift toward family-centered work. Family work can only be implemented if it is viewed as a shared aim by all clinical team members and mental health service members, including the organization's executives. This may require a shift in clinical teams' attitudes and practices and the construction of work routines that enable family participation methods. This refers to the fact that the residents' culture aligns with how they abide by the ordinances.

The results are supplemented by the Resource Dependence Theory proposed by Pfeffer and Salancik, which connotes that organizations mainly depend on external resources to exist and succeed. As per the theory, the

modest to low level of implementation is brought by the need for more critical resources of the implementing bodies, which creates uncertainties and power differences. The relevance of the theory in this study is undisputed since it provides a pillar in tracing how political activities, especially policy implementation, should be improved. In this case, the limited resources, which constitute insufficient funding, and the residents' personnel and culture deter the implementers' capability to enforce this indicator.

## Penalties

Table 9 indicates the extent of the implementation of penalties as perceived by the households following a violation committed on the ZOD Ordinance. The respondents believe that the provision indicating the penalties that will be imposed is being partially implemented after gathering a median of 2.00. Similarly, the respondents also perceive the number of charges based on the number of offenses committed, which provides an amount of Php 500.00 for the first offense, Php 1,000.00 for the second offense, and Php 1,500.00 for the third offense as all slightly implemented with a computed median of 2.00.

Table 9. Perceived Level of Implementation of the ZOD Ordinance on the Households in terms of Penalties

	Median	DE
1. The ZOD Ordinance charges a corresponding penalty on any individual caught violating the ordinance.	2.00	PaI
2. The ZOD Ordinance charges Php 500.00 for the first offense by any individual caught violating the ordinance.	2.00	PaI
3. The ZOD Ordinance charges Php 1,000.00 for the second offense by any individual caught violating the ordinance.	2.00	PaI
4. The ZOD Ordinance charges Php 1,500.00 for the third offense by any individual caught violating the ordinance.	2.00	PaI
Overall	2.00	PaI

Legend: Median-Median, DE-Descriptive Equivalent, EI-Extremely Implemented, MI-Moderately Implemented, PaI-Partially Implemented, PA-Poorly Implemented

Analogous to these findings is discussed by Olukani et al. (2014) regarding the implementation of regulations and penalties for the violators of proper waste management. The study indicated that the state and local government struggles to impose some provisions, such as sanitary levies with stringent regulations and penalties for offenders, especially those who practice illegal dumping on the streets.

The study found that although such acts were prohibited and bound to be penalized, more households are still contributing to air pollution due to burning waste disposal methods. Aside from the penalty imposed, government agencies experience low turnouts from the levies paid by the residents. The partial implementation of policies related to practices and sanitation in a semi-urban city in Southwest Nigeria can be influenced by various factors.

To affirm the findings, a study by Maharaj (2021) indicated that understanding these factors is crucial to addressing the challenges and enhancing the effectiveness of the policy. For instance, more funding may help the complete execution of sanitation programs and infrastructure development, affecting the policy's implementation. These factors include infrastructure challenges, community awareness and education, cultural and behavioral factors such as cultural practices, weak enforcement and monitoring, policy coordination, population growth and urbanization, community engagement, political will, and environmental challenges.

Sridhar (2017) supports the finding of the study as another setback in effective waste management environmental policies, including waste management, have been generally slow due to various bureaucratic bottlenecks, lack of political will, and continuity of programs and policies by successive governments. The study of Ogunkan (2022) also supports the finding which provided that Nigeria's environmental system is

assailed with ineffectiveness, lack of public participation, unenforceable and non-implementable laws and policies, and a weak and uncoordinated institutional framework.

In line with the findings is a study by Abdullah and Tuna (2014) which revealed an unsatisfactory knowledge level of environmental issues among student respondents, but they showed good perception ratings. The students were, at least, conscious, but they could not "explain why" environmental problems continue to exist in their community. Consistent with this is a study by Rahmaddin et al. (2015) regarding waste management in communities near the Martaputra River Bank in Indonesia. The community's attitude and knowledge were deemed highly satisfactory; however, the participants needed to show better actions towards handling and managing river-dumped wastes by non-participation. The gap between knowledge and practices on household wastes was also indicated in the study done in Thrissur City in Kerala, India (Licy et al., 2013).

In the local settings, Paras (2016) affirmed the findings which indicated a slightly implemented equivalent regarding the penalties imposed following a violation and the imprisonment period with an average weighted mean of 2.21. The study revolved around the extent of awareness and implementation of RA 9003 in terms of segregation and storage of solid waste in selected barangays of Balaoan, La Union, in which the provisions included littering, throwing, and dumping of waste matters in public places, open burning of solid waste, and others.

The modest level of awareness of the penalties imposed is a reflection of the extent to which the provisions were implemented. The Classical Theory of Deterrence, proposed by Bentham (1789), supplements the findings of this indicator. As per the theory, the citizens will be encouraged to obey the law if the severity of the punishments discourages the residents from violating the law and thinking about the potential gains and losses that might happen. In relation to this study, the respondents perceive the enforcement of the penalties as moderately implemented as the implementation mechanism of the officials in charging sanctions does not discourage future offenders from committing such offenses. The advantage of the Classical Theory of Deterrence lies in its emphasis on the rational calculation of individuals when deciding whether to engage in criminal behavior. According to this theory, individuals weigh the potential benefits and costs before committing a crime. The key advantage is that if punishment is swift, specific, and severe, it is believed to act as a deterrent by influencing individuals to choose not to engage in criminal activities due to the perceived negative consequences. This theory has influenced criminal justice policies and the design of legal systems in many societies (Abramovaite, 2022).

### **Challenges Encountered in the Implementation of the ZOD Ordinance**

**Inadequate Regulatory Action.** This is the first universal theme drawn from the Barangay Officials. These are the factors that affect the effectiveness of the implementation of the Zero Open Defecation Ordinance. These factors include communal toilets, lack of financial resources, political capacity, and priority. This answers the question, "What do you think is/are the reason/s why many residents still practice open defecation despite the implementation of the ZOD Ordinance preventing the barangay from successfully implementing the Ordinance?"

This central theme is rooted in structural functionalism theory. It is a sociological theory that views society as a complex system with interconnected parts, each contributing to the stability and functioning of the whole.

With this theory, community, institutions, and practices within society are seen as having specific functions that contribute to the overall stability of the social system. It suggests that social institutions and structures exist because they serve important functions in maintaining social order and equilibrium.

This general theme coincides with the study of Sinharoy et al. (2019), which posited that political factors pose hindrances to policy implementation. To illustrate, WASH policy and investment decisions are heavily influenced by the government's overall policy on informal settlements. In the study that examined the barriers to water and sanitation policies in low-income and middle-income countries, there are three primary strategies for addressing slums. First, the areas with illegal settlers should be cleared through forced or legal eviction; second, neglect or disregard the undesirable situation despite being responsible for it; and finally, regular settlement conditions.



Upgrading policies for informal settlements frequently include providing WASH infrastructure and regularizing informal settlements. However, such advancements are only bound to fail if a political "champion" is nonexistent to push such policies forward. Aside from that, the researchers also mentioned other political factors, such as corruption and patronage that can impede the implementation of WASH policies for low-income communities. The abovementioned literature posited that corruption is widespread among water and sanitation service providers. Corruption can take many forms, ranging from small bribes for household repairs to price fixing and delaying the construction of system-level water infrastructure. Persons in power are likely to prioritize personal and political interests and allegiances, which may actively conflict with existing policies and the needs of informal settlements in the absence of solid institutional leadership. In other cases, politicians may seek local support by securing access to services such as water and sanitation. However, its preservation can be a challenge.

Furthermore, this is affirmed by Walker et al. (2015), who tackled the role of power, politics, and history in achieving sanitation service provision in informal urban environments. It instigated that the central to most urban sanitational planning approaches developed was meeting the requirement of an "enabling environment," which refers to the political, economic, educational, socio-cultural, organizational, technical, and legal conditions required for implementation success.

In this case, there are several instances wherein leadership significantly affects policy implementation. To illustrate, the findings revealed that while strategies, plans, and policies concerning urban sanitation exist in Lusaka, there were only a limited number of successful projects, as it appeared that they were weak at supporting successful sanitation interventions, as shown by associated documentation. Additionally, there is an absence of will underneath the government to support developments in providing services; people need more motivation to make change. Another issue raised was the difficulty people have in doing their jobs correctly because doing so can lead to their dismissal if it is seen as going against the agenda of political leaders. A lack of personnel to implement strategies was also mentioned as a limitation. Another body of literature also posits that political action is crucial for restoring the damage of the past and preventing future harm with a growing global awareness of and attention to the realities of human impact on the environment and the externalities of industrial, cultural, and social practices.

Sullivan (2016) affirms this justification by presenting the significance of government action through environmental campaigns, improved education programs, waste management, increased awareness, and stricter control by city governments. The literature mentioned how big of an impact politics has on the success of policy implementation. Linking with the generated theme of the study, there needs to be more in undertaking government action to be one of the major hindrances in successfully attaining the policy's objectives. This challenge is difficult to confront as it sprouts within the very system of implementing bodies.

