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COMPLIANCE LEVEL AND CHALLENGES OF LUKAG (LUNA KAAYUSAN ACTION GROUP) MEMBERS IN IMPLEMENTATION OF HEALTH AND SANITATION ORDINANCES IN LUNA, APAYAO

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Abstract

This study assessed compliance with four public health and sanitation ordinances (Nos. 453, 449, 475, and 436) in Luna, Apayao. High overall compliance was observed, particularly regarding health certificates, permits, waste segregation, smoking regulations, and meat pricing. However, challenges remain, notably in informal markets, waste transport, and stray animal control. The study's participants were predominantly mature, male, married, college-educated individuals with short job tenures. Key barriers to full compliance included insufficient public awareness, weak enforcement, inadequate waste management infrastructure, and uncontrolled stray animals. Recommendations include strengthened enforcement by the MLGU, improved waste management and a municipal dog pound, intensified awareness campaigns by the LUKAG, and active community participation. Further research should explore innovative enforcement strategies and the long-term effectiveness of these ordinances. Addressing these issues collaboratively will create a healthier environment for Luna, Apayao.

Keywords: Compliance, Public Health, Sanitation Ordinances, Waste Management, Stray Animal Control, Local Governance, Policy Implementation.

Introduction

In the remote municipality of Luna, Apayao, a dedicated group battles overwhelming odds to protect public health. The Luna Kaayusan Action Group (LUKAG) faces a relentless struggle against inadequate resources, limited infrastructure, and community apathy in their fight to enforce vital sanitation ordinances. This

research unveils the stark realities of their mission, revealing the critical barriers to successful public health initiatives in a challenging environment.

This research investigates the challenges faced by the Luna Kaayusan Action Group (LUKAG) in enforcing public health and sanitation ordinances in Luna, Apayao, Philippines. LUKAG's work is crucial for community well-being, aligning with global Sustainable Development Goals (SDGs) and Philippine national policies promoting health and sanitation. However, LUKAG encounters significant obstacles, mirroring issues faced by similar groups worldwide.

Key challenges include limited funding, inadequate infrastructure, and insufficient community engagement and compliance. The COVID-19 pandemic further exacerbated these problems. Existing legislation, such as Presidential Decree No. 856 (Code on Sanitation) and Republic Act No. 7160 (Local Government Code), aims to support local initiatives, but implementation gaps persist. A significant portion of the Filipino population lacks access to safely managed sanitation, highlighting the urgency of addressing these issues.

The study aims to comprehensively analyze LUKAG's challenges, offering practical solutions and recommendations to improve ordinance enforcement. Understanding these difficulties is vital for policymakers and community leaders to foster healthier, more sustainable communities in the Philippines, particularly given the country's history of mixed success in policy implementation and high poverty rates. The research will contribute to more effective strategies for achieving SDG targets related to health and sanitation in Luna and potentially beyond.

Statement of the Problem

Generally, this study determined the problems encountered by the Luna Kaayusan Action Group (LUKAG) in implementing public health and sanitation ordinances.

Specifically, it sought to answer the following questions:

1. *What is the profile of the participants in terms of:*
 - 1.1. *LUKAG members*
 - 1.1.1 *age;*
 - 1.1.2 *sex;*
 - 1.1.3 *civil status;*
 - 1.1.4 *length of service;*
 - 1.1.5 *educational attainment;*
 - 1.1.6 *number of relevant training attended; and*
 - 1.1.7 *status of appointment*
 - 1.2. *clients*
 - 1.2.1. *age;*
 - 1.2.2. *sex;*
 - 1.2.3. *civil status; and*
 - 1.2.4. *educational attainment;*
2. *What is the extent of compliance of the LUKAG Members in Implementing Public Health and Sanitation Ordinances?*
 - 2.1. *Municipal Ordinance #453, s 2022 (Enacting the 2022 Code on Health and Sanitation of the Municipality of Luna, Apayao)*
 - 2.2. *Municipal Ordinance # 449 s. 2022 (An ordinance providing for a revised Ecological Solid Waste Management of 2022 Prescribing Fees for Solid Waste Management Services, Declaring certain acts prohibited and providing penalties, appropriating funds therefor, and other purposes)*

2.3. *Municipal Ordinance No. 475 s .2023 (Regulating smoking in public places, including Public conveyances in the Municipality of Luna, Apayao, providing penalties therefor in accordance with Republic Act 9211 or the Tobacco Regulation Act of 2003 and other legal issuances)*

2.4. *Municipal Ordinance # 436 , s 2021(Fixing the prices of pork, beef and carabeef in the Municipality of Luna, Apayao and providing penalties for violation thereof)*

3. *What are the challenges of LUKAG members in implementing Public Health and Sanitation Ordinances?*

4. *What public awareness materials can be proposed?*

Methodology

This study employed a descriptive-exploratory research design to investigate public health and sanitation ordinance compliance and enforcement challenges in Luna, Apayao, Philippines. The descriptive component profiled participants (age, gender, training, etc.) while the exploratory component examined obstacles to policy implementation.

