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Original Article

## Ecological Responsibility and the Action Gap Among College Students Anchored on the *Laudato Si'* Framework

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### Abstract

*Environmental care has become urgent as ecological challenges increasingly affect human life and sustainability. Understanding how students relate to this responsibility provides insight into strengthening ecological awareness, values, and action within educational and moral frameworks inspired by Laudato Si', a papal encyclical that promotes integral ecology and emphasizes care for creation. Student perspectives were gathered through a researcher-developed questionnaire administered both online and in print to 2,376 college students. The resulting responses were organized and examined using descriptive statistics to outline prevailing patterns in how students understand and engage with care for the environment within an integral ecological perspective. The findings indicate that students demonstrate generally low ecological responsibility, with stronger development in ethical awareness and environmental concern than in concrete action and lifestyle practice. While moral sensitivity toward ecological issues is present, this awareness is not consistently reflected in daily behaviors, spiritual engagement, or sustained participation in environmental initiatives. The results reveal a clear gap between what students recognize as important and how they act in practice, suggesting that ecological responsibility remains unevenly developed across attitudes, values, and personal commitment. These findings highlight the need for more integrated and action-oriented approaches to environmental formation that connect ethical reflection with lived practice. For religious educators and catechists, the results provide empirical insight into the challenges of translating ecological teaching into everyday life, emphasizing the importance of faith-based educational approaches that nurture moral responsibility, encourage practical engagement, and integrate care for creation as a lived dimension of faith and community life.*

**Keywords:** *Ecological Responsibility, Environmental Education, Environmental Engagement, Integral Ecology, Laudato Si'*

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## Introduction

Ecological responsibility refers to the way individuals recognize, value, and respond to their relationship with the natural environment and with others who share it. It involves awareness of environmental issues, ethical consideration of human actions, and a willingness to act in ways that protect and sustain life (Nainggolan et al., 2024). In the 21st century, this responsibility has become increasingly relevant as societies face environmental degradation, climate-related risks, and growing pressure on natural resources (Sánchez-Camacho & Villegas Moreno, 2024). These challenges affect not only ecosystems but also human health (Gozum et al., 2023), social stability (Christie et al., 2019), and the quality of life of present and future generations (Boustani, 2025; Knox, 2025). As young people will live and work within these conditions, understanding how they relate to ecological responsibility has become an important concern for education and social development.

Within this broader context, the idea of integral ecology provides a way of understanding the close connection between environmental, social, cultural, and moral concerns. Rather than treating ecological issues as separate from human life, this perspective highlights how environmental well-being is closely tied to human values, relationships, and everyday choices (de Oliveira & de Souza, 2025). This understanding is reflected in *Laudato Si'*, which calls for renewed care for the environment grounded in human dignity, social responsibility, and moral reflection (Francis, 2015). By emphasizing that ecological problems are closely linked to human behavior and decision-making, the document encourages individuals and communities to respond with greater responsibility toward the common good.

Despite the increasing number of environmental programs, policies, and initiatives promoted by public and private institutions, a noticeable gap remains between these efforts and the lived experiences of students. Many initiatives aimed at environmental protection and sustainability are implemented through schools, organizations, and government agencies, often encouraging participation in environmental activities. However, these efforts frequently focus on involvement and compliance rather than examining how students themselves understand, internalize, and respond to such initiatives (Leighter & O'Keefe, 2019; Sršen & Petrović Štefanac, 2023; Francisco & Flores, 2024). As students are among those most directly encouraged to support and sustain these initiatives, exploring their perspectives becomes essential. Without a clearer understanding of how students perceive ecological responsibility, it is difficult to determine whether existing programs foster meaningful engagement or lasting commitment.

Understanding students' ecological responsibility is important for both educational practice and institutional planning. As integral ecology is increasingly taught and promoted across public and private sectors, there is a growing emphasis on shaping values, attitudes, and behaviors that support sustainable living. The Catholic Church (Colella, 2022), in particular, continues to encourage educational institutions to integrate care for creation into learning and formation, reinforcing the moral and social dimensions of ecological responsibility (Buencibello & Aton, 2025). Within the field of catechesis and religious education, examining how students respond to these teachings provides practical insight into how ecological values are received and lived out in daily life. The findings help religious educators identify the gap between students' ethical awareness and their concrete actions, allowing them to

design formation activities, classroom discussions, and community initiatives that better connect moral teaching with everyday ecological practice. In this way, the study offers empirical guidance for strengthening faith-based education that encourages students not only to understand the call to care for creation but also to translate that understanding into responsible action.

