

Awareness and Insights of Sangguniang Kabataan Chairpersons in Laoag City for Enhancing Sustainable Agriculture, Ensuring Food Security, and Promoting Climate Action

Jezreel Larry R. Caunca 

Northwestern University

jezreellarry.caunca@nwu.edu.ph

Article Details:

Received: 19 July 2026

Revised: 30 August 2026

Accepted: 4 September 2026

Published: 26 September 2026

Corresponding Email:

jezreellarry.caunca@nwu.edu.ph

Recommended Citation:

Caunca, J. L. R. (2026). Awareness and Insights of Sangguniang Kabataan Chairpersons in Laoag City for Enhancing Sustainable Agriculture, Ensuring Food Security, and Promoting Climate Action. *The International Review of Multidisciplinary Research*. 1 (11), 53-62.
<https://doi.org/10.67167/vertex.409>

Index Terms:

Sangguniang Kabataan, sustainable agriculture, food security, climate action, anticipatory governance, Futures Triangle, youth leadership, climate resilience, Laoag City

Abstract. Sustainable agriculture, food security, and climate action remain pressing developmental priorities in the Philippines, and local youth leaders occupy an increasingly prominent role in advancing these agendas at the barangay level. This study examines the awareness, insights, and futures-oriented perspectives of Sangguniang Kabataan (SK) Chairpersons in Laoag City in relation to sustainable agriculture, food security, and climate action. Anchored in Anticipatory Governance and Systems Theory, and operationalized through the Futures Triangle framework, the research explores how youth leaders navigate the interaction of future aspirations, present conditions, and historical constraints in shaping local sustainability initiatives. A descriptive quantitative research design with an embedded open-ended qualitative component was employed, involving seventy-eight (78) SK Chairpersons representing 78 of Laoag City's 80 barangays. Data were gathered through a structured questionnaire, administered via Google Forms, measuring awareness, self-reported personal engagement, and open-ended reflections on future aspirations, present enablers, and historical constraints. Findings revealed a very high overall level of awareness ($M = 4.61$) and self-reported personal engagement ($M = 4.68$) among respondents, with climate action registering the highest composite scores, although this should be interpreted alongside the low implementation rates observed for knowledge-based programs, which may reflect social-desirability tendencies in self-report data. Notable gaps emerged in the implementation of climate change education workshops and food security initiatives, both of which lagged considerably behind environmentally oriented activities such as tree planting and community gardening. Applying the Futures Triangle to respondents' open-ended reflections further revealed persistent tension between youth leaders' aspirations for resilient, self-sufficient communities and structural weights such as limited resources, traditional practices, and recurring climate disruptions. The study underscores youth leadership as a critical driver of sustainability transitions and highlights the urgent need for capacity-building, knowledge-based programming, and stronger institutional support to translate high awareness into sustained, systemic action.

Introduction

Sustainable agriculture, food security, and climate action have emerged as among the most urgent development priorities of the twenty-first century, particularly in agrarian, climate-vulnerable nations such as the Philippines. Climate change is projected to intensify existing pressures on food systems, with rising

temperatures, shifting rainfall patterns, and more frequent extreme weather events threatening crop yields and household food availability (Gregory et al., 2005; Weldearegay & Tedla, 2018). These pressures are especially acute in the Philippines, where the archipelago's recurring exposure to typhoons and other climate hazards routinely disrupts agricultural production and local livelihoods. In response, national and local governments have increasingly sought to embed climate resilience and food security considerations into governance structures at every level, including the barangay, the country's smallest political and administrative unit.

Within this governance architecture, the Sangguniang Kabataan (SK) occupies a distinctive position as the primary institutional mechanism for youth participation in Philippine local government. Reconstituted through national reform intended to professionalize youth governance and expand its policy influence beyond ceremonial functions (Flores et al., 2021), the SK has become a focal point for examining how young leaders translate civic mandates into community action. Studies of SK performance nationwide highlight both the potential and the limitations of this reform: while SK chairpersons increasingly engage in community programming, questions remain about the depth of their policy knowledge, the sustainability of their initiatives, and their capacity to translate mandates into long-term institutional impact (Cruz & Tapia, 2021). Concurrently, a growing body of scholarship on youth and agriculture warns of a widening generational divide, wherein young people are drawn away from farming and rural livelihoods by limited land access, low returns, and the perceived low status of agricultural work (Manalo et al., 2019). This tension is particularly relevant for SK Chairpersons, many of whom are expected to champion agricultural and environmental initiatives despite these same structural disincentives.