Corroborating this phenomenon, the theory of Street-level Bureaucracy by Michael Lipsky (1969) explains how the common difficulties encountered in the interior of the implementing authorities affect the communities. The said theory that falls under the umbrella of implementation deficit theory explains how problems arise from a lack of organizational and personal resources, physical and psychological threats, and conflicting and ambiguous role expectations.

Among the challenges found were bureaucratic hurdles, which comprise problems within government agencies like vagueness in roles and responsibilities, inadequate training of the attending personnel of the community, and bureaucratic red tape.

Meanwhile, resource constraints refer to the need for more financial and human resources allocation, which limits the government's ability to implement the programs effectively. Aside from that, political interference and lack of monitoring and evaluation undermine the effectiveness of the policies imposed as different political priorities and lack of assessment mechanisms contribute to the struggle to resolve such issues promptly. Bridging the relevance of this theme to the study's findings, this challenge commonly appears as the implementing body focused on those at the grass-roots level, which entails that to have a successful policy implementation, the internal affairs of the implementing bodies should also be addressed.

**Absence of Communal Toilet.** This is the first subtheme, which refers to the lack or absence of communal



facilities, particularly in the coastal area. The absence of communal facilities such as communal toilets leads to health issues and environmental problems in the area. Communal toilets may be built up fast in emergency circumstances, refugee camps, or temporary settlements to address the sanitary demands of a large population. Furthermore, it is commonly established in highly populated metropolitan areas with limited space to assist inhabitants needing private bathroom facilities.

Several participants identified this factor as one of the contributing reasons that deter the capability of the officials in successfully implementing the ordinance. As stated by Participant 3 *“Iti maysa, natangken unay iti ulo da. Kaslahan da ngamasursurwan nu di ketdikuma, nu jay mas masarap yung bawal. Maysa pai ngarason, awan CR da siguro, ken wen coastal da ngamin, mabalin da lang nga tumakki ijay. Damagdamag met laeng, awan iti natiliw pai, ibaga da kuma iti barangay tapnu ammo iti aramiden iti konseho.”* (Primarily, the people are hard-headed. They disregard what the officials tell them like what is not good they still do. Another reason, maybe they do not have their own CR because they are living in the coastal areas, it is typical for them to defecate anywhere. It is known but no one has been spotted yet, those who have seen someone should tell it to the officials so they can be stopped.)

The importance of a personal toilet or a CR within each home is unquestionable, for it pertains to personal well-being, privacy, and keeping the environment clean. Affirming this analysis is the study of Yatmo et al. (2012), in many nations, shared sanitation facilities have become the sole viable option for providing access to sanitary services in areas with dense populations and low incomes. Amidst the numbered cases wherein open defecation is present in the area of the barangay, it is of great value for the presence of communal toilets.

Communal toilets are very much applicable to rural places especially since the respondents came from the area wherein the population is dense and houses are near each other. According to Participant 4 *“Maysa diyay met, mabalin tay met nga i-consider diyay dakkel nga populasyon, kasla kuma diyay maysa a sitio a deeply populated. Diyay space a dapat a pagdianan iti CR ket pagdianan pay lang iti tao. Diay ngamin space ken over population iti maysa a problema ket diay ngamin space kasla, han mi met a basta basta a diay naited nga area para iti familia ket alaen tapnu agkaroon da kuma iti CR. Haan mo basta basta serreken nu awan iti I’issue iti association. Kayat ko, agkaroon kuma ti communal toilet. Ngem with the issue of association. Yung mga kapulisan meron silang communal toilet na project pero nagreeseach sila ng donor, hindi nila pondo yun, hindi. Isa sila na pwede naming malapitan. Pero meron naman yung sinasabi namin na programa namin na galing sa external sources hindi lang galing sa government agencies. It is just a matter of paperworks.”* (The population is the primary reason, for example, a district is deeply populated. The space that is identified for a portable CR will be used to build the resident’s home. The space and over population of a district is the primary reason and it is not easy to take away those area from a certain family for the cooperative handling them will issue a letter addressing it. I want to have a communal toilet but they are protected by an association. The police have a communal toilet project; they can be approached to push through with the project. But we also have external resources, not only the government agencies. It is just a matter of paperwork.) Contrary to establishing individual toilets for each family, communal toilets can be a more cost-effective method for providing sanitary services to a larger number of people. In addition, Participant 10 stated *“Kwa met ading ditoy barangay mi adda met diay pondo ngay nga it-ited da ngay nga kwa no kwa gumatang da met ti lusob kasdiay nga para inti cr da. Adda met ngamin diay balay ngay nga awan ti cr na makishishare, ngem manmanon ti sharing tatta. Sabagay ado met ti improvement na. Ado unay ti kwa syempre ado talaga ti kwa umad ado ti populasyon dita baybay. Wen ading amin met iimplement mi met.”* (Here in our barangay there is a fund which we use in buying tubular for their cr. There are houses that share a cr, but only a few now. Though there’s a lot of improvement now. The population in the coastal area is really increasing. Yes, everything is being implemented.)

The result is consistent with the findings of Simiyu (2016), communal sanitation facilities are meant to meet the defecation needs of populations in regions such as informal settlements, where sanitation facilities are few and providing household sanitation facilities is challenging. They are frequently located within a neighborhood, have a caretaker, and operate on a pay-per-use basis. Construction costs (such as raw materials and labor) can influence charges. However, this is not always the case. Charges are subsidized; thus, individuals are assumed to pay for the services provided. They are regarded as an avenue for behavior modification in informal settlements (for example, reducing open defecation), particularly when paired with

sensitization and awareness.

A communal or community toilet is a possible solution to the present open defecation within the area. Community involvement is frequently required to deploy and accept communal restrooms successfully. Involving the community in the design and upkeep of these facilities can improve their efficacy. The respondents also aim for the people's cooperation to avoid practicing open defecation. Also, the primary action is to start with the leaders themselves. In rare circumstances, state agencies or non-governmental organizations (NGOs) may execute programs to offer community toilets as part of more extensive sanitation campaigns, mainly where sanitation infrastructure is inadequate.

According to Participant 10, *“Ngem allokuyen mi met an isuda nga sumurot da ti ordinansa. Ngamin maminduwwa kami nga naevaluate dayta tatta, idi first nga kwa mi nabagsak kami ta last kuma payen nga pasyaren mi nga balay adda nakita da ngay nga diaper, diyay lang ti nakakwaan mi, second evaluation mi nakapasa kami metten. Siyempre rigat mi met at a apan kami met agbalay-balay bagaan isuda no innia aramiden da. Mga barangay officials, mga barangay Captains, tanod, BHW, BNS lahat kami (nageevaluate), tsaka kung minsan pumupunta yung RSI namin dito sinasamahan kami.”* (But we encourage them to follow the ordinance. We are being evaluated twice, we failed at first because at the last house we visited they saw a diaper, only because of that we failed. In our second evaluation we finally passed. It is really our struggle to go house to house visit just to inform them what they should do. The Barangay officials, barangay captain, tanods, BHWs, BNS all of us (evaluate), also sometimes our RSI come here to accompany us.) In rare circumstances, state agencies or non-governmental organizations (NGOs) may execute programs to offer community toilets as part of larger sanitation campaigns, particularly in places where sanitation infrastructure is inadequate.

Participant 4 also added that *“Haan met nga agkurkurang ti barangay ta kanayun met ti panagpasyar iti BHW tayu nga agbalaybalay iti awan iti CR na, nga kadaan a style ti kasilyas. Machecheck met daguidiay, adda met jay makic'CR ti sabali.”* (The barangay is not lacking for there are the BHWs who visit the resident's houses to check their CR, from the old-style toilets. They are checked thoroughly, there are some residents who use someone else's CR or their neighbors.) As part of the Local Government Unit (LGU), the barangay officials are responsible for addressing, implementing, and resolving the issues within the barangay. Along with the leadership of the barangay councils, the voluntary action actions of the BHW are essential in monitoring the compliance of the residents and the possible effect of a communal toilet.

It is essential to recognize that the availability of communal toilets can have significant implications for public health, sanitation, community well-being, and personal privacy. Without communal toilets, communities may face challenges related to open defecation, which can lead to the spread of diseases, environmental pollution, and compromised dignity, such as invasion of privacy applicable to men and women, especially for vulnerable populations. Transmission of infectious diseases is facilitated through environmental pathways, wherein people may be repeatedly exposed and infected (Garchitorena et al., 2017).

Public sanitation affects public health; while community toilets might be a practical option, they can be challenging to maintain and clean. Regular cleaning and adequate sanitation techniques are critical for user health and well-being. To avoid the transmission of infections, community toilets must be properly designed and maintained. Handwashing stations, garbage disposal, and frequent cleaning contribute to overall hygiene. According to Burton (2013), inadequate access to clean, pleasant toilets will affect all children badly; it can have a particularly negative impact on children with disabilities and additional support needs for children with bladder or bowel conditions or children experiencing bullying. Sanitation connects to the residents' health and the community's overall well-being.