## **Conceptual Framework**

The conceptual foundation of this study is grounded in the idea that ecological responsibility is shaped by the way individuals understand their relationship with the environment, society, and moral life. Integral Ecology, as articulated in *Laudato Si'* (Francis, 2015), provides the primary lens by emphasizing that environmental concerns cannot be separated from human values, social conditions, and ethical responsibility (Knox, 2025; Barete et al., 2026). This perspective frames ecology as a shared concern that includes care for nature, concern for others, and responsibility for future generations (de Oliveira & e Souza, 2025). In the conduct of the study, this framework guides the examination of how students perceive ecological issues not as isolated environmental problems but as part of a wider system of human actions, values, and responsibilities.

Building on this holistic view, the Value–Belief–Norm (VBN) theory and the Social Ecological Model help explain how ecological responsibility develops and is expressed in everyday life. The VBN theory (Negm, 2024) highlights how values shape beliefs, which in turn influence personal norms and readiness to act. This allows the study to examine how students' values and beliefs about the environment relate to their sense of obligation and willingness to respond. At the same time, the Social Ecological Model (Walker et al., 2024) situates these individual processes within broader social contexts, recognizing that students' attitudes and behaviors are influenced by family, school, community, and institutional environments. Together, these frameworks help the study move beyond individual awareness by acknowledging that ecological responsibility is also shaped by social structures and shared practices.

Spiritual Ecology (Mickey, 2020) further strengthens this framework by addressing the moral and spiritual dimensions of ecological responsibility. It emphasizes that care for the environment is not only a social or personal task but also a moral calling that shapes identity, purpose, and agency. Within the study, this perspective complements Integral Ecology by highlighting the deeper motivations that influence students' commitment to care for creation. When combined, these frameworks support one another by linking values and beliefs to social context, moral responsibility, and action.

## **Statement of the Problem**

The study focuses on examining how college students engage with ecological responsibility in their current context. By looking at students' levels of awareness, values, attitudes, and actions related to care for the environment, the study aims to provide a clearer picture of how ecological responsibility is understood and practiced among young adults. Establishing this understanding is necessary for developing educational strategies and programs that are more responsive to students' realities and more effective in promoting sustained care for our common home. Specifically,

the study sought to answer: What is the overall level of ecological responsibility of college students?

## Methodology

### Research Design and Locale

A cross-sectional research design (Hunziker & Blankenagel, 2024) was employed to capture a clear snapshot of students' perspectives and dispositions toward ecological responsibility at a single point in time. Data were gathered simultaneously from participants enrolled at San Isidro College, ensuring that responses reflected the current institutional, social, and cultural context in which students engage with ecological concerns. The distribution of the questionnaire was facilitated through the Office of Student Affairs, and the data collection was conducted over a three-week period in October 2025. The use of a cross-sectional approach was appropriate for establishing baseline empirical evidence and for providing a timely overview that can inform both institutional reflection and future longitudinal research.

### Sampling Method and Respondents

The study adopted a stratified random sampling method to ensure fair and representative participation. The population consisted of college students enrolled at San Isidro College, and the strata were formed based on the institution's seven academic departments. This approach ensured that students from each department were proportionally included, reducing the risk that findings would be influenced by overrepresentation from any single academic group.

*Table 1. Demographic profile of the respondents of the study (N=2376).*

	Demographic	Frequency	Percentage
Sex	Male	949	39.94
	Female	1427	60.06
Year	First	899	37.84
	Second	699	29.42
	Third	457	19.23
	Fourth	321	13.51
Course	Arts and Sciences	76	3.20
	Education	375	15.78
	Business Administration	260	10.94
	Accountancy	118	4.97
	Engineering	368	15.49
	Information Technology	157	6.61
	Nursing and Midwifery	1022	43.01

The respondents of the study, as presented in Table 1, were college students currently enrolled at San Isidro College, reflecting a broad range of academic backgrounds and levels of study. Their inclusion provided direct insight into how ecological responsibility and related values are understood and expressed within the student body. By focusing on this population, the study grounded its findings in the lived experiences of students who actively participate in campus life and academic formation.