At the same time, evidence increasingly suggests that Filipino youth are not disengaged from environmental and climate concerns; rather, their participation is often shaped by the interplay of personal conviction, institutional opportunity, and lived community experience (Estilong & Lansang, 2025; Palomares et al., 2021). International research similarly documents that civic and environmental engagement among youth develops cumulatively over time, shaped by early exposure to participatory structures (Amnå, 2012), and that young people today report considerable anxiety regarding climate change and the perceived adequacy of government responses to it (Hickman et al., 2021). Taken together, these findings suggest that youth leaders may possess considerable awareness and motivation even where formal programming, resources, and institutional support remain limited, underscoring the need to examine not only what youth leaders know, but how they reconcile that knowledge with the constraints of their local context.

To make sense of how youth leaders reconcile these countervailing forces, this study draws on Anticipatory Governance and Systems Theory as complementary theoretical lenses, operationalized through the Futures Triangle framework. Anticipatory Governance foregrounds the capacity of institutions and leaders to prepare for future conditions of uncertainty rather than merely reacting to present crises (Fuerth, 2009; Quay, 2010), while Systems Theory situates individual awareness and behavior within the broader web of institutional, economic, and cultural forces that constrain or enable action. The Futures Triangle operationalizes these perspectives by mapping the interaction of the “pulls” of future aspirations, the “pushes” of present drivers, and the “weights” of historical and structural constraints (Inayatullah, 2008), offering a structured means of understanding how SK Chairpersons' awareness and insights are shaped by, and in turn shape, the sustainability trajectory of their communities.

Despite the SK's prominent local role and the growing international literature on youth climate engagement, empirical research specifically examining SK Chairpersons' awareness of sustainable agriculture, food security, and climate action, particularly through a futures-oriented lens, remains scarce in the Philippine context. Most existing studies on Philippine youth governance focus broadly on political participation or institutional reform (Cruz & Tapia, 2021; Flores et al., 2021) rather than on sector-specific sustainability competencies. This gap is particularly evident in Ilocos Norte, where, despite the province's heavy reliance on agriculture and its recurring exposure to climate hazards, no known study has systematically assessed how SK Chairpersons perceive, prioritize, and act upon these interconnected concerns. This study addresses this gap by assessing the awareness and insights of SK Chairpersons in Laoag City and examining how their perspectives, understood through the Futures Triangle, shape and are shaped by ongoing sustainability initiatives at the barangay level.

Specifically, this study sought to answer the following research questions: (1) What is the extent of implementation of barangay-level sustainability initiatives related to agriculture, food security, and climate action, and how does this pattern

relate to the “pushes of the present” that enable or constrain SK-led programming? (2) What is the level of awareness of SK Chairpersons regarding sustainable agriculture, food security, and climate action, and how does this awareness inform the “pulls of the future” that shape their sustainability aspirations? (3) What is the level of personal engagement of SK Chairpersons in sustainability-related behaviors, and what structural or historical factors, corresponding to the “weights of the past,” appear to constrain the translation of this engagement into systemic, knowledge-based outcomes?

Methodology

Research Design

This study employed a descriptive quantitative research design with an embedded open-ended qualitative component, deemed appropriate for systematically measuring the awareness and engagement of a defined population while also capturing respondents’ own accounts of their future aspirations, present enablers, and historical constraints. The quantitative component allowed the study to quantify the extent and pattern of awareness and engagement across the full population of SK Chairpersons, while the qualitative, open-ended items allowed the Futures Triangle framework to be applied directly to respondents’ own words rather than inferred solely from closed-item results.

Respondents and Sampling

The study involved seventy-eight (78) SK Chairpersons, representing 78 of Laoag City’s 80 barangays at the time of data collection. Purposive sampling was employed, as the study intended to include one sitting SK Chairperson from each barangay; total enumeration of the eligible population was therefore achieved rather than probability sampling. Barangay 16 (San Jacinto) and Barangay 32-B (La Paz West) were excluded from the study because both barangays did not have an elected SK Chairperson in office at the time of data collection, the positions having been vacated. The final sample of 78 therefore reflects the complete population of actively serving SK Chairpersons in Laoag City during the study period.