To strengthen the claim above, Sirgy (2010) stated that a new measure of community well-being is developed on the premise that community residents perceive the impact of community services and conditions on their quality-of-life (QOL) in various life domains such as family, social, leisure, health, financial, cultural, consumer, work, spiritual, and environmental domains. These perceptions influence residents' sense of communal well-being, dedication to the community, and overall life satisfaction.

McDonald (2020) also affirmed this finding by stating that researchers and designers of privacy must address

the unique requirements and problems of vulnerable populations. Normative and privileged lenses have the potential to damage conceptualizations of identities and privacy demands, as well as maintain or worsen power structures and struggles--and how they are institutionalized within privacy research techniques, theories, designs, and analytical tools. The session's goal is to foster discussion about alternate ways of thinking about privacy and power and methods for studying and building technology that respects and strives to empower disadvantaged communities. The absence of communal toilets will undermine the ZOD ordinance that is being implemented in the areas where open defecation is rampant, and some violators openly defecate and throw feces in public places.

**Lack of Financial Resources.** This is the second sub-theme which concerns the barangays fund that could help the ordinance be easier to fulfill. The lack of financial resources can have significant implications for individuals, communities, and organizations. For instance, effectiveness of government policies and social programs aimed depends on how the government alleviates financial hardship.

This has been mentioned by Participant 5 stating *"Iti mangpanggep ti, agkurang a talaga nu pondo ti barangay ti narigat mi nga, although adda met iti nga bassit nga naka-allocate ngem ah, han lang kuma ngamin ngay a dijay lang ti mapunduan ta adu met it aahh mawarasan dituy nga kwa kwarta wennu kasapulan pai ti barangay. Haan lang met a data ti kasapulan da, ti kitkitaen da ti main nga problem, isn't kitkitaen da. Isu nga talaga nga agkurang kami nga talaga ti pondo. Kitkitaen mi lang ngamin, talaga nga diay critical nga dalan, nga critical a maypapan ti silaw."* (If it's about, there is a lack of funds for the barangay for it is hard, although we have allocated some ah, but they are not exclusively for toilets but for the other needs of the barangay as well. It is not only what they need, they look for the main problem, they look at it. That is why we lack funds.) Participant 6 also gave a brief answer stating that *"Ay pondo, awan ti maitulong nga uray bassit laeng kuma."* (Ah funds, there is no help even just a little.)

While Participant 10 stated that *"Kwa met ading ditoy barangay mi adda met diay pondo ngay nga it-ited da ngay nga kwa no kwa gumatang da met ti lusob kasdiay nga para inti cr da. Adda met ngamin diay balay ngay nga awan ti cr na makishishare, ngem manmanon ti sharing tatta. Sabagay ado met ti improvement na. Ado unay ti kwa syempre ado talaga ti kwa umad ado ti populasyon dita baybay. Wen ading amin met iimplement mi met."* (Here in our barangay there is a fund which we use in buying tubular for their cr. There are houses that share a cr, but only a few now. Though there's a lot of improvement now. The population in the coastal area is really increasing.)

Lastly, focusing on the statement of Participant 4 who stated, *"...Kayat ko, agkaroon kuma ti communal toilet. Ngem with the issue of association. Yung mga kapulisan meron silang communal toilet na project pero nagreesearch sila ng donor, hindi nila pondo yun, hindi. Isa sila na pwede naming malapitan. Pero meron naman yung sinasabi namin na programa namin na galing sa external sources hindi lang galing sa government agencies. It is just a matter of paperworks"* (I want to have a communal toilet but they are protected by an association. The police have a communal toilet project, they can be approached to push through with the project. But we also have external resources not only the government agencies. It is just a matter of paperwork.)

On the other hand, a development observed was provided by Participants 6 explaining how they implement the Zero Open Defecation Ordinance in their barangay, and stated that *"Ay, adda met daguiti kwa idi immay iti DOH, kadwa mi idi nga nagsursur, talaga binagaan mi isudan nga dapat kailangan adda iti CR dan. Iti kaadwan ngamin, lallalo purok 7 ket open pit. Kasla manmanu laeng iti water sealed. Sunga kailangan, agikukwa kami daguiti abot. Nu awan mabalin da nga kwa, nu han da makaya mangaramid iti, kasla kaadwan kenyak ket, jay purok, open pit."* (Ah, there are those when DOH came, we escorted them to visit, totally we informed them that they need a CR of their own. The majority, especially sector & is open pit. There are some which is water sealed. That is why... it is a must to dig up holes. If they don't have the capability to, like a lot from my sector, is open-pit.)

However, the problem with scarce resources still prevails as Participant 8 explained why many residents still practice open defecation despite the implementation of the ZOD Ordinance, *"Madam awan met ti pagaramid da ti kubeta da pagpatakder da ti kubeta da isu diyay ti kwa. Tumultulong kami met lang, ibagbaga nga...info"*

*mi nga bawal ti agtakki.*” (Madam they can’t afford to build their own comfort rooms that’s why. We also help; we tell them.... we inform them that pooping [anywhere] is prohibited.)

The lack of financial resources often concerns economic disparities and limited opportunity access. Structural factors, such as unequal distribution of wealth and systemic barriers, contribute to financial challenges. This entails that the success of a policy relies mainly on national-level officials who influence the overall allocation of sanitation resources. The key agencies (budgeting, economics, and finance) are on the list, as are line agencies (infrastructure, sanitation, water, rural development, and urban planning), as well as external financing and technical partners (multilateral, bilateral, and nongovernmental organizations).

Furthermore, according to the Philippines and Vietnam under the Economics of Sanitation Initiative (ESI) in 2008, solving the issue requires the provision of primary and affordable amenities, which can be quite helpful. However, children, particularly those under five, are susceptible to the adverse health effects of inadequate sanitation, so areas with large child populations are given special attention. Given that most of those needing improved sanitation access are impoverished, the government, charitable organizations, and cause-oriented groups will bear some of the financial burden of these expenditures. Furthermore, programs to enhance sanitary facilities will likely compete with other projects for whatever funds are available. Thus, particular target beneficiaries must be established.

**Political Capacity and Priority.** The final subtheme refers to the Participants' priority and ability to implement the ordinance. The Political Priority includes their willingness to help, leadership capabilities, and leadership skills. Political capacity and priority as significant factors in policy implementation are parallel with the study of Kelkar & Ram (2019), which involves evaluating new approaches to resolve the sanitation issue in developing Asia.

The researchers presented a global scenario indicating that a system failure, inability to invest in the sector, and unwillingness of decision-makers to ignite changes dramatically affect the success of sanitation policies. Sanitation failure systems are significantly associated with institutional and governance shortcomings. Last 2017, for example, water and sanitation received 8% of the Asian Development Bank's assistance, compared to 27% for transportation and 31% for energy. The grave dangers associated with defecation in public and impaired sanitation systems are not taken as a compelling motivation for reform. The lack of awareness among consumers extends beyond health risks to the loss of environment and ecology caused by groundwater contamination by waste products.

Together with this, there are problems with how governments at both levels prioritize this industry. As previously stated, there has been little emphasis on wastewater management partly because of a lack of awareness of the advantages to consider. Meanwhile, water supply has consistently received more attention than sanitation.

Given this understanding, and for the overall growth of sanitation provision, it is critical to address the sector's key issues. This entails a shift in perceptions of the best way to implement sanitation, whether in networked or non-networked forms, as well as innovation toward more flexible approaches and more excellent technological expertise on new methods, after which financial and profit mechanisms that support innovation should follow.

Also, Participant 8 stated that *“Ngem adda met ti inpatakder ni Kapitan nga kubeta idiyen, communal. Maus-usr, dayta lang ti haan ko nga masungbatan. Wen ado ti population idiy. Duwwa ti BHW nga naikabil idiy, adda ngamin diay maysa nga BHW idiy ngamin. Doon lang [dalawa ang BHW] kasi marami sila doon. Haan met nga agkukurang [ti impleyado), sukir da nga talaga.”* (But our captain already built a communal cr for them there. As to whether it is heavy used that’s something I can’t tell. Yes the population there is big. There are two BHWs assigned there, only there because they are many. We’re not lacking of employees, they are just stubborn.) Participant 8 also added *“Wen madam [naipaprioty]. No kwa ket ag-iinfo kami kakadwa mi ti Kagawad. Kuma madam, awan kuma ti agtaktakki ti kakasdiayen siyempre maapektaran da met lang. Kinakausap namin matitigas ang ulo, awan pay minulta.”* (Yes madam [it is being prioritized]. We inform them together with the Kagawads. I hope they stopped it already because it will harm them. We talk to them; we have no fines yet.)