### Research Instrument and Development

The instrument used in the study was a researcher-developed survey questionnaire designed to capture students' perspectives on ecological responsibility

in a structured and systematic manner. Its development was guided by the *Laudato Si'* framework, which emphasizes care for creation, human responsibility, and the interconnectedness of social, moral, and environmental life. Drawing from these core ideas, the questionnaire items were carefully written to reflect everyday attitudes, values, awareness, behaviors, spiritual reflections, and perceived capacity for action related to ecological concerns. This framework-based development ensured that the instrument remained faithful to the integrative vision of ecology presented in *Laudato Si'* while remaining accessible and relevant to the student population.

To ensure the soundness of the research instrument prior to its use in the main survey, the questionnaire underwent a process of expert validation and pilot testing. Seventeen experts from relevant academic and professional fields reviewed the instrument using the evaluation framework developed by Solanon et al. (2020). Their assessment focused on the clarity, relevance, and alignment of the items with the conceptual components of ecological responsibility. The evaluation results indicated a very high level of agreement among reviewers. The overall Content Validity Index (CVI) reached 0.986, while the computed Krippendorff's alpha was 0.949, showing strong inter-rater reliability. These results indicate that the items were clearly understood by the reviewers and were considered appropriate for measuring the intended concepts related to ecological responsibility.

Following this validation stage, the instrument was pilot tested to examine its internal consistency before full administration. The reliability analysis showed strong consistency across the questionnaire components. Cronbach's alpha values for the individual sections ranged from 0.854 to 0.932, while the overall reliability coefficient for the full 72-item instrument reached 0.924. These results suggest that the items worked together as a coherent measurement tool and were able to consistently capture the different aspects of ecological responsibility included in the instrument. The combined results from expert validation and pilot testing provided sufficient evidence that the questionnaire was methodologically sound and appropriate for use in the main data collection.

The final instrument is a structured questionnaire that measures students' ecological responsibility through six interconnected dimensions: ecological attitudes and concern; values and ethical responsibility toward integral ecology; ecological awareness and interconnectedness; pro-ecological behaviors and simplicity of lifestyle; spiritual ecology and moral responsibility; and ecological self-efficacy and commitment to action. Each dimension is composed of twelve indicators that represent key aspects of students' perspectives, practices, and confidence in taking action. Responses are measured using a 7-point Likert scale, allowing for a detailed assessment of variations in students' views. Negatively worded items are reverse coded to maintain consistency in scoring, ensuring that higher values indicate stronger ecological responsibility. This structure allows for both dimension-specific analysis and an overall assessment, offering a comprehensive view of how ecological responsibility is developed and expressed across cognitive, ethical, behavioral, and spiritual domains.

### **Data Gathering Procedure**

Data collection was carried out using both online and printed versions of the questionnaire to ensure wider accessibility and participation among students. The administration of the instruments was coordinated through the Office of Student Affairs, which facilitated distribution and retrieval while maintaining an orderly process. Prior to participation, all respondents were provided with an informed consent form that clearly explained the purpose of the data collection, the voluntary

nature of participation, and assurances of confidentiality. Only students who had read and formally agreed to the consent were allowed to proceed, ensuring that ethical standards were observed throughout the data gathering process.

### Treatment of Data

Following data collection, the responses were systematically encoded, organized, and processed to ensure accuracy and consistency prior to analysis. Descriptive statistics were applied to summarize students’ responses and to present the overall pattern of ecological responsibility reflected in the data. Central tendency and variability were examined to provide a clear picture of how students generally responded to the questionnaire items, allowing the results to be interpreted in a way that is both structured and accessible.

### Results

This section presents the empirical findings derived from the collected data, offering an objective overview of the patterns observed among the respondents. The results provide a structured basis for understanding how key aspects of the phenomenon manifest within the student population, serving as a foundation for subsequent interpretation and discussion.

Table 2 provides a synthesized view of students’ responses across multiple dimensions, offering a quantitative snapshot of prevailing tendencies and overall standing. It organizes the results in a manner that allows for a balanced appreciation of central patterns and variations within the dataset.