Respondents were predominantly aged 23 to 25 (see Table 1), with the largest single group aged 24 (35.90%). It is worth noting that Republic Act No. 10742 (the Sangguniang Kabataan Reform Act of 2015) sets candidate eligibility at 18 to 24 years of age at the time of election; the age distribution observed here reflects the current age of sitting, mid-term incumbents rather than the statutory eligibility bracket itself. Gender representation was exactly balanced, with 39 male (50.00%) and 39 female (50.00%) respondents.

Research Instrument

Data were collected using a structured survey questionnaire, distributed digitally via Google Forms. To strengthen the reliability and validity of the instrument, items were adapted from established, previously validated tools: the Climate Change Awareness and Concern Scale (Leiserowitz et al., 2011), the Climate Change Behavior Scale (Stevenson & Peterson, 2016), the Connectedness to Nature Scale (Mayer & Frantz, 2004), and selected indicators from Plan International’s (2021) global youth climate engagement survey. Because these instruments had already undergone validation and testing in prior research settings, the adapted items were treated as reliable for the present study without a separate pilot-test reliability run. Internal-consistency reliability (e.g., Cronbach’s alpha) specific to this adapted item set and this particular sample was not independently computed; this is acknowledged as a methodological limitation below, and future administrations of this instrument with similar populations should report a sample-specific reliability coefficient.

The instrument was organized into sections addressing (a) respondents’ demographic profile, (b) barangay-level sustainability initiatives, (c) awareness of sustainable agriculture, food security, and climate action, (d) personal engagement and behavior in relation to these domains, and (e) an open-ended, futures-oriented component in which respondents were invited to describe their aspirations, the present conditions supporting or constraining their work, and the historical or structural factors shaping their communities’ trajectory — corresponding respectively to the “pulls,” “pushes,” and “weights” of Inayatullah’s (2008) Futures Triangle. Awareness and engagement items were measured on a five-point Likert scale, with mean scores interpreted against the following ranges: 4.21–5.00 = Very Aware / Always; 3.41–4.20 = Aware / Very Often; 2.61–3.40 = Moderately Aware / Sometimes; 1.81–2.60 = Slightly Aware / Rarely; and 1.00–1.80 = Not Aware / Never.

Data Collection Procedure

Ethical clearance was secured prior to data collection from the Northwestern University Research Ethics Committee (NWU-REC Code 2025-059; approval issued August 1, 2025). Formal request letters were then submitted to the Sangguniang Kabataan Federation of Laoag City and the Department of the Interior and Local Government (DILG) to secure permission and support for the participation of SK Chairpersons. The questionnaire, including an informed consent section explaining the purpose of the study, respondents' role, and their rights, was then distributed via Google Forms; respondents provided electronic consent before proceeding. Participation was voluntary, and respondents were informed of their right to withdraw at any stage without penalty. Completed responses were organized, collated, and tabulated in preparation for statistical analysis.

Data Analysis

Quantitative responses were analyzed using IBM SPSS Statistics. Descriptive statistical tools — frequency counts, percentages, and weighted means — were used to characterize the demographic profile, barangay-level initiatives, and Likert-scale responses of the SK Chairpersons, interpreted using the standardized ranges described above. Because this study achieved total enumeration of the eligible population of sitting SK Chairpersons (78 of 80 barangays) rather than a probability sample drawn to generalize to a larger population, inferential statistical tests, p-values, and confidence intervals were not required and are not reported; descriptive statistics were deemed sufficient and appropriate for characterizing this fully enumerated population.

It should also be noted that two sections of the instrument — the Food Security awareness items and the personal engagement items — each administered the same set of statements twice within the questionnaire. This repetition functioned as an informal internal-consistency check: because respondents were not shown their earlier answers when reaching the repeated block, close agreement between the two administrations of the same items provides supporting descriptive evidence of stable, consistent responding. This comparison is not a substitute for a formal reliability coefficient such as Cronbach's alpha (see Limitations), but the results are reported alongside the relevant tables below.

The open-ended responses to the futures-oriented items were analyzed thematically and organized under the three Futures Triangle categories — pulls of the future, pushes of the present, and weights of the past — consistent with Inayatullah's (2008) framework. Table 5 presents these themes together with illustrative, verbatim responses from participants, grounding the Futures Triangle synthesis directly in respondents' own qualitative accounts rather than in researcher inference from the Likert-scale items alone.