Additionally, Participant 5 stated, "*Kitkitaen mi lang ngamin, talaga nga diay critical nga dalan, nga critical a maypapan ti silaw. Lalo panagtutudo ikwaan ti rangtay, purok purok. Aglalo kadaguituy, nalpas mi ti rangtay, tatta solar.*" (We only look at, the critical street, those needing lights. Also, the bridges constructed need light preferably solar. Especially now, we finished those bridges, now, solar powered lights.) This indicates that while sanitation remains an issue, the local government is leaning more towards prioritizing other political agendas as it is deemed a problem that needs immediate action compared to the ZOD ordinance. However, it is also important to note that several factors affect how they identify which issue should be resolved first, such as their geographic locations, sense of emergency, and others.

Another area for improvement was the need for more solidarity between the officials and BHWs in promoting policies such as this ordinance. Participant 6 stated, "*Siguro, kaadwan ngamin tatta. Ta nu ti kadwa mi ket agtittinnulong kami. Wennu kadwa mi siguro iti Barangay Officials, mabalin met ta mangibaga kenya.*" (Maybe, a lot of them. Because we act as one. Or maybe with the help of the Barangay Officials, we are able to tell them.) The participant reiterated that if their locality had a more solidified force, especially in information dissemination, the residents would take the information they share with a higher degree of attentiveness. Furthermore, the participant was also confident that the ZOD ordinance would be fully realized if their barangay worked closely together, which they identified as needing improvement.

Aligned with the result is the study of Hueso (2016) which discussed that a lack of political will triggers a domino effect on the sanitation crisis, presenting slow progress, program failure, and weak coordination. For too long, low political will has been and continues to be a significant impediment to progress in sanitation. However, its priority has gradually increased to unprecedented levels in recent years. To name a few examples, sanitation has been recognized as a human right and has become a global target under the Sustainable Development Goals. The situation varies across the country, but in India, where two-thirds of people defecate outside, for example, cleanliness is a top priority for Prime Minister Modi. A lack of political commitment to sanitation determines the level of priority it receives across government levels and departments, as well as the course of action that will be taken.

To supplement more, a policy brief in 2016 revealed that due to its multi-sectoral nature of sanitation, it faces the risk of isolating itself if priority is restricted to a single ministry, as well as becoming an orphaned sector. Perceptions of the relative power and status of institutions and programs are a common source of difficulty for attempts to reduce this risk by prioritizing government initiatives more across accountable ministries or departments at the same level. Therefore, politics also weighs in predicting the successful employment of policies like the ZOD ordinance.

Corroborating this circumstance, the Bureaucratic Politics Approach by Graham T. Allison (1962) explains the relevance of politics and bureaucratic necessities in policy implementation. According to Allison, the approach is actor-oriented and disregards a structural perspective of the field. As a result, it concentrates on the interactions between players representing various bureaucracies engaged in a political game of bargaining, which bears similarities to a zero-sum game where the success of one bureaucracy is deemed the failure of another. In a perpetual state of rivalry, bureaucracies (or even individual offices or divisions within larger organizations) present ideas and solutions to the current issue. Should a bureaucracy's proposals become policy, this would entail leveraging its resources and giving them more weight. These agencies/bureaucracies are alleged to prioritize their survival over all other considerations and hold divergent viewpoints and interests.

Three factors determine an organization's survival: its budget, employee morale, and relative influence (or "turf") over other organizations. Enthusiastically guarding its territory and power, the organization upholds its "essence" or "mission" without compromising. The position is strengthened by authority and responsibility. More power comes from having an authoritative position, and in bureaucratic policy, more power gives a player "effective influence on policy choices and operations." In connection with the study, some participants openly admitted that prioritization is a significant challenge in implementing the ZOD policy. While they acknowledged the need to resolve sanitation issues, the implementing bodies cannot attend to all the problems within their community, especially with other factors such as meager funds intervening in the programs. However, considering this theory, such a struggle will be minimized by exuding a solid persona in the political arena and establishing the community with other public and private agencies that can meet the needs of their respective localities, especially in sanitation.



Burton (2013) affirms that the legislation does not always guarantee implementation, but it signals a government's priorities and intentions and provides recourse if standards fall too low. Without advice, guidance, and support, legislation may mean only an essential minimum is achieved. Political capacity and priority revolve around the ability of governments to address pressing issues. Institutional capacity theories analyze the effectiveness of governmental structures while specific issues gain attention over others. Understanding these theories helps navigate the complexities of policy-making, advocating for improvements in governance and allocating resources to critical areas.

**Pervading Cultural and Social Norms.** This is the second universal theme, which covers the difficulties the Barangay Officials encounter in implementing the ordinances. This includes cultural or behavior issues, population, unstoppable violators, and unavoidable practices. This answers, "What are the difficulties you encounter implementing the ZOD Ordinance?" To further understand this finding, the Conflict theory posits that society is characterized by inherent inequalities that lead to conflicts among different social groups. This would analyze how power imbalances and struggles contribute to disparities in employment opportunities, cultural dynamics, population management, political decisions, and societal behaviors. It provides a critical lens to understand the underlying conflicts on Zero Open Defecation Ordinance.

**Cultural and Behavioral Issues.** This is the first subtheme, which refers to the phenomenon wherein the behavior and culture of the residents strongly challenge participants. In the implementation of ordinances, the primary cause of slight implementation within the area is the behavior of the residents, which pertains to the way they think negatively. Another is the cultural practices from their clan until the present that the residents retain. The residents' behavior includes stubbornness, lack of discipline and cooperation, and culture, such as long practices. This has been mentioned by the majority in which Participant 1 states that "*Kaadwanna gamin dita, haanmo met ngarud maiwasan iti tattao met, siguro dita, lal'lalo dita igid met itibaybay, ket mammanu met ngarud didiay iti, adda ti, kammo, dadduma ngamin di met maaw'awatan dita nu apan da met agdalos, kaadwanna nakawalang met iti kwa idiayyen. Adda latta uray apan aglinis. Haan mo maiwasan dajay, daguijay met siguro tat'taon tumak'takki da metten ittan ig'iggidden.*" (Mostly from there, we cannot avoid the people; maybe there, most especially in the seashore, only a few there have a, I'm not sure, others are hard to understand; every time they go there to clean, waste is scattered. We cannot avoid it even if they clean because the residents defecate around the area.) Participant 1 also added "*Yan ang hirap na solusyunan pero kaya ring masolusyunan pero karamihan kasi talagang kwan e. Yung mga bata hindi mo mapigilan na magkwansa kung saan.*" (That's hard to solve but it can be solved, but they really, we cannot stop the kids from defecating anywhere). It was disclosed that the residents openly defecate in public places, for they are acting on the behavior that they do it repeatedly and disregard the constant cleanups of the barangay officials and volunteers.

In connection to the findings, the negative behavior seen by the residents causes negative results to the community. According to Participant 3 "*Iti maysa, natangken unay iti ulo da. Kasla han da nga masursurwan nu di ketdi kuma, nu jay mas masarap yung bawal. Maysa pai nga reason, awan CR da siguro, ken wen coastal da ngamin, mabalin da lang nga tumakki ijay. Damag damag met laeng, awan iti natiliw pai, ibaga da kumaiti barangay tapnu ammo iti aramiden iti konseho.*" (Primarily, people are hard-headed. They disregard what the officials tell them like what is not good they still do. Another reason, maybe they do not have their own CR, and they are living in the coastal areas, it is typical for them to defecate anywhere. It is known but no one has been spotted yet, those who have seen someone should tell it to the officials so they can be stopped.) Moreover Participant 5 said that "*Hmm kwa, napadas mi, adda pay lang ngay daguiti makingatngat, di kayu met ngarud mangted it isarili mi nga pagtakkian. Uhhuhh, wen, adda pay lang diyay, medyo natangsit kasjay ngay. Matigas yung ulo*" (Hmm the, our experience, there are those who argue, why don't you give us those bowls. Uhhuhh, yes, we have those, a little bit sassy. Hard-headed.) Participant 8 also said that "*Nasukir ngamin ti tao, no ibagbagam ti pagsayaatan da ket nasukir da haan da sursuroten ti patpatakan.*" (The residents are really stubborn, if you tell them what's good for them, they will not listen, they don't comply with the rules.)

Lastly, Participant 10 mentioned that "*Adda met ngamin dagidiay barangay mi ngay nga natangken ti ulo na. Kasla ngay nangeg da wala lang kasdiay, adda met ti kasdiay diba? Ngem allokuyen mi met a isuda nga sumurot da ti ordinansa. Ngamin maminduwawa kami nga naevaluate dayaatta, idi first nga kwa mi*

*nabagsak kami ta last kuma payen nga pasyaren mi nga balay adda nakita da ngay nga diaper, diyay lang ti nakakwaan mi, second evaluation mi nakapasa kami metten. Siyempre rigat mi met a ta apan kami met agbalay-balay bagaan isuda no innia aramiden da. Mga barangay officials, mga barangay Captains, tanod, BHW, BNS lahat kami [nageevaluate], tsaka kung minsan pumupunta yung RSI namin dito sinasamahan kami.”* (We still have villagers who are very stubborn. They heard about it but they don’t care, but we encourage them to follow the ordinance. We are being evaluated twice, we failed at first because at the last house we visited, they saw a diaper, only because of that we failed. In our second evaluation we finally passed. It is really our struggle to go house to house visit just to inform them what they should do. The Barangay officials, barangay captain, tanods, BHWs, BNS all of us [evaluate], also sometimes our RSI come here to accompany us.) This implies that the stubbornness, hard-headedness, and undignified defensiveness of the residents that the barangay officials find it hard to manifest the implementation of the ZOD ordinance.