Locale and Participants: The study was conducted in Luna, Apayao, a municipality with a 2020 population of 21,297, predominantly young (10-59 years) and male (107 males per 100 females). The population is largely rural (86.2%), with Ilocanos forming the majority ethnic group. The sample comprised 18 participants: six members of the Luna Kaayusan Action Group (LUKAG), responsible for enforcing ordinances, selected via total enumeration, and twelve LUKAG clients selected through purposive sampling (six male, six female).

Data Collection and Analysis: Data were collected using a two-part questionnaire. The first part gathered participant profiles, while the second used a three-point Likert scale to assess LUKAG members' compliance with ordinances. Semi-structured interviews explored enforcement challenges. Quantitative data (from the Likert scale) were analyzed using SPSS, while qualitative data (from interviews and open-ended questionnaire responses) underwent thematic analysis. Frequencies and percentages described participant profiles, and Pearson's r correlation coefficient analyzed the relationship between profile variables and compliance levels. A three-point scale interpreted compliance levels (3.0 = highly compliant; 2.0-2.99 = slightly compliant; 1.0-1.99 = compliant). The researcher ensured data privacy and confidentiality throughout the process.

Results and Discussion

This chapter presents the data gathered, analyzed, and interpreted in answers to the problems raised. The data were based on the responses given by the respondents through the distribution of the survey questionnaire. Furthermore, it presents the study's findings from which conclusions and recommendations were made.

Frequency and percentage distribution of the profile of the participants

Table 1.1 shows the frequency and percentage distribution of the profile of the participants (LUKAG MEMBERS) in terms of age, sex, civil status, length of service, educational attainment, number of relevant trainings attended, and status of appointment.

Table 1.1 Frequency and percentage distribution of the profile of the participants (LUKAG MEMBERS).

Profile		Frequency	Percentage
Age	26 – 30	1	16.67
	31 – 35	1	16.67
	41 – 45	2	33.33
	Above 45	2	33.33
	Mean – 40.5		
Sex	Male	6	100
	Female	0	0
Civil Status	Single	1	16.67
	Married	5	83.33
Length of Service	1 – 5	6	100
	Mean – 2.17		
Educational Attainment	College Undergraduate	1	16.67
	College Graduate	5	83.33
Number of Relevant Trainings attended	1 – 3	2	33.33
	4 – 6	3	50.0
	7 – 9	1	16.67
	Mean – 5		
Status of Appointment	Job Order	6	100

This study examined a workforce with a mean age of 40.5 years, with a significant portion (33.33%) aged 41-45 or older, suggesting a mature and experienced group (Martinez et al., 2021). However, the sample lacked gender diversity, being entirely male (100%), a contrast to many public sectors with higher female representation, particularly in administrative roles. The majority (83.33%) were married, implying a focus on job security and stability due to family responsibilities (Kessler et al., 2019).

Despite a mean tenure of only 2.17 years (range 1-5 years), indicating relative inexperience (Bieda et al., 2020), the workforce demonstrated high educational attainment (83.33% college graduates), suggesting strong problem-solving skills. A moderate level of professional development was evident, with half the participants attending 4-6 relevant training sessions annually (mean=5), aligning with research showing improved job performance and satisfaction with this level of training (Bautista & Tan, 2021). However, all participants held job-order positions, suggesting temporary or contract employment, potentially impacting job security and career advancement opportunities (Martinez et al., 2021), and potentially affecting long-term engagement and satisfaction.

Table 1.2 shows the frequency and percentage distribution of the profile of the participants (CLIENTS) in terms of age, sex, civil status, and educational attainment.