Ethical Considerations

This study was reviewed and granted ethical clearance by the Northwestern University Research Ethics Committee (NWU-REC Code: 2025-059; approval letter dated August 1, 2025, signed by the REC Chair). The principles of non-maleficence, beneficence, and respect for persons were observed throughout the research process. Participation was entirely voluntary, and informed consent was obtained electronically from all respondents prior to data collection; respondents were informed of their right to decline or withdraw at any stage without penalty. Confidentiality and anonymity were maintained through the use of non-identifying codes rather than personal identifiers, and data were used solely for academic and research purposes. The researcher declares that there were no personal, financial, or institutional conflicts of interest that could have influenced the conduct or findings of this study.

Results and Discussion

The demographic distribution, presented in Table 1, indicates that respondents were predominantly aged 23 to 25, with the largest group aged 24 (35.90%), followed by those aged 25 (28.21%) and 23 (24.36%). Gender representation was exactly balanced, with 39 male (50.00%) and 39 female (50.00%) respondents, suggesting inclusive youth leadership across the 78 represented barangays.

Demographic Variable	Category	f	%
Age	21 years old	2	2.56
	22 years old	7	8.97
	23 years old	19	24.36
	24 years old	28	35.90
	25 years old	22	28.21
Sex	Male	39	50.00
	Female	39	50.00

Note. Age percentages are computed against N = 78.

Table 1. Demographic Profile of SK Chairpersons (N = 78)

With respect to barangay-level initiatives, the results demonstrate a high prevalence of environmentally oriented activities, with tree planting and community gardening implemented by 100% of respondents, as summarized in Table 2. This universal adoption suggests a strong alignment of SK-led programs with national and local environmental priorities. Moderate implementation levels were observed in plastic-free initiatives (60.26%), organic farming (46.15%), and water conservation campaigns (43.59%), indicating partial integration of sustainability practices into barangay governance; these moderate rates are broadly consistent with the incremental adoption patterns reported in the broader literature on organic and resource-conserving agriculture (Reganold & Wachter, 2016). However, the significantly lower implementation rates of climate change education workshops (7.69%) and food security initiatives (5.13%) reveal a critical disparity between action-oriented environmental programs and knowledge-based or system-oriented interventions. This imbalance echoes prior findings that climate change education, despite its demonstrated influence on long-term behavior, is frequently underprioritized relative to visible, activity-based programming (Cordero et al., 2020), and suggests that while environmental engagement is high, the depth of institutionalized sustainability practices remains limited.

Barangay-Level Initiative	Percentage of Respondents (%)
Tree planting	100.00
Community gardening	100.00
Plastic-free initiatives	60.26
Organic farming	46.15
Water conservation campaigns	43.59
Climate change education workshops	7.69
Food security initiatives	5.13

Table 2. Barangay-Level Sustainability Initiatives Implemented by SK Chairpersons

The analysis of awareness levels, summarized in Table 3, reveals that SK Chairpersons exhibit a very high degree of self-reported awareness across all sustainability domains, with an overall mean score of 4.61. Climate action recorded the highest composite mean (4.75), followed by Sustainable Agriculture (4.64) and the Food Security domain, which was administered twice within the questionnaire and yielded nearly identical composite means across both administrations (4.53 and 4.52), all interpreted as “Very Aware.” One plausible explanation for the relatively higher awareness in climate action is the Philippines’ exposure to climate-related hazards, which may heighten risk perception among youth leaders; this interpretation is offered as conjecture rather than a tested causal claim, since the descriptive, cross-sectional design does not permit causal attribution. Within the Sustainable Agriculture domain, the lowest-scoring item concerned awareness of specific sustainable farming practices such as composting, crop rotation, and organic methods (M = 4.42), suggesting a gap between conceptual awareness and technical competence, a pattern consistent with prior observations that awareness of climate issues does not automatically translate into behavioral or technical capacity (Halady & Rao, 2010).

Domain	Composite Mean	Interpretation
A. Sustainable Agriculture	4.64	Very Aware
B. Food Security – First Administration	4.53	Very Aware
C. Food Security – Repeated Administration	4.52	Very Aware
D. Climate Action	4.75	Very Aware
Overall Mean	4.61	Very Aware

Note. Scale: 4.21–5.00 = Very Aware; 3.41–4.20 = Aware; 2.61–3.40 = Moderately Aware; 1.81–2.60 = Slightly Aware; 1.00–1.80 = Not Aware. Each domain composite mean is the average of 3 items (12 items total); the overall mean (4.61) is the average of the four-domain composite means. Domains B and C administered the same three Food Security statements twice within the questionnaire (see Data Analysis). The two administrations produced nearly identical composite means (4.53 vs. 4.52, a difference of 0.01), providing descriptive evidence of consistent responding across the repeated items, though this is not a substitute for a formal reliability coefficient.