The cultural practice of the residents indicates that it plays highly in the way the residents consider either abiding or violating the provision. Consistent with the role of cultural practices, Participant 2 mentioned that the “nature” of the residents is one of the indicators highly indicative of hindrances to implementing the ZOD ordinance. Participant 2 specifically said *“Talaga nga haan tay nga makwaisuda ta isu ti kwan dan ngamin, nature da didiay, nakasanayan dan. Adda da pai lang ngamin diay tawen nga kwa diay dati, isunga han da nga maikkat datan nga ugali da.”* (The people are unstoppable because it is already their nature. Their actions have been brought from the past to the present, that is why they cannot remove their old ways for it has become their habit.)

The participant also added, *“Ta uray nu ibagam ket isu latta ta adda ta pai lang nga behaviour da. Uray nu kasatnu nga bagaan, ken ahta multa nga daguita, isu latta.”* (That even when you tell them they’ll still have their behavior. However we tell them and those fines, it’s still the same.) In connection to the statement made by Participant 2 regarding their culture, it can be gleaned that there is a connection between their cultural practices and their behavior.

One indicator of the residents in terms of the profound practice of their culture is their original abode where their practices are originally from and is rampantly seen. According to the statement of Participant 4 *“Sipud idi, iti nakaarwaman gamin kasla daguiti residente tayu iti \*\*\*\*\*, lalo ta naggapu da met iti \*\*\*\*\*, narwam da met daguita nga idiyay da lattan kasamsamekan, idiyay karumrumasan apan da lattan ikutkot idiyayen, isu diyay iti nakasanayan, iti nakasanayan da. Ken dadduma met daguiti igi diti highway, lalo nu ubing nga makataktakin, adayu met iti gasoline station nga adda CR na, ijay da lattan. Ngem nu nataknagan nga adda kuston nga panunot nan ket mabain da met ten nga agkasjay. Most likely ket taga igid ti baybay laengen ti kasjay. Mabalin met siguro ta nu siguro, mabalin kuma nga ti kwa ti barangay nga agkaroon diay portal CR. Siguro maysa kuma diyay nga maliklikan.”* (From the very beginning, it is typical for the residents especially those who came from \*\*\*\*\*, it’s common to dig up a small hole and defecate on bushy and hidden places, it is their practice. The residents by the highway, especially kids, defecate in the open for the gasoline station which has a CR is far. But adults are disciplined and are shy to defecate in the open. Most likely are the residents by the seashore who usually do this. Maybe if the barangay has a portable CR, this habit will be avoided.)

Furthermore, Participant 9 states *“Siguro awan pay met ti...No cr kunam ket inti baybay ket adda pay ti kumon nga cr idiyay, adda latta met siguro dagidiay ubing talaga met nga welwel dagidiay ubing. Ay haan met siguro madam nga kurang ti pondo, kurangen ayenti kwa ti tatang idiyayen no kasatno panangdisiplina ti anak da. Haan kami met agkurkuran ta mapan kami pay dita ket mauma kami pay ngarud mapanen. Malinis kitdi tattan a ta kwa, ngem no adda kasta manen nga ipayulog ti munisipyo ibaga da manen nga apan kami agkita ti takki.”* (I think there’s none yet... If we say cr, there’s already a communal CR in the coastal area. The children are really stubborn. I think the fund is not lacking madam, what’s lacking is the parents’ guidance. We’ve done enough in reminding them. It’s actually clean now, but if the municipality orders us to check the area’s cleanliness again we’ll work right away.) In relation to this, cultural factors have a great impact on effective parental involvement. Therefore, understanding the culture of a specific group of people to be studied should be seriously taken into consideration for better understanding of parental involvement in a particular context (Bartolome at al., 2017).

This implies that the culture and the behavior of the residents are a major challenge whereas the barangay

officials need to consider in regard of implementing the ZOD ordinance. The undignified behavior of the residents should be maintained to the degree that they respect the authority. Like what Participant 2 stated, *“Mayat met, magun-od dayta nu agkaykaysa. Syempre nu respetwen da kami, respeto kadakwada ket mapan iti kasayaatan. Kanayun mi met nga ibagbaga kenya, ngem kasjay latta. Ngem kunak manen, addan tu latta ti panag-adapt da. Ta uray nu ibagam ket isu latta ta adda ta pai lang nga behaviour da. Uray nu kasatnu nga bagaan, ken ahta multa nga daguita, isu latta. Ngem bassit metten han nga kasla idi. Itultuloy latta iti panagbagbaga kadakwa da, haan nga sardengan nga pagsaritaan nga linisan da. Adda met ti saggabassit nga sumursurot nu bagaam. Haan metten nga nakaru, saggaysa kasjay.”* (That’s good; we can attain it if we have unity. Definitely, if we respect each other, we’ll obtain wellness. We always remind them, but nothing has changed. But like I’ve said, one day they will adapt. Even if we tell them, they still do it because their behavior hasn’t changed yet. However, we tell them, and even if there are fines, it makes no difference. Nonetheless, there’s only a few now, unlike before. We consistently tell them to clean it. There are few who comply when told. It’s not that bad now; there are only a few.) This indicates that the people within the community do not have a reason to disrespect and violate the law for they are a citizen of that locality that binds them to the laws and ordinances the National and Local Government promulgate and implement.

**Population.** This is the second subtheme, which refers to the phenomenon wherein the uncontrollable population contributes to the difficulties in implementation. The rapid population increase is a challenge the participants have faced because a massive population is more difficult to handle regarding discipline, equal distribution of services and benefits, and crowd control. While Participant 2 does not consider population as a challenge in implementing the policy as the participant stated a brief answer saying, *“Haan met, haan nga problema iti kaadu da ta isu met ti ugali da datan.”* (Not really, their population is not the problem because it is already their practice.) Likewise with Participant 3 who also stated a brief answer saying *“Hindi naman naging problema ang bilang ng mga tao.”* (The population was not a problem.)

Participant 4 claims the opposite stating that *“Maysa diyay met, mabalintay met ngai-consider diyay dakkel nga populasyon, kasla kuma diyay maysa ng sitio nga deeply populated. Diyay space nga Dapat nga pagdianan iti CR ket pagdianan pai lang ititao. Diay ngamin space ken over population iti maysa nga problema ket diay ngamin space kasla, han mi met nga basta basta nga diay naited nga area para iti familia ket alaen tapnu agkaroon da kumaiti CR. Haan mobasta bastaserreken nu awaniti’issueiti association. Kayat ko, agkaroon kuma ti communal toilet.”* (The population is the primary reason, for example, a district is deeply populated. The space that is dedicated for a portable CR will be used to build the residents home. The space and overpopulation of a district is the primary reason and it is not easy to take away that area from a certain family for the cooperative handling them will issue a letter addressing it. I want to have a communal toilet but they are protected by an association.)

The issue of the world population growth is not new as Baus (2017) stated, rather it has been around for a number of decades and has its roots in prehistoric times as well as the present. Recognized scientists have long ago coined the term "overpopulation" and forecast dire implications should the globe continue along its current trajectory. Global inequality leads to a shortage of food, water, and employment prospects as well as poor education. Despite the support of international organizations and agencies, the unequal distribution of natural resources, financial resources, and individual rights leads to poverty and characterizes global culture as greedy.

Affirming this statement, Brown (2020) indicated that decreasing water supplies, ecosystems necessary for food production, and other human systems are harmed by pollution in rivers and lakes. In regions like landlocked countries that depend on freshwater, there are frequent shortages of water. As the population grows, freshwater supplies will be progressively diminished, leading to an issue known as water scarcity.

The population is growing, but so is the need for water. A household of four in the United States would use 243 gallons of water every day in 1990, which amounted to 400 billion gallons of water per day nationwide. There are three main uses of water by humans. The majority of views are based on the claim that the primary cause of insufficiency is domestic usage, which includes eating, drinking, cooking, washing, and maintaining hygiene in relation with the study.

The participants have encountered difficulties as a result of the fast growth of population since huge crowds are more challenging to manage in terms of restricting crowds, equitable distribution of services and benefits,

and strictness. Despite the fact that some of the participants denied the population as one of the challenges encountered, several participants stated otherwise as provided above. The large number of population made it difficult for the implementers to effectively manage and govern prospect violators.