Table 1.2 (CLIENTS)

Profile		Frequency	Percentage
Age	25 & below	2	16.67

	26-30	2	16.67
	31-35	1	8.33
	36-40	2	16.67
	41-45	2	16.67
	above 45	3	25.00
	Mean - 36.75		
Sex	Male	6	50.00
	Female	6	50.00
Civil Status	single	2	16.67
	married	8	66.67
	Widowed	2	16.67
	Separated		0.00
Educational Attainment	Elementary Undergraduate	1	8.33
	Elementary Graduate	1	8.33
	High School Undergraduate	0	0.00
	High School Graduate	1	8.33
	College Undergraduate	3	25.00
	College Graduate	6	50.00

The study participants, averaging 36.75 years old, demonstrated diverse demographics. A quarter were over 45, suggesting experience and maturity (Fernandez et al., 2022), while the remaining age groups were relatively evenly distributed. Gender representation was balanced (50% male, 50% female), promoting collaborative decision-making (Ramos, 2020). Most participants were married (66.67%), potentially indicating increased commitment to community health (Santos and Mercado, 2022). A significant majority (75%) possessed at least some college education, facilitating policy understanding and community engagement (Garcia et al., 2021).

Table 2. LUKAG Members extent of compliance in implementing public health and sanitation ordinances

LUKAG Members Response

Municipal Ordinance # 453, s 2022 (Enacting the 2022 Code on Health and Sanitation of the Municipality of Luna, Apayao)	Mean	Descriptive Interpretation
No person shall be employed in any establishments without securing first health certificate issued by the Municipal Health Officer	2.83	Highly Compliant
No business establishments can operate without Sanitary Permit.	2.83	Highly Compliant
No person or entity shall operate a food establishment for public patronage	2.83	Highly Compliant

without securing a sanitary permit from the RHU of Luna.		
Solid waste shall be separated from liquid wastes for all business establishments within the locality	2.50	Highly Compliant
Ambulant food vendors shall possess health certificates and shall sell only bottled food drinks and packed biscuits and confectionery.	2.83	Highly Compliant
Public Market Vendors and Sidewalk vendors sell goods in designated areas only.	1.83	Compliant
No Public Market Vendors and Sidewalk Vendors are authorized in making of extensions of stalls beyond leased areas and/or utilizing pathways for the display of goods	2.50	Highly Compliant
Short weighing and false measuring including tampering of standard weights and measures are strictly prohibited	2.50	Highly Compliant
Non-Operation of videoke, video karera machines, and online gambling machines.	2.50	Highly Compliant
Gambling or drinking alcoholic beverages within the public market are strictly prohibited.	2.50	Highly Compliant
Not selling of adulterated food within the public market or at sidewalk vending spaces.	2.67	Highly Compliant
Public swimming pool, bathing facility or natural body of water developed and used for profit shall be operated for public use with a sanitary permit issued by the Rural Health Unit of Luna.	2.0	Compliant
Not littering, vandalism, and improper use of restrooms and other areas within the public market	2.83	Highly Compliant
Pet owners are required to have their dogs registered and immunized against rabies	2.17	Compliant
Pet owners put leash on their dogs while they are brought outside the house.	2.17	Compliant
Composite Mean	2.49	Highly Compliant

Municipal Ordinance #453, s 2022 (Enacting the 2022 Code on Health and Sanitation of the Municipality of Luna, Apayao)

Municipal Ordinance #453 shows high compliance (2.83) in requiring health certificates for employment and sanitary permits for businesses and food outlets, indicating strong adherence to health and sanitation protocols in the formal sector. Ambulant vendors selling packaged food and drinks also showed high compliance (2.83). However, compliance was lowest (1.83) for public market

and sidewalk vendors, highlighting enforcement challenges in informal sectors. This aligns with Morris et al. (2020), who linked stricter enforcement of health certificates and permits to improved public health outcomes, and Smith & Adams (2021), who noted the difficulty of regulating informal sectors due to limited resources. Addressing this disparity requires improved resource allocation and enforcement strategies targeting informal markets.

CLIENTS RESPONSE

Municipal Ordinance # 453, s 2022 (Enacting the 2022 Code on Health and Sanitation of the Municipality of Luna, Apayao)	Mean	Descriptive Interpretation
No person shall be employed in any establishments without securing first health certificate issued first health certificate issued by the Municipal Health Officer	2.42	Highly Compliant
No business establishments can operate without Sanitary Permit.	2.75	Highly Compliant
No person or entity shall operate a food establishment for public patronage without securing a sanitary permit from the RHU of Luna.	2.50	Highly Compliant
Solid waste shall be separated from liquid wastes for all business establishments within the locality	2.25	Compliant
Ambulant food vendors shall possess health certificates and shall sell only bottled food drinks and packed biscuits and confectionery.	2.08	Compliant
Public Market Vendors and Sidewalk vendors sell goods in designated areas only.	2.00	Compliant
No Public Market Vendors and Sidewalk Vendors are authorized in making of extensions of stalls beyond leased areas and/or utilizing pathways for the display of goods	2.25	Compliant
Short weighing and false measuring including tampering of standard weights and measures are strictly prohibited	2.67	Highly Compliant
Non-Operation of videoke, video karera machines, and online gambling machines.	2.33	Compliant
Gambling or drinking alcoholic beverages within the public market are strictly prohibited.	2.33	Compliant
Not selling of adulterated food within the public market or at sidewalk vending spaces.	2.08	Compliant
Public Public swimming pool, bathing facility or natural body of water developed and used for profit shall be	2.33	Compliant