Table 3. Awareness of SK Chairpersons on Futures-Oriented Sustainability Issues

In terms of personal behavior and engagement, summarized in Table 4, the findings indicate consistently high levels of self-reported participation, with an overall mean of 4.68 across all 10 administered items, corresponding to “Always.” The same five statements were administered twice within the questionnaire; the highest single value recorded was for promoting eco-friendly practices such as avoiding plastic use and organizing community clean-ups, which rose from 4.69 in the first administration to 4.85 in the second (a difference of 0.16, the largest of the five item pairs), reflecting the strong role of SK Chairpersons as community mobilizers. Notably, this self-reported engagement level sits in considerable tension with the low implementation rates observed for climate change education workshops (7.69%) and food security initiatives (5.13%) in Table 2; this divergence may signal social-desirability bias in self-report responses, given that respondents are elected officials rating their own performance, and should be interpreted with appropriate caution rather than as direct evidence of behavior (see Limitations). The lowest-rated indicator across both administrations was self-directed learning about sustainability issues (M = 4.51 and M = 4.49, a difference of only 0.02), suggesting that engagement is somewhat more action-driven than knowledge-driven, though still within the “Always” range.

Indicator	1st Admin.	2nd Admin.	Difference	Interpretation
Promote eco-friendly practices (e.g., no plastic, clean-ups)	4.69	4.85	0.16	Always
Take part in agricultural or food-related projects	4.58	4.62	0.04	Always
Initiate or support climate-related programs	4.72	4.79	0.07	Always
Encourage others in the community to care for the environment	4.82	4.77	0.05	Always
Read or learn about sustainability issues regularly	4.51	4.49	0.02	Always
Overall Mean (all 10 items)	4.68			Always

Note. Scale: 4.21–5.00 = Always; 3.41–4.20 = Very Often; 2.61–3.40 = Sometimes; 1.81–2.60 = Rarely; 1.00–1.80 = Never. The same five engagement statements were administered twice within the questionnaire (see Data Analysis); item-level differences between the first and second administration ranged from 0.02 to 0.16, indicating generally consistent responding across the repeated items. This comparison is descriptive only and does not substitute for a formal reliability coefficient such as Cronbach's alpha (see Limitations).

Table 4. Personal Behavior and Engagement of SK Chairpersons in Sustainability Initiatives

The Futures Triangle synthesis, summarized in Table 5, organizes respondents' own open-ended reflections into a coherent, futures-oriented narrative. The “pulls of the future” were characterized by aspirations for localized food systems, climate-resilient communities, and increased youth participation, indicating a forward-looking orientation among respondents. The “pushes of the present” included existing SK programs, institutional partnerships, and increasing environmental awareness, which function as enabling conditions for sustainability initiatives; respondents specifically named partnerships with the Federated 4-H Club of Laoag City and the City Agriculture Office as valuable sources of training and technical support, echoing findings elsewhere that local advocacy and institutional collaboration are key drivers of municipal sustainability outcomes (Portney & Berry, 2016). Conversely, the “weights of the past” encompassed traditional farming practices, limited access to resources, and recurring climate-related disruptions, which act as structural constraints. The interaction of these forces illustrates a tension between aspirational futures and systemic limitations, highlighting the need for strategic alignment between vision, capacity, and institutional support.

Futures Triangle Element	Themes	Illustrative SK Chairperson Response
Pulls of the Future (Aspirations & Desired Futures)	Local food self-sufficiency; household/community gardening (gulayan sa bakuran); climate-smart agriculture; youth engagement; environmentally resilient barangays	“Our community should become more self-sufficient in food production so families can rely on locally grown vegetables and crops.” “Youth should become more involved in sustainability programs because they will be the ones responsible for protecting the environment in the future.”
Pushes of the Present (Current Drivers & Enablers)	Existing SK-led programs; youth mobilization; partnerships with NGOs, schools, and government; Federated 4-H Club and City Agriculture Office support; increasing climate awareness	“Existing SK programs already promote environmental awareness through tree planting, clean-up drives, and community gardening.” “The Federated 4-H Club and the City Agriculture Office provide support and training related to agricultural activities.”
Weights of the Past (Constraints & Legacy Issues)	Traditional farming practices; outdated tools and methods; limited capital and access to resources; resistance to change; recurrent climate disasters	“Limited capital and resources prevent farmers from improving their farming systems.” “Frequent typhoons and climate-related disasters affect farming activities and food production.”