**Community Misconduct.** This third subtheme under cultural and social norms refers to the residents' practices that are deviant from the ZOD ordinance. Community misconduct is a factor in the resident's culture and nature. It also includes the habit of not complying with the rules, stubbornness, lack of discipline, and being uncooperative with the residents. In accordance with this, Participant 1 stresses *"Wala pa yang ZOD nayan, yang ordinansa na yan, marami na, talagang maaapakan ng paa."* (Maybe the fund is just enough, but the problem is with the people. Even when the ZOD does not yet exist, there's already a lot of waste that can be stepped on.) Before the existence of the ZOD ordinance, it was revealed that it was evident in the residents' practice. This states that the community normalizes these practices, which are rampant in the community.

In addition, Participant 1 revealed that, *"Minsan met, adu met latta jay pasaway. Haan mo nga talaga nga maiwasan."* (Sometimes, there are still people who are stubborn, and we cannot avoid it.) According to Bond et al. (2004), community integration is conceptualized as the outward, concrete embodiment of the healing experience, making empirical assessment easier. It encompasses a collection of constructs for which objective proxy measures (as well as accompanying subjective measures) have been verified to a far larger extent than the broader notion of recovery is currently true.

This correlates with Participant 3 that stated *"Iti maysa, natangken unay iti ulo da. Kaslahan da nga masursurwan nu di ketdi kuma, nu jay 'mas masarap yung bawal.' Maysa pai nga reason, awan CR da siguro, ken wen coastal da ngamin, mabalin da lang nga tumakki ijay. Damagdamag met laeng, awan iti natiliw pai, ibaga da kuma iti barangay tapnu ammo iti aramiden iti konseho."* (Primarily, people are hard-headed. They disregard what the officials tell them like what is not good they still do. Another reason, maybe they do not have their own CR, and they are living in the coastal areas, it is typical for them to defecate anywhere. It is known but no one has been spotted yet, those who have seen someone should tell it to the officials so they can be stopped).

Lastly, Participant 9 also added that *"Siguro awan pay met ti...No cr kunam ket inti baybay ket adda pay ti kumon nga cr idiy, adda latta met siguro dagidiay ubing talaga met nga welwel dagidiay ubing. Ay haan met siguro madam nga kurang ti pondo, kurangen ayenti kwa ti tatang idiyen no kasatno panangdisiplina ti anak da. Haan kami met agkurkuran ta mapan kami pay dita ket mauma kami pay ngarud mapanen. Malinis kitdi tattan a ta kwa, ngem no adda kasta manen nga ipayulog ti munisipyo ibaga da manen nga apan kami agkita ti takki."* (I think there's none yet... If we say cr, there's already a communal cr in the coastal area. The children are really stubborn. I think the fund is not lacking madam, what's lacking is the parents' guidance. We've done enough in reminding them. It's actually clean now, but if municipal orders us to check the area's cleanliness again we'll work right away.)

Social Disorganization Theory is a sociological viewpoint that aims to explain the presence of crime and deviance in specific neighborhoods or communities by examining the collapse of social institutions and systems. The idea was established primarily by academics at the University of Chicago School of which emphasizes the role of social institutions such as family, education, and local government and the larger social structure in preserving communal order. The indicator of community misconduct is in line with the theory, in which the role of the community is affiliated with the actions such as practices, culture, and nature of the residents that influence the residents' behavior.

Participant 2 stated that *"Talaga nga haan tay nga makwaisuda ta isu ti kwan dan ngamin, nature da didiay, nakasanayan dan. Adda da pai lang ngamin diay tawen nga kwa diay dati, isunga han da nga maikkat datan nga ugali da."* (We really cannot stop them already because it is innate to them; they are used to it. They are still in the old year, so they can't change that behavior.) This emphasizes the additional account of Participant 2 which stated *"...ta adda met iti tao data."* (...but instead, it is up to the people.)

To further strengthen the finding, Jimenez-Albornoz (2021) clearly provided that the behaviour of the community is a huge factor as anthropological studies examine cultural practices and rituals, looking into their historical development and societal significance. It also explores habit formation and cognitive factors



contributing to the persistence of specific behaviors.

In addition, Participant 6 states that “Ah, kinasadot laeng dadiayyen. Wen. Tapos handa nga maki-operate iti kwa, daguituy nga progprograma iti ta syempre pagsayaatan met diyay.” (Ah, it’s only their laziness. Yes. Then they do not cooperate with, these programs but because it’s for their betterment.) Moreover Participant 8 said “Nasukir ngamin ti tao, no ibagbagam ti pagsayaatan da ket nasukir da haan da sursuroten ti patpatakaran.” (The residents are really stubborn, if you tell them what’s good for them, they will not listen, they don’t comply with the rules.) Furthermore, Participant 9 stated “Isu ngarud sulpeng da ngarud dagita dabduma haan da makaaw-awat. Ayna Apo Dios ko dakami pay mismo, man-mano met tattan madam ta kwa ngamin adda ngay ti kwa ti munisipyo idi nga apan kami agkita kasdiay. At least nagurgurwan mi metten ti dabduma nga agkasdiay dan, dagidiay lang puro met ubbingen dagitay sulpeng nga ubbing ngamin.” (I agree, others are really stubborn and they can’t understand. Oh my God! Even us personally, there’s only a few now because the municipal ordered us to supervise. At least we already taught some of them, our only concern now are the kids who are being stubborn).

Lastly the 10th Participant stated “Adda met ngamin dagidiay bumarangay mi ngay nga natangkem ti ulo na. Kasla ngay nangeg da wala lang kasdiay, adda met ti kasdiay diba? ngem allokuyen mi met a isuda nga sumurot da ti ordinansa. Ngamin maminduwwa kami nga naevaluate dayta tatta, idi first nga kwa mi nabagsak kami ta last kuma payen nga pasyaren mi nga balay adda nakita da ngay nga diaper, diyay lang ti nakakwaan mi, second evaluation mi nakapasa kami metten. Siyempre rigat mi met ata apan kami met agbalay-balay bagaan isuda no innia aramiden da. Mga barangay officials, mga barangay Captains, tanod, BHW, BNS lahat kami [naevaluate], tsaka kung minsan pumupunta yung RSI namin dito sinasamahan kami.” (We still have villagers, who are very stubborn. They heard about it but they don’t care, but we encourage them to follow the ordinance. We are being evaluated twice, we failed at first because at the last house we visited, they saw a diaper, only because of that we failed. In our second evaluation we finally passed. It is really our struggle to go house to house visit just to inform them what they should do. The Barangay officials, barangay captain, tanods, BHWs, BNS all of us [evaluate], also sometimes our RSI come here to accompany us.)

This indicates that the residents' behavior is significant to their choices as community residents. In the Anomie Theory by Emile Durkheim, a breakdown in social norms and values can lead to a state of anomie, in which individuals feel estranged from society's expectations. This divergence may contribute to increased levels of misconduct. The theory supports the indicator of the significance of behavior on the residents' choices. In contrast, the residents' choices are valuable in their compliance with implementing the ZOD ordinance.

This implies that if people behave negatively, there is also a negative effect supporting the fact that the residents have two choices, whether to abide or to act, in contrast to the ZOD Ordinance. The diagram on the following page presents a comprehensive summary of the general themes and sub-themes generated.

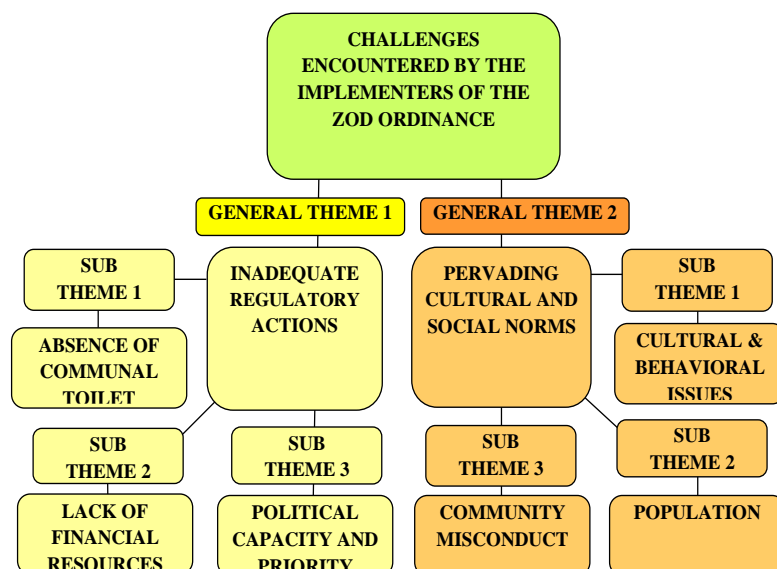


Figure 2. Thematic Map of Challenges

## CONCLUSION

Based on the findings, the following conclusions were formulated:

1. The respondents showed limited awareness of implementing the Zero Open Defecation ordinance in their localities. The said level of awareness indicated that the respondents are accustomed to only a few of its provisions, such as its objectives. In contrast, the rest of its provisions remain somewhat unfamiliar to them.
2. The respondents believe that the implementers of the ZOD ordinance were imposing the ordinance on a minimal level, as perceived by the households. While some of the policy's provisions were deemed moderately implemented, the respondents perceive that the rest were only implemented to a modest degree. The level of implementation reflects the level of awareness of the respondents.
3. The local authorities encountered two significant challenges: factors under and beyond their control in implementing the ordinance, namely, inadequate regulatory actions and the pervasive cultural and social norms due to various facets, such as insufficient funds and infrastructures that promote sanitation and having to confront different issues within their localities that often overwhelm the governing capabilities of the authorities. Lastly, deterrence in achieving a certified ZOD status was the residents' embedded cultural and behavioral practices.
4. An information education campaign material centered on elevating the consciousness and understanding regarding the significance of sanitation policies can enhance the community engagement of the residents within the selected barangays, namely Brgy. Pugo, Brgy. Santiago, and Brgy. Sta. Monica.