operated for public use with a sanitary permit issued by the Rural Health Unit of Luna.		
Not littering, vandalism, and improper use of restrooms and other areas within the public market	2.00	Compliant
Pet owners are required to have their dogs registered and immunized against rabies	2.00	Compliant
Pet owners put leash on their dogs while they are brought outside the house.	2.00	Compliant
Composite Mean	2.27	Compliant

Municipal Ordinance #453, s 2022 (Enacting the 2022 Code on Health and Sanitation of the Municipality of Luna, Apayao)

Municipal Ordinance #453, focusing on health and sanitation in Luna, Apayao, showed an overall compliance mean of 2.27. However, compliance varied significantly across specific provisions. The highest compliance (rated "Highly Compliant") was observed for regulations requiring sanitary permits for businesses ($M = 2.75$) and prohibiting short weighing/false measuring ($M = 2.67$). This high compliance likely stems from regular inspections, clear penalties, and the impact on business reputation.

Conversely, the lowest compliance ($M = 2.00$, rated "Compliant") was found in the provision requiring vendors to sell only in designated areas. This lower compliance may result from enforcement challenges, spatial constraints, or vendors prioritizing customer visibility. This behavior-oriented rule necessitates continuous monitoring and community engagement.

The findings suggest that regulations with clear documentation and legal consequences achieve higher compliance. Reyes et al. (2023) support this, showing higher compliance in rural markets with formal licensing. Dela Cruz and Santiago (2022) highlight the importance of regular inspections. Conversely, Lopez (2022) indicates that even strict rules may fail without community education and engagement. Therefore, improving compliance requires targeted interventions, including enhanced enforcement, awareness campaigns, and community dialogue, particularly for behavior-oriented regulations.

LUKAG MEMBERS RESPONSE

Municipal Ordinance # 449 s. 2022 (An ordinance providing for a revised Ecological Solid Waste Management of 2022 Prescribing Fees for Solid Waste Management Services , Declaring certain acts prohibited and providing penalties, appropriating funds therefor, and other purposes)		
Not Littering, throwing or dumping of garbage on the streets, rivers, seas sidewalks, esteros, canals, parks, playgrounds and other public or private places other than the designated disposal facility.	2.83	Highly Compliant
Proper segregation of solid waste at source.	2.83	Highly Compliant

Following the schedule of bringing of waste at source.	2.67	Highly Compliant
Authorized/proper dumping of solid waste at the disposal facility.	2.83	Highly Compliant
Transport of solid waste using nets or covering materials on the collection facility.	2.50	Highly Compliant
Allocation of separate receptacles for residual and biodegradable wastes.	2.67	Highly Compliant
No to open burning of wastes.	2.83	Highly Compliant
No to vandalism, destruction or defacement of SWM facilities/receptacles	2.83	Highly Compliant
Composite Mean	2.75	Highly Compliant

Municipal Ordinance #449, s 2022 (Revised Ecological Solid Waste Management of 2022)

Municipal Ordinance #449 demonstrates high community compliance (2.83) with prohibitions against littering and open burning, and with proper source segregation of solid waste. These practices are crucial for environmental sustainability, aligning with Lander & Reed (2019). However, compliance with waste transport regulations using nets or covers is lower (2.50), though still "highly compliant". This reflects challenges in waste transportation, particularly in areas with inadequate infrastructure, as noted by Sullivan et al. (2020). While overall compliance is high, infrastructure improvements are needed to fully optimize waste management practices.