Note. Themes and illustrative responses were derived from the open-ended, futures-oriented items of the questionnaire, thematically organized under Inayatullah’s (2008) Futures Triangle categories. Responses are reproduced from the study’s own primary data (participant survey responses), not from third-party published sources.

Table 5. Preferred Futures of SK Chairpersons in Laoag City, Organized Using the Futures Triangle

Despite the high levels of self-reported awareness and engagement, and consistent with the “weights of the past” identified through respondents’ own reflections, the study identifies several systemic barriers that may constrain the realization of sustainable outcomes. Economic limitations, particularly limited capital and access to quality inputs and modern agricultural technologies, were reported by respondents as significant impediments. Resistance to change and continued reliance on traditional farming methods also emerged as notable factors, a dynamic consistent with the broader generational divide observed in Filipino agriculture (Manalo et al., 2019). Additionally, recurring typhoons and climate-induced disruptions were reported to reinforce short-term coping mechanisms rather than long-term adaptive strategies, echoing concerns that inadequate food system resilience heightens household vulnerability to climate variability (Weldearegay & Tedla, 2018).

Notwithstanding these constraints, the study highlights several emerging trends and innovations that may serve as enabling factors for sustainability transitions. Multi-sectoral partnerships involving local government units, educational institutions, and non-government organizations were identified as critical mechanisms for enhancing resource mobilization, technical support, and program sustainability. Youth-centered agricultural programs and early education initiatives were also recognized as key strategies for fostering long-term environmental awareness and behavioral change, consistent with evidence that sustained civic engagement is cultivated cumulatively from an early age (Amnå, 2012). These findings suggest that sustainability outcomes are most effectively achieved through collaborative governance, capacity-building, and the integration of grassroots innovations with institutional support systems.

The results indicate that while SK Chairpersons possess strong awareness and engagement in sustainability initiatives, the translation of these attributes into long-term, systemic impact remains contingent upon addressing structural barriers and enhancing institutional capacities. The integration of foresight-based frameworks, such as the Futures Triangle, with practical governance mechanisms may therefore provide a pathway for strengthening youth-led sustainability initiatives and achieving more resilient and self-sufficient communities.

Limitations

Several limitations should be considered when interpreting the findings of this study. First, the study was conducted within a single city (Laoag City) using a cross-sectional, one-time survey; the findings therefore describe this specific cohort of SK Chairpersons at a single point in time and should not be generalized to SK leadership nationally or assumed to hold across other localities without further comparative research. Second, awareness and engagement were measured primarily through self-report, which is susceptible to social-desirability bias — a concern reinforced by the tension observed between very high self-reported engagement ($M = 4.68$, “Always”) and the markedly low implementation rates for climate-education (7.69%) and food-security (5.13%) initiatives; the study did not triangulate self-reports against independent records (e.g., barangay program documentation), and readers should weigh the engagement findings accordingly. Third, while the instrument’s items were adapted from previously validated scales (Leiserowitz et al., 2011; Stevenson & Peterson, 2016; Mayer & Frantz, 2004; Plan International, 2021), a sample-specific internal-consistency reliability coefficient (e.g., Cronbach’s alpha) was not independently computed for this adapted item set. The repeated administration of the Food Security and personal engagement item blocks within the questionnaire did produce closely matching results across both administrations (differences of 0.01–0.16), offering some descriptive reassurance of consistent responding, but this does not substitute for a formal reliability statistic, which future studies should report. Fourth, although the Futures Triangle synthesis was grounded in respondents’ own open-ended survey responses rather than researcher inference alone, this qualitative component remained limited to short structured written responses rather than more in-depth methods such as interviews, focus group discussions, or participatory workshops, which could have yielded richer, more nuanced insights. Future research employing multi-city comparisons, longitudinal designs, or more extensive qualitative methods would help address these limitations and substantiate the patterns identified here.