*Table 2. Level of students’ ecological responsibility.*

Components	$\bar{x}$	$\sigma_x$	Qual. Int.
Ecological Attitudes and Concern	3.91	1.217	Moderate
Values and Ethical Responsibility towards Integral Ecology	4.44	1.108	Moderately High
Ecological Awareness and Interconnectedness	3.76	1.117	Moderate
Pro-Ecological Behaviors and Simplicity of Lifestyle	2.77	1.578	Low
Spiritual Ecology and Moral Responsibility	2.63	1.544	Very Low
Ecological Self-Efficacy and Commitment to Action	2.80	1.582	Low
<b>Ecological Responsibility</b>	<b>3.39</b>	<b>1.476</b>	<b>Low</b>

Table 2 presents a differentiated view of students’ ecological responsibility across several dimensions. Overall, the level of ecological responsibility is characterized as low, indicating that ecological considerations are only weakly integrated into students’ general outlook and everyday practices. Across the cognitive and attitudinal dimensions, students demonstrate developing but not yet consolidated orientations. Ecological attitudes and concern, as well as ecological awareness and interconnectedness, are described as moderate, suggesting that students are beginning to recognize ecological issues and their broader implications, but such recognition remains tentative and not firmly established. In contrast, values and ethical responsibility toward integral ecology are assessed at a moderately high level, indicating that ethical considerations related to care for creation are generally present, although they may not yet be consistently internalized or translated into practice.

More pronounced limitations are evident in the behavioral, spiritual, and agency-related dimensions. Pro-ecological behaviors and simplicity of lifestyle are rated low, reflecting infrequent engagement in environmentally responsible actions and limited adoption of sustainable consumption patterns. Similarly, ecological self-

efficacy and commitment to action are low, pointing to weak confidence and limited intention to actively engage in ecological initiatives. The lowest level is observed in spiritual ecology and moral responsibility, which indicates minimal integration of ecological concerns into students' spiritual life and moral agency. Taken together, these findings suggest that while some ethical awareness is emerging, substantial gaps remain in translating awareness and values into sustained action, lifestyle change, and deeper moral or spiritual engagement, resulting in an overall ecological responsibility that remains limited and uneven across dimensions.

## **Discussion**

Building on the presented findings, the discussion section offers a deeper examination of the observed patterns by situating them within a broader conceptual and practical context. This part aims to clarify the meaning of the results, highlight significant trends, and articulate their broader relevance in a coherent and accessible manner.

### **Ecological Attitudes and Concern**

The results indicate, as presented in Table 2, that students' ecological attitudes and concern are present but remain at a developing stage. This pattern suggests that many students already recognize environmental problems and express a degree of concern for ecological issues, yet such concern has not fully matured into a deeply internalized orientation. Within the broader pattern of findings, this dimension reflects the early formation of ecological awareness, where recognition of environmental problems begins to shape attitudes but does not yet consistently guide behavior. In religious education, this stage of awareness is often associated with the initial formation of moral sensitivity toward creation, where students begin to understand that care for the environment is not only a scientific or social issue but also a matter of moral responsibility and stewardship (Buencibello & Aton, 2025). Previous discussions in Catholic education also emphasize that ecological concern frequently develops gradually through reflection on ethical teachings, community engagement, and the integration of social responsibility within faith formation (Colella, 2022; Barete et al., 2026). Seen in this light, the moderate level of concern suggests that students are beginning to relate ecological issues to their personal values, although this connection is still forming and has not yet become a stable guide for consistent ecological engagement.

At the same time, the results reflect the broader pattern observed across the other dimensions, where students demonstrate awareness and emerging values but show weaker expressions of action-oriented responsibility. This pattern suggests that the movement from awareness to sustained ecological commitment may still be incomplete. In many educational settings, awareness of environmental issues often develops earlier than the sense of personal obligation that motivates consistent action. Moral reflection and belief formation can encourage positive attitudes toward environmental care, yet the translation of these attitudes into daily practices often depends on additional factors such as social influence, institutional support, and opportunities for participation. Studies in religious education have noted that when ecological concern is presented primarily at the level of moral reflection without sustained opportunities for lived practice, students may affirm the values associated with care for creation but struggle to integrate them into their everyday decisions (Sršen & Petrović Štefanac, 2023; Boustani, 2025). The moderate level of ecological attitudes and concern reflects an important stage in the formation of ecological responsibility, where awareness and moral sensitivity are present but still require

deeper reinforcement through education, community engagement, and consistent ecological practice.