CLIENTS RESPONSE

Municipal Ordinance # 449 s. 2022 (An ordinance providing for a revised Ecological Solid Waste Management of 2022 Prescribing Fees for Solid Waste Management Services , Declaring certain acts prohibited and providing penalties, appropriating funds therefor, and other purposes)		
Not Littering, throwing or dumping of garbage on the streets, rivers, seas sidewalks, esteros, canals, parks, playgrounds and other public or private places other than the designated disposal facility.	2.33	Compliant
Proper segregation of solid waste at source.	2.50	Highly Compliant
Following the schedule of bringing of waste at source.	2.42	Highly Compliant
Authorized/proper dumping of solid waste at the disposal facility.	2.42	Highly Compliant
Transport of solid waste using nets or covering materials on the collection facility.	2.25	Compliant
Allocation of separate receptacles for residual and biodegradable wastes.	2.08	Compliant

No to open burning of wastes.	2.00	Compliant
No to vandalism, destruction or defacement of SWM facilities/receptacles	2.17	Compliant
Composite Mean	2.27	Compliant

Municipal Ordinance #449, s 2022 (Revised Ecological Solid Waste Management of 2022)

Compliance with Luna, Apayao's revised Ecological Solid Waste Management Ordinance #449 (2022) shows high adherence to source waste segregation and scheduled disposal (means 2.50 and 2.42, respectively), categorized as "Highly Compliant". However, compliance with the ban on open burning is lower (mean 2.00), classified as "Compliant," indicating a need for improvement. The overall compliance mean of 2.27 suggests generally compliant behavior, but further education and enforcement are needed. Janssen et al. (2023) support the high compliance with segregation and scheduling, emphasizing community participation and monitoring. Martinez and Lopez (2022) highlight the effectiveness of enforcement and education campaigns in reducing open burning. Conversely, Johnson et al. (2021) found persistent issues with open burning and improper disposal in rural areas, despite high segregation compliance, indicating that behavioral change requires sustained effort and infrastructure improvements.

LUKAG MEMBERS RESPONSE

Municipal Ordinance No. 475 s .2023 (Regulating smoking in public places, including public conveyances in the Municipality of Luna, Apayao, providing penalties therefor in accordance with Republic Act 9211 or the Tobacco Regulation Act of 2003 and other legal issuances)		
Not smoking within enclosed public places and public conveyances, whether stationary or in motion, except in designated smoking areas.	3.0	Highly Compliant
Do not allow, abet, or tolerate smoking within enclosed public places and public conveyances outside designated smoking areas	2.67	Highly Compliant
Do not sell, distribute or purchase tobacco products to and from minors.	2.83	Highly Compliant
No to Ordering, instructing or compelling a minor to use, light up, buy, sell distribute, deliver, advertise or promote tobacco products.	2.83	Highly Compliant
Non-selling or distributing tobacco products in schools, public playgrounds, youth hostels and recreational facilities for minors, including those frequented by minors, or within 100 meters from any point of the perimeter of these places	2.83	Highly Compliant
No to Littering of cigarette butts and wrappers.	2.83	Highly Compliant
Do not participate in promotion, distribution, selling, or giving of cigarettes/tobacco products within one	2.67	Highly Compliant

hundred meters from any point of perimeter of learning institutions such as schools and colleges, public playgrounds, or other facilities frequented particularly by minors.		
Composite Mean	2.81	Highly Compliant

Municipal Ordinance No. 475, s 2023 (Regulating Smoking in Public Places)

Municipal Ordinance No. 475 demonstrates high compliance with regulations restricting smoking in enclosed public spaces and the sale of tobacco products to minors. However, enforcement of prohibitions against tobacco promotion near schools lags slightly. This aligns with research indicating that while public smoking bans effectively reduce tobacco-related health risks, challenges remain in regulating sales and promotions near schools due to weaker enforcement. Strengthening regulations and enforcement in these sensitive areas is crucial

CLIENTS RESPONSE

Municipal Ordinance No. 475 s .2023 (Regulating smoking in public places, including public conveyances in the Municipality of Luna, Apayao, providing penalties therefor in accordance with Republic Act 9211 or the Tobacco Regulation Act of 2003 and other legal issuances)		
Not smoking within enclosed public places and public conveyances, whether stationary or in motion, except in designated smoking areas.	2.17	Compliant
Do not allow, abet, or tolerate smoking within enclosed public places and public conveyances outside designated smoking areas	2.17	Compliant
Do not sell, distribute or purchase tobacco products to and from minors.	2.17	Compliant
No to Ordering, instructing or compelling a minor to use, light up, buy, sell distribute, deliver, advertise or promote tobacco products.	2.25	Compliant
Non-selling or distributing tobacco products in schools, public playgrounds, youth hostels and recreational facilities for minors, including those frequented by minors, or within 100 meters from any point of the perimeter of these places	2.25	Compliant
No to Littering of cigarette butts and wrappers.	2.17	Compliant
Do not participate in promotion, distribution, selling, or giving of cigarettes/tobacco products within one hundred meters from any point of perimeter of learning institutions such as schools and colleges, public playgrounds, or other facilities frequented particularly by minors.	2.25	Compliant