Conclusion and Implications

The findings of this study indicate that, within this Laoag City cohort, Sangguniang Kabataan (SK) Chairpersons report a high level of awareness and active engagement in sustainability-related initiatives, particularly in climate action, sustainable agriculture, and environmental practices. Despite this strong self-reported participation, the limited implementation of climate education and food security programs highlights a gap between activity-based interventions and more systemic, knowledge-driven approaches to sustainability — a gap that, as discussed above, may be associated with self-report bias and therefore warrants further, corroborating research rather than being treated as a settled causal finding. Drawing on respondents’ own open-ended reflections, the Futures Triangle synthesis suggests that youth leaders in this sample envision communities that are self-sufficient, climate-resilient, and actively engaged in sustainability efforts. These aspirations appear to be supported by existing programs and partnerships, including with the Federated 4-H Club and the City Agriculture Office; however, they remain constrained by structural challenges such as traditional practices, limited resources, and environmental vulnerabilities. This pattern is consistent with the complex interaction between future aspirations, present conditions, and historical constraints that the framework anticipates.

Furthermore, the barriers discussed above — economic, institutional, cultural, and environmental — underscore the potential need for more comprehensive and coordinated support systems in Laoag City and comparable local government units. Emerging trends such as multi-sectoral collaboration, youth-centered programs, and community-based innovations present plausible pathways for strengthening sustainability outcomes, though their effectiveness would benefit from direct evaluation in future research.

Overall, the study is associated with, and may support, the view that youth leadership plays a meaningful role in advancing sustainable development within this local context. Achieving long-term impact, however, likely requires enhanced capacity-building, stronger institutional support, and the integration of foresight-informed approaches into local governance; these implications should be scoped to Laoag City and similarly situated LGUs pending broader comparative evidence.

Recommendations

Based on the findings, local government units may consider more formally integrating SK councils into sustainability planning, environmental programming, and climate adaptation strategies, with strengthened coordination between SK

councils and offices such as the City Agriculture Office and the Environment and Natural Resources Office. Given the low implementation of climate change education workshops (7.69%) and food security initiatives (5.13%) relative to the high self-reported awareness and engagement observed, capacity-building and technical training for SK Chairpersons — covering climate-smart agriculture, organic farming, water conservation, and food-systems management — may help translate awareness into sustained institutional programming. Community-based initiatives such as *gulayan sa bakuran*, composting, and organic farming may be further expanded through continued partnership with organizations already identified by respondents as key enablers, such as the Federated 4-H Club of Laoag City and the City Agriculture Office.

Northwestern University, through the PhilForesight Institute and the UNESCO Chair for Anticipatory Governance and Regenerative Cities, may also consider developing workshops and training programs introducing foresight tools and anticipatory governance concepts to SK officials, building on the futures-oriented approach demonstrated in this study. For future research, this study recommends: (a) a multi-city or multi-province comparative study across Ilocos Norte local government units to test whether the awareness-implementation gap observed here generalizes beyond Laoag City; (b) a more extensive qualitative follow-up incorporating interviews or focus group discussions with SK Chairpersons to further substantiate and enrich the Futures Triangle themes identified here; and (c) a longitudinal design following a single cohort of SK Chairpersons across their term to examine whether self-reported awareness and engagement translate into measurable increases in program implementation over time.

Acknowledgements

The author expresses sincere gratitude to the Sangguniang Kabataan Chairpersons of Laoag City for their active participation and valuable contributions to this study. Appreciation is also extended to Northwestern University, particularly the Social Sciences and Humanities Department, for its academic support and guidance throughout the research process. The author further acknowledges the institutions and organizations that provided access to data and relevant resources necessary for the completion of this study.

Funding

There is no monetary support associated with the work, from any public, private, or charitable organization. All stages of the study and its release were conducted independently of any outside sources of monetary support.

Competing Interests Statement

The author declares that there are no known competing financial, institutional, or personal interests or relationships that could have influenced the conduct or findings of this study.

Data Availability Statement

The data used in this study are available from the author upon reasonable request, subject to ethical and confidentiality considerations.