## RECOMMENDATIONS:

Based on the findings and conclusions of the study, the following recommendations are hereby suggested:

1. The information dissemination initiatives of the implementing bodies should be enhanced and sustained. Aside from publicizing its effectiveness in general assemblies and house-to-house activities, there shall be educational programs, other community engagements, visual aids or printed materials in public places, and digital and online platforms to reach a broader scope of audience. The LGU can also practice becoming more active in social media through consistent postings of official announcements and other informational posts.
2. The households shall also be informed of the harmful and life-threatening effects of practicing open defecation. Instead of merely focusing on notifying the residents of the ordinance, they shall be first well-informed about the rationale behind its formulation, value, and importance to instill health consciousness among them. This can be achieved through organizing public events; aside from general assemblies, they could consider conducting awareness walks, interactive seminars, and workshops, celebrating World Toilet Day through contests that present the residents' creativity, and other programs.
3. The implementing bodies shall coordinate and establish partnerships with private or non-governmental agencies and other key figures in their community that can provide financial assistance or in-kind contributions. The local authorities may conduct sponsorship events, build solid networking and relationships with various organizations, and create a well-detailed proposal outlining the barangay's objectives, necessities, and sense of emergency.
4. The implementing bodies shall exercise a stricter implementation to encourage the citizens to comply with the ordinance. A stronger political will and leadership mechanism to enforce the policy can help prioritize the success of this policy, overcome the occurrence of resisting attitudes, and foster a healthy culture of collaboration among the residents. Implementing this ordinance is not only to restrain the residents from open defecation that leads to health and environmental issues but also to inform them and educate them on the adverse effects open defecation may bring to the community.

5. The Barangay Officials should conduct formal research or surveys regarding the solution they have mentioned or what they plan to apply. The research or survey that will be conducted will better understand the cause and effect on the residents, the Barangay, and the community's well-being. One method includes permitting and allowing researchers to conduct studies in their respective localities. They can also perform a survey of their own, initiated by their health and sanitation committees and the barangay health workers.
6. The construction of a communal toilet should also be pursued by dedicating a specific area accessible to the residents. The communal toilet shall be maintained through voluntary action of the residents to clean the communal toilet along with a payment of not more than Php. 10.00 is allocated to buy the necessary materials to maintain the communal toilet. This can be accomplished through legislation that will be approved and enacted by the LGU.
7. The local authorities should also consider devising a new mechanism or approach to implementing the ordinance. Improving and establishing a good relationship and connection among the implementing authorities can enhance their solidarity. It will result in collective plans to actualize a certified zero open defecation status.

## REFERENCES:

1. Adepoju, P. (2019). Why Nigeria's campaign to end open defecation is failing. Devex. <https://www.devex.com/news/why-nigeria-s-campaign-to-end-open-defecation-is-failing-95448>
2. Akros Media. (2015). Zambia and Southern Africa Celebrate First Open Defecation Free District. Akros International Development. <https://akros.com/zambia-and-southern-africa-celebrate-first-opendefecationfree-district/>
3. Amato, H.K., et al. (2022). Somewhere to go: assessing the impact of public restroom interventions on reports of open defecation in San Francisco, California from 2014 to 2020. BMC Public Health 22, 1673. <https://doi.org/10.1186/s12889-022-13904-4>
4. Anuradha, R., et al. (2017). Role of Community in Swachh Bharat Mission. Their Knowledge, Attitude and Practices of Sanitary Latrine Usage in Rural Areas, Tamil Nadu. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5427859/>
5. Arvanitidis, P. A. (2017). The Concept and Determinants of Civic Engagement. Institute for Research in Social Communication, Slovak Academy of Sciences. DOI: 10.1515/humaff-2017-0022.
6. Atlan. (2019, July 12). Your guide to qualitative and quantitative data analysis methods. Atlan. <https://humansofdata.atlan.com/2018/09/qualitative-quantitative-data-analysis-methods/>
7. Barangay Ordinance No. 01, s. 2021. (2021, April 24). Office of the Sangguniang Barangay of Santiago, Municipality of Bauang, Province of La Union.
8. Baus, D.(2017). Overpopulation and the Impact on the Environment. CUNY Academic Works. [https://academicworks.cuny.edu/cgi/viewcontent.cgi?article=2929&context=gc\\_etds](https://academicworks.cuny.edu/cgi/viewcontent.cgi?article=2929&context=gc_etds)
9. Boysillo, S. L. MPA, (2017). Governance of the Barangay Chairpersons in the Municipality of Ubay Bohol. International Journal of Business and Management Studies. Vol 9, No 1, 2017.
10. Brown, J. (2020). Controlling overpopulation: is there a solution? a human rights analysis. Fields: journal of Huddersfield student research. University of Huddersfield Press.
11. Buxton, H., et al. (2019). The impact of an operation and management intervention on toilet usability in schools in the Philippines: a cluster randomized controlled trial. BMC Public Health 19, 1680. <https://doi.org/10.1186/s12889-019-7833-7>
12. Cagnet, D. L. (2022). Facilitators to Becoming and Remaining Open Defecation Free in Uganda: Implications for Community-Led Total Sanitation Programming [Doctoral dissertation].
13. Capone, D., et al. (2020). Water and Sanitation in Urban America, 2017–2019. American Public Health Association. <https://ajph.aphapublications.org/doi/epdf/10.2105/AJPH.2020.305833>
14. Centers for Disease Control and Prevention. (2014). Public Health 101 Series: Introduction to Public Health. <https://www.cdc.gov/training/publichealth101/documents/introduction-to-public-health.pdf>
15. CLTS Foundation. (2017, November 21). Philippines aims to become Open Defecation Free by 2022. Community Led Total Sanitation Foundation. <https://www.cltsfoundation.org/philippines-open-defecation-free-2022>

16. Dakar, Accra, & Abuja. (2021, July 15). Young people rally to put an end to open defecation in west and Central Africa. UNICEF. <https://www.unicef.org/wca/press-releases/young-people-rally-put-end-open-defecation-west-and-central-africa>
17. Department of Health: 100% toilet coverage possible before 2022. (2017, November 28). UNICEF Philippines. <https://www.unicef.org/philippines/press-releases/department-health-100-toilet-coverage-possible-2022>
18. Development Goals in Africa: An empirical evidence from Ghana. Environment, Development and Sustainability. <https://doi.org/10.1007/s10668-023-02959-x>
19. Dew, K. (2014). The Cult and Science of Public Health a Sociological Investigation. Public Health Theories and Theorizing Public Health. [https://www.berghahnbooks.com/downloads/intros/DewCult\\_intro.pdf](https://www.berghahnbooks.com/downloads/intros/DewCult_intro.pdf)
20. Dudovskiy, J. (2022, January). Mean, Mode and Median. Business Research Methodology. <https://research-methodology.net/research-methods/quantitative-research/mean-mode-and-median/>
21. Dulebohn, J. H., et al. (2012). A meta-analysis of antecedents and consequences of leader-member exchange: Integrating the past with an eye toward the future. *Journal of Management*, 38(6), 1715–1759. <https://doi.org/10.1177/0149206311415280>
22. United States Environmental Protection Agency. (2025, February 06). Public Participation Guide: Introduction to Public Participation. <https://www.epa.gov/international-cooperation/public-participation-guide-introduction-public-participation>
23. George, T. (2022, March 10). Types of Interviews in Research | Guide & Examples. Scribbr. <https://www.scribbr.com/methodology/interviews-research/>
24. Gold, N. (2018). Review of The Origins of Behavioural Public Policy, by Adam Oliver. London School of Economics and Political Science Research Online. [https://eprints.lse.ac.uk/110180/1/Gold\\_2018\\_Adam\\_Oliver\\_Behavioural\\_Public\\_Policy\\_review\\_pre\\_publication\\_copy.pdf](https://eprints.lse.ac.uk/110180/1/Gold_2018_Adam_Oliver_Behavioural_Public_Policy_review_pre_publication_copy.pdf)
25. Harlianty, R. A., Widyastuti, T., Mukhlis, H., & Susanti, S. (2020). Study on awareness of COVID-19, anxiety and compliance on social distancing in Indonesia during coronavirus disease 2019 (COVID-19) pandemic in Indonesia. *Journal of Community Psychology*.
26. Ignacio, J.J., et al. (2018). Perceptions and Attitudes Toward Eco-Toilet Systems in Rural Areas: A Case Study in the Philippines. *Sustainability*, 10, 521. <https://doi.org/10.3390/su10020521>
27. Jones, E. C. & Murphy, A. D., (2009). The Political Economy of Hazards and Disaster. Society for Economic Anthropology.
28. Kebritchi, M. (2020). Introduction to Quantitative Analysis. Center for Educational and Instructional Technology Research. [https://research.phoenix.edu/sites/default/files/filescontent/intro\\_quantitative\\_data\\_analysis-april2020.pdf](https://research.phoenix.edu/sites/default/files/filescontent/intro_quantitative_data_analysis-april2020.pdf)
29. LaMorte, W. (2022, November 3). The health belief model. Boston University School of Public Health. <https://sphweb.bumc.bu.edu/otlt/mphmodules/sb/behavioralchangetheories/behavioralchangetheories2.html>
30. Latip, N. K., et al. (2021). Factors Affecting the Achievement of Zero Open Defecation Program of the 16 Barangays of Municipality of Kabuntalan. *International Journal of Social Science and Humanities Research*, 9(1).
31. Laurence, M. (2016, April 28). Biopolitics and State Regulation of Human Life. Oxford Bibliographies. <https://www.oxfordbibliographies.com/display/document/obo-9780199756223/obo-9780199756223-0170.xml>
32. Lightsey, L. (2017, August 17). Biopolitics and Globalization. Institute of the Humanities & Global Cultures. <https://globalsouthstudies.as.virginia.edu/key-concepts/biopolitics-and-globalization>
33. London School of Hygiene & Tropical Medicine (2011). Hygiene and Sanitation in Rural Regions of Mindanao, the Philippines. [http://library.lshtm.ac.uk/MSc\\_CID/2010-11/100544.pdf](http://library.lshtm.ac.uk/MSc_CID/2010-11/100544.pdf)
34. Lukama, B. (2022). Assessing Knowledge, Attitudes and Practices towards Community-led Total Sanitation (clts) in Bunga Community of Twapia Ndola. *Journal of Health Education Research & Development*. <https://www.hilarispublisher.com/open-access/assessing-knowledge-attitudes-and-practices-towards-communityled-total-sanitation-clts-in-bunga-community-of-twapia-ndola-90290.html>