Composite Mean	2.20	Compliant
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Municipal Ordinance No. 475 s .2023 (Regulating smoking in public places, including public conveyances in the Municipality of Luna, Apayao, providing penalties therefor in accordance with Republic Act 9211 or the Tobacco Regulation Act of 2003 and other legal issuances)

Municipal Ordinance No. 475, implemented in Luna, Apayao, shows generally high compliance (composite mean 2.20) with smoking regulations. Strongest compliance (mean 2.25) exists in provisions protecting minors from tobacco exposure, including sales restrictions near schools and prohibitions against compelling minors to use tobacco. However, lower compliance (mean 2.17) was observed regarding smoking bans in enclosed spaces and public conveyances, and cigarette butt littering. This suggests a need for increased awareness and stricter enforcement in these areas.

Research supports the ordinance's effectiveness. Dela Cruz et al. (2022) demonstrated that public smoking bans reduce smoking rates, emphasizing the importance of awareness campaigns and penalties. Garcia and Tan (2023) similarly found that restricting tobacco sales near schools reduces youth consumption. Conversely, Rodriguez et al. (2021) highlighted enforcement challenges in rural areas, particularly concerning littering, indicating a need for targeted interventions in less-monitored locations to achieve comprehensive compliance.

LUKAG MEMBERS

Municipal Ordinance # 436 , s 2021(Fixing the prices of pork, beef and carabeef in the Municipality of Luna, Apayao and providing penalties for violation thereof)		
Following the fix price of pork, beef and carabeef in the Municipality of Luna.	3.0	Highly Compliant
Municipal Ordinance # 345 (An ordinance enacting the environment code of the Municipality of Luna, Apayao)	Mean	Descriptive Value
Not littering in tourism areas and any public areas.	3.0	Highly Compliant
Not picking of flowers, cutting of trees, vandalistic and other detrimental acts.	3.0	Highly Compliant
The slash-and=burn system of farming is strictly implemented	3.0	Highly Compliant
Dumping of solid wastes and garbage at canals and drainage systems	3.0	Highly Compliant
Unauthorized Cutting, gathering or Removing of Tress for Firewood and Charcoal Making and for Other Purposes within the Territorial Jurisdiction of the Municipality.	3.0	Highly Compliant
Composite Mean	3.0	Highly Compliant
Over-all Mean	2.81	Highly Compliant

Municipal Ordinance #436, s 2021 (Fixing the Prices of Pork, Beef, and Carabeef)

Municipal Ordinance #436, focusing solely on fixed pricing for pork, beef, and carabeef, achieved complete adherence (3.0 compliance score). This suggests effective enforcement and contributes to economic stability by preventing price manipulation.

This high compliance aligns with Hernandez & Thomas (2020), who demonstrated that fixed pricing stabilizes food prices and protects consumers in small municipalities. The inherent fairness and consistency of price controls foster high adherence. The overall compliance rate of 2.81 ("Highly Compliant") across all municipal ordinances indicates strong community engagement in health, sanitation, waste management, smoking regulations, and environmental protection.

This high compliance supports findings from several studies. Hernandez & Thomas (2020) linked fixed pricing to stable food prices and consumer protection. Watkins et al. (2020) showed that smoking bans reduce tobacco-related health risks, while Lander & Reed (2019) found that effective waste segregation improves environmental outcomes. Despite the high overall compliance, challenges persist in enforcing regulations within informal sectors like sidewalk vendors and tobacco sales near schools (Smith & Adams, 2021; Bieda & Santos, 2020). Enhanced monitoring strategies are needed to address these areas.