References

- Amnå, E. (2012). How is civic engagement developed over time? Emerging answers from a multidisciplinary 10-year longitudinal study. *Journal of Adolescence*, 35(3), 611–627. <https://doi.org/10.1016/j.adolescence.2012.04.011>
- Cordero, E. C., Centeno, D., & Todd, A. M. (2020). The role of climate change education on individual lifetime carbon emissions. *PLOS ONE*, 15(2), e0228064. <https://doi.org/10.1371/journal.pone.0228064>
- Cruz, J. M., & Tapia, L. C. (2021). Youth participation in local governance: Assessing the Sangguniang Kabataan experience in the Philippines. *Philippine Journal of Public Administration*, 65(1), 45–72.
- Estilong, A. J., & Lansang, M. (2025). Lived experiences of Filipino youth in community development initiatives. *Acta Ilocandia*, 9(1). <https://doi.org/10.62960/dmmmsu.v9i1.61>

- Flores III, L., Mendoza, R. U., Yap, J., & Valencia, J. S. O. (2021). Advancing youth governance in the Philippines: A narrative of the Sangguniang Kabataan and its road to reform. *SSRN*. <https://doi.org/10.2139/ssrn.3779023>
- Fuerth, L. S. (2009). Foresight and anticipatory governance. *Foresight*, 11(4), 14–32. <https://doi.org/10.1108/14636680910982412>
- Gregory, P. J., Ingram, J. S. I., & Brklacich, M. (2005). Climate change and food security. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 360(1463), 2139–2148. <https://doi.org/10.1098/rstb.2005.1745>
- Halady, I. R., & Rao, P. H. (2010). Does awareness to climate change lead to behavioral change? *International Journal of Climate Change Strategies and Management*, 2(1), 6–22. <https://doi.org/10.1108/17568691011020229>
- Hickman, C., Marks, E., Pihkala, P., Clayton, S., Lewandowski, R. E., Mayall, E. E., Wray, B., Mellor, C., & van Susteren, L. (2021). Climate anxiety in children and young people and their beliefs about government responses to climate change: A global survey. *The Lancet Planetary Health*, 5(12), e863–e873. [https://doi.org/10.1016/S2542-5196\(21\)00278-3](https://doi.org/10.1016/S2542-5196(21)00278-3)
- Inayatullah, S. (2008). Six pillars: Futures thinking for transforming. *Foresight*, 10(1), 4–21. <https://doi.org/10.1108/14636680810851631>
- Leiserowitz, A., Maibach, E., Roser-Renouf, C., & Smith, N. (2011). *Climate change in the American mind: Americans' global warming beliefs and attitudes in May 2011*. Yale University and George Mason University. Yale Project on Climate Change Communication.
- Manalo, J. V., II, de Guia, A. H., & Binas, R. R. (2019). Why the Filipino youth do not want to farm. *Journal of Agricultural Education and Extension*, 25(4), 321–335. <https://doi.org/10.1080/1389224X.2019.1629983>
- Mayer, F. S., & Frantz, C. M. (2004). The connectedness to nature scale: A measure of individuals' feeling in community with nature. *Journal of Environmental Psychology*, 24(4), 503–515. <https://doi.org/10.1016/j.jenvp.2004.10.001>
- Palomares, P. P., Cadutdut, D. E., Amod, A. F., & Tomaro, Q. P. V. (2021). Determining the motivations for political participation among elected youth leaders. *Jurnal Studi Pemerintahan*, 12(1), 35–61. <https://doi.org/10.18196/JGP.121127>
- Plan International. (2021). *Reimagining climate education and youth leadership: Survey report*. <https://plan-international.org/publications/reimagining-climate-education-and-youth-leadership/>
- Portney, K. E., & Berry, J. M. (2016). The impact of local environmental advocacy groups on city sustainability policies. *Policy Studies Journal*, 44(3), 308–327. <https://doi.org/10.1111/psj.12131>
- Quay, R. (2010). Anticipatory governance: A tool for climate change adaptation. *Journal of the American Planning Association*, 76(4), 496–511. <https://doi.org/10.1080/01944363.2010.508428>
- Reganold, J., & Wachter, J. M. (2016). Organic agriculture in the twenty-first century. *Nature Plants*, 2, 1–8. <https://doi.org/10.1038/nplants.2015.221>
- Stevenson, K. T., & Peterson, M. N. (2016). Motivating action through fostering climate change hope and concern and avoiding despair among adolescents. *Sustainability*, 8(1), 6. <https://doi.org/10.3390/su8010006>
- Weldearegay, S. K., & Tedla, D. G. (2018). Impact of climate variability on household food availability. *Agriculture & Food Security*, 7, 15. <https://doi.org/10.1186/s40066-017-0154-0>

Appendices

No appendices are attached to this study.