### **Values and Ethical Responsibility towards Integral Ecology**

The results indicate, as presented in Table 2, that students demonstrate a generally positive orientation toward values and ethical responsibility in relation to ecological concerns. This suggests that many students recognize the moral importance of caring for the environment and acknowledge the responsibility of individuals and communities to protect creation. Within the broader pattern of findings, this dimension appears more developed than several other areas of ecological responsibility, reflecting a stronger ethical awareness even when behavioral and action-oriented dimensions remain less established. In the context of religious education, such patterns are often associated with the formative role of moral teaching, where learners become familiar with ethical principles related to stewardship and the common good. Catholic social teaching consistently emphasizes that care for creation is closely linked to human dignity, solidarity, and responsibility toward future generations (Colella, 2022; Buencibello & Aton, 2025). The moderately high level in this dimension suggests that students are able to recognize and affirm these ethical principles, indicating that ecological responsibility is already present at the level of moral understanding.

At the same time, the contrast between this stronger ethical orientation and the weaker levels observed in behavioral and action-based dimensions points to a gap between recognizing moral responsibility and translating it into consistent practice. Moral values can shape beliefs about what ought to be done, yet the movement from ethical recognition to sustained action often depends on whether individuals feel personally responsible and capable of acting within their social environment. In educational contexts, students may affirm ecological values and agree with the moral call to care for creation, but this agreement does not automatically lead to changes in daily behavior if opportunities, support systems, or reinforcing experiences are limited. Studies in Catholic education note that ecological responsibility becomes more fully integrated when ethical reflection is accompanied by concrete forms of participation, communal practice, and opportunities for students to connect moral teachings with everyday decisions (de Oliveira & de Souza, 2025; Nainggolan et al., 2024). Viewed in this way, the moderately high level of values and ethical responsibility highlights an important foundation for ecological formation, while the differences across other dimensions indicate the need to strengthen the connection between moral awareness and lived ecological practice among college students.

### **Ecological Awareness and Interconnectedness**

The results indicate, as presented in Table 2, that students demonstrate a developing level of awareness regarding the interconnected nature of ecological systems and human life. This suggests that many students recognize that environmental issues are linked to broader social and human concerns, yet their understanding of these connections remains partial and not yet fully integrated into a consistent perspective. Within the broader pattern of findings, this dimension reflects an emerging awareness that environmental challenges are connected to human choices, social conditions, and shared responsibilities. In religious education, such awareness is often linked to the moral formation of students, where the relationship between human dignity, social justice, and care for creation is gradually introduced through ethical reflection and community-oriented learning. Catholic social teaching, particularly the reflections on integral ecology, emphasizes that

environmental problems cannot be separated from social and moral concerns, as the well-being of the natural environment is closely tied to human relationships, economic practices, and cultural values (Colella, 2022; Buencibello & Aton, 2025). The moderate level in this dimension suggests that students are beginning to recognize these relationships, although this understanding has not yet developed into a deeply rooted ecological outlook.

At the same time, the pattern of results across the other dimensions indicates that awareness of interconnectedness does not necessarily translate into consistent ecological commitment or action. Recognizing that environmental issues are linked to broader social and ethical concerns may shape how students view ecological responsibility, but awareness alone may not be sufficient to influence everyday behavior if it is not accompanied by a stronger sense of personal obligation and meaningful opportunities for engagement. Educational studies have noted that students often express agreement with the idea that human actions affect the environment and society, yet this recognition does not always lead to sustained ecological practices when personal responsibility and practical pathways for action remain unclear (Sršen & Petrović Štefanac, 2023; Sánchez-Camacho & Villegas Moreno, 2024; Boustani, 2025; de Oliveira & de Souza, 2025; Barette et al., 2026). In this sense, the moderate level of ecological awareness and interconnectedness highlights an important stage in the development of ecological responsibility, where students acknowledge the broader implications of environmental issues but may still require deeper formation and supportive contexts to translate this awareness into active and sustained ecological engagement.

### **Pro-Ecological Behaviors and Simplicity of Lifestyle**

The results indicate, as presented in Table 2, that students demonstrate a low level of engagement in environmentally responsible behaviors and the practice of a simpler lifestyle. This suggests that ecological responsibility is not yet strongly reflected in their everyday habits, consumption choices, and routine actions. Within the broader pattern of findings, this behavioral dimension appears weaker than students' ethical orientations and developing awareness, pointing to a noticeable gap between what students recognize as important and what they consistently practice in daily life. In the context of religious education, this pattern reflects a common challenge in moral formation, where students may accept the ethical call to care for creation but still struggle to translate this understanding into concrete lifestyle choices. Catholic social teaching emphasizes that ecological responsibility involves not only reflection on moral values but