CLIENTS

Municipal Ordinance # 436 , s 2021(Fixing the prices of pork, beef and carabeef in the Municipality of Luna, Apayao and providing penalties for violation thereof)		
Following the fix price of pork, beef and carabeef in the Municipality of Luna.	2.50	Highly Compliant
Municipal Ordinance # 345 (An ordinance enacting the environment code of the Municipality of Luna, Apayao)	Mean	Descriptive Value
Not littering in tourism areas and any public areas.	2.33	Compliant
Not picking of flowers, cutting of trees, vandalistic and other detrimental acts.	2.17	Compliant
The slash-and=burn system of farming is strictly implemented	2.33	Compliant
Dumping of solid wastes and garbage at canals and drainage systems	2.08	Compliant
Unauthorized Cutting, gathering or Removing of Tress for Firewood and Charcoal Making and for Other Purposes within the Territorial Jurisdiction of the Municipality.	2.25	Compliant
Composite Mean	2.23	Compliant
Over-all Mean	2.29	Highly Compliant

Municipal Ordinance # 436 , s 2021(Fixing the prices of pork, beef and carabeef in the Municipality of Luna, Apayao and providing penalties for violation thereof)

Municipal Ordinance #436 (price controls on meat) shows high compliance (mean 2.50, "Highly Compliant"), suggesting effectiveness in stabilizing prices and benefiting both consumers and vendors. This aligns with Santos et al. (2023), who found that transparent price controls improve economic conditions and public trust.

Ordinance #345 (environmental code) reveals varied compliance. Prohibitions against littering and slash-and-burn farming show near "Highly Compliant" status (mean 2.33), highlighting success in protecting tourism and mitigating harmful practices. This supports Martinez et al. (2022), who linked community education, fines, and

enforcement to higher compliance in similar ordinances. However, waste disposal compliance is lower (mean 2.08, "Compliant"), indicating a need for improved awareness and enforcement, consistent with Lopez et al. (2021)'s findings on enforcement challenges in rural areas. The overall mean compliance for Ordinance #345 (2.23, "Compliant") suggests room for improvement, particularly in waste management. The combined mean compliance (2.29) across both ordinances demonstrates generally positive adherence to municipal regulations.

The challenges of the participants toward implementing Public Health and Sanitation Ordinances

Theme	Subtheme	Verbatim	Convergence/Divergence (LUKAG vs Client)
Lack of Awareness, Understanding, and Weak Reinforcement	Public Awareness and Understanding	<i>P1C1 "Many residents are unaware of the specific provisions, penalties, and importance of public health and sanitation ordinances."</i>	Convergence: Both LUKAG and Clients agree that there is lack of awareness among residents, which affects the effective enforcement of ordinances.
	Understanding Barriers	<i>P1C2 "Certain groups, such as elderly individuals and those with low literacy levels, struggle to understand the ordinances, and the lack of consistent educational campaigns leads to continuous non-compliance"</i>	Convergence: Both LUKAG and Clients acknowledge that specific groups, like the elderly and low-literacy individuals, face difficulties in understanding the ordinances, which hampers compliance.
	Enforcement and Monitoring	<i>P2 C2 "The enforcement efforts are mostly reactive rather than proactive, and the absence of regular monitoring and reinforcement mechanisms prevents long-term adherence"</i>	Divergence: LUKAG may perceive enforcement as inadequate and reactive, while Clients might not fully recognize the lack of proactive monitoring or feel the negative impact of it.

Several studies support the findings of this research regarding the issues of awareness, understanding, and enforcement of sanitation ordinances.

For instance, Garcia, Santos, and Mercado (2022) emphasized that public awareness campaigns play a crucial role in improving compliance with sanitation policies. Their study highlighted the value of targeted educational strategies that consider the literacy levels and age demographics of the population. This aligns with the observed challenges in Luna, Apayao, where elderly individuals and low-literacy groups struggle to understand ordinance provisions. Similarly, Blanco and Cruz (2023) found that these vulnerable groups benefit significantly from visual learning tools, community discussions, and simplified materials, reinforcing the need for continuous education as a method to improve ordinance adherence. These findings validate the expressed concerns of both LUKAG and

the community members that awareness and understanding gaps contribute to non-compliance.

On the other hand, a contrasting perspective is offered by Dizon, Reyes, and Bautista (2021), who argued that reactive enforcement, though often criticized, can still yield effective results in certain urban contexts. Their study suggested that immediate, reactive responses to violations may still influence behavior change, especially when public health threats are imminent. This stands in contrast to the perception of LUKAG members in this study, who viewed the lack of proactive enforcement as a major obstacle to long-term compliance. The divergence in enforcement effectiveness reveals that contextual differences such as urban vs. rural settings may influence the outcomes of enforcement strategies and the perception of their success.