35. Maguire, M., & Delahunt, B. (2017). Doing a Thematic Analysis: A Practical, Step-by-Step Guide for Learning and Teaching Scholars. All Ireland Journal of Teaching and Learning in Higher Education.
36. Manikandan, S. (2011). Measures of central tendency: Median and mode. PubMed Central (PMC). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3157145/>
37. Marengo, J. (2019). How is Latin America in terms of Sanitation? Inter-American Development Bank. <https://www.iadb.org/en/improvinglives/how-latin-america-terms-sanitation>
38. Mensah, J. (2020). Theory-anchored conceptual framework for managing environmental
39. Ministry of Local Government and Rural Development. (2001). Environmental Sanitation Policy. <https://faolex.fao.org/docs/pdf/gha170015.pdf>
40. Molina, R. A., & Catan, I. (2021). Solid Waste Management Awareness and Practices among Senior High School Students in a State College in Zamboanga City, Philippines. *Aquademia*, 5(1). <https://doi.org/10.21601/aquademia/9579>
41. Municipal Health Office of Bauang. (2022). Quarterly FHSIS Summary Report.
42. National Nutrition Council Region I. (2021). Weight For Age, Height for Age, Weight for Length/Height Status.
43. Oliver, A. (2019, July 28). Towards a New Political Economy of Behavioral Public Policy. *Public Administration Review*, 79(6), 917-924. Wiley Online Library. <https://doi.org/10.1111/puar.13093>
44. Ordinario, C. U. (2023, March 26). Open defecation still bugs, but declining, in rural areas. *Business Mirror*. <https://businessmirror.com.ph/2023/03/27/open-defecation-still-bugs-but-declining-in-rural-areas/manila-conference/>
45. Petsko, E. (2019, April 5). Where does all the human poop in Antarctica end up? *Mental Floss*. <https://www.mentalfloss.com/article/575512/what-happens-to-human-waste-in-antarctica>
46. Philippine Statistics Authority. (2023). Majority of Families Have Access to Improved Source of Drinking Water (Results from the 2022 Annual Poverty Indicators Survey). <https://psa.gov.ph/press-releases/id/176566>. <https://psa.gov.ph/press-releases/id/176566>
47. Pooter, Z. (2015, February 2). Engaging with the local government to end open defecation in Cambodia. World Bank. <https://www.worldbank.org/en/news/feature/2015/02/02/engaging-with-the-local-government-to-end-open-defecation-in-cambodia>
48. Presidential Decree No. 856, s. 1975. (1975, December 23). Official Gazette of the Republic of the Philippines. <https://www.officialgazette.gov.ph/1975/12/23/presidential-decree-no-856-s-1975/>
49. Robinson, A. & Gnilo, M., (2016). Beyond ODF: a phased approach to rural sanitation development. <https://core.ac.uk/download/pdf/286047218.pdf#page=173>
50. Saleem, M., et al. (2019). Health and social impacts of open defecation on women: A systematic review. <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-019-6423-z>
51. San Jose, R., et al. (2019). Pet owners' awareness on RA 9482 (Anti-Rabies Act of 2007) in Magalang, Pampanga Philippines. *National Library of Medicine*. <https://doi.org/10.1016/j.heliyon.2019.e01759>
52. sanitation in developing countries: Literature review. *Social Sciences & Humanities Open*, 2(1). <https://doi.org/10.1016/j.ssaho.2020.100028>.
53. Spears, D., et al. (2013). Open Defecation and Childhood Stunting in India: An Ecological Analysis of New Data from 112 Districts. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0073784>
54. Sumedh, M. K. (2018). Community-Based Approaches to Tackle Open Defecation in Rural India: Theory, Evidence and Policies. Observer Research Foundation. [https://www.orfonline.org/wpcontent/uploads/2018/12/ORF\\_OccasionalPaper\\_178\\_OpenDefecation\\_FinalForUpload.pdf](https://www.orfonline.org/wpcontent/uploads/2018/12/ORF_OccasionalPaper_178_OpenDefecation_FinalForUpload.pdf)
55. Tabuga, A. D. (2013). Policy Awareness and Participation by Persons with Disability in the Philippines. Philippine Institute for Development Studies. <https://pidswebs.pids.gov.ph/CDN/PUBLICATIONS/pidsdps1311.pdf>
56. Tolentino, J. C., et al. (2023). The Motivations for Political Participation among Elected Sangguniang Kabataan Officials of the First, Class Municipalities in La Union. [Bachelor's Thesis, Don Mariano Marcos Memorial State University- Mid La Union Campus].
57. UNICEF Ph. (2020, November 19). Sanitation targets are off-track: DOH, WHO and UNICEF ask local governments to invest in sanitation. Philippine Institute for Development Studies.

- <https://www.pids.gov.ph/details/sanitation-targets-are-off-track-doh-who-and-unicef-ask-local-governments-to-invest-in-sanitation>
58. United Nations Economic Commission for Europe. (2019). More efforts are still needed to realize the basic human rights to clean water and sanitation in the Pan-European region. UNECE. <https://unece.org/press/more-efforts-are-still-needed-realize-basic-human-rights-clean-water-and-sanitation-pan>
59. United Nations International Children's Emergency Fund. (2017). Ending open defecation. UNICEF. <https://www.unicef.org/wca/ending-open-defecation>
60. United Nations International Children's Emergency Fund. (2021). Five-fold increase in municipal targets needed to end open defecation by 2025. UNICEF Philippines. <https://www.unicef.org/philippines/press-releases/five-fold-increase-municipal-targets-needed-end-open-defecation-2025>
61. Universal Health Care Act 2018. Philippine Laws and Jurisprudence Databank. (2018). [https://lawphil.net/statutes/repacts/ra2019/ra\\_11223\\_2019.html](https://lawphil.net/statutes/repacts/ra2019/ra_11223_2019.html)
62. Villegas, F. (2023). Thematic Analysis: What it is and How to Do It. Question Pro. <https://www.questionpro.com/blog/thematic-analysis/>
63. Vyas, S., & Spears, D. (2018). Sanitation and Religion in South Asia: What Accounts for Differences across Countries? PubMed. <https://pubmed.ncbi.nlm.nih.gov/30363925/>
64. WHO/UNICEF Joint Monitoring Program. (2016). Inequalities in sanitation and drinking water in Latin America and the Caribbean. WashData. <https://washdata.org/report/lac-snapshot-wash-2016-en>
65. World Health Organization, & United Nations Economic Commission for Europe. (2019). The Human Rights to Water and Sanitation in Practice. United Nations Publication.
66. World Health Organization. (2020). State of the World's Sanitation Summary report. <https://apps.who.int/iris/bitstream/handle/10665/336687/9789240015470-eng.pdf>
- 67.