Theme	Subtheme	Verbatim	Convergence/Divergence (LUKAG vs Client)
Public Health and Environmental Risks Due to Poor	Inadequate Waste Disposal Infrastructure	<i>P3C2 "Many residents lack access to appropriate waste disposal facilities, leading to</i>	Convergence: Both LUKAG and clients acknowledge that the lack of proper waste disposal facilities contributes to

<p>Waste Management and Uncontrolled Animals</p>	<p>Stray Animal Management and Public Safety</p> <p>Lack of Awareness on Pet Ownership</p> <p>Absence of Animal Waste Management</p> <p>Health Hazards from Animal Waste</p> <p>Lack of Facilities for Stray Animal Control</p> <p>Spread of Animal-Borne Diseases</p>	<p><i>indiscriminate dumping and burning of trash.”</i></p> <p><i>P4C1 “Stray dogs roaming the streets pose significant health and safety risks, as some members of the community have experienced dog bites due to the lack of proper containment.”</i></p> <p><i>P4C3 “The lack of awareness regarding responsible pet ownership further exacerbates this issue.”</i></p> <p><i>P5C1 “There is no designated storage or disposal system for animal waste, particularly dog feces.”</i></p> <p><i>P5C3 “The presence of animal waste in streets and residential areas poses health risks, especially for children.”</i></p> <p><i>P6C1 “The absence of a municipal dog pound hinders the control and management of stray animals.”</i></p> <p><i>P6C3 “The spread of diseases such as rabies makes it difficult to enforce regulations on pet ownership.”</i></p>	<p>poor environmental hygiene and public health risks.</p> <p>Convergence: LUKAG and clients agree that stray dogs are a pressing concern, presenting risks like dog bites and disease transmission.</p> <p>Convergence: Both parties recognize that insufficient knowledge about pet responsibilities worsens animal control problems.</p> <p>Convergence: LUKAG and clients similarly identify the need for a structured waste management plan for animal waste to improve hygiene.</p> <p>Convergence: Shared concern over the public health threats caused by unmanaged animal feces, particularly to vulnerable populations.</p> <p>Convergence: Both LUKAG and clients agree on the need for facilities like a dog pound to manage the stray animal population effectively.</p>
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Recent literature affirms the concerns raised by both LUKAG and clients regarding poor waste disposal infrastructure and the impact of unmanaged animals on public health. For instance, Cabahug et al. (2023) emphasized that inadequate waste management systems in rural municipalities in the Philippines often lead to indiscriminate dumping and burning, contributing to air pollution and disease outbreaks, which aligns with the respondents' observations about environmental risks. Similarly, a study by Villanueva et al. (2022) highlighted the health hazards associated with stray animals in urban settings, particularly the increased risk of rabies and injuries from dog bites, reinforcing the urgency for proper animal control and responsible pet ownership education.

On the other hand, contrasting evidence from Ismail et al. (2021) in a study conducted in Malaysia suggests that with strong community engagement and routine educational campaigns, even low-income communities demonstrated high compliance with environmental health ordinances, including pet management and waste segregation. This suggests that the gaps observed in Luna, Apayao, may not solely be due to infrastructural deficiencies but could also stem from inconsistent program implementation and lack of sustained awareness efforts.

Conclusions

Luna, Apayao's public health ordinance compliance study reveals a mixed picture. While mature, educated participants generally comply, adherence is stronger with directly enforceable ordinances (business permits, price controls) than behavior-based ones (smoking, vendor regulations). This highlights the need for clearer rules, stronger enforcement, and targeted public awareness campaigns, especially for vulnerable groups. Significant systemic challenges exist, including inadequate waste management infrastructure and uncontrolled stray animals, hindering full compliance. To improve public health outcomes, Luna, Apayao must strengthen enforcement, invest in infrastructure, and prioritize public education initiatives fostering a more responsible citizenry.

Recommendations

To improve public health and sanitation in Luna, Apayao, several key recommendations emerged from the study. The Municipal Local Government Unit (MLGU) should strengthen enforcement through regular monitoring, allocate resources for public awareness campaigns, and establish improved waste management and animal control infrastructure, including a municipal dog pound. The Luna, Apayao, Kabataan (LUKAG) should enhance community engagement, conduct educational campaigns on sanitation and responsible pet ownership, and collaborate with authorities for prompt non-compliance resolution. Residents must actively participate in educational programs, follow waste disposal regulations, and ensure responsible pet ownership. Future research should explore long-term ordinance effectiveness, assess the impact of improved enforcement, and investigate innovative compliance strategies, including behavioral interventions and technology, while expanding research to include comparative analyses from other municipalities. The researcher should continue advocating for policy improvements and disseminating findings to stakeholders.

The author hereby states that there is no conflict of interest and this article is her original work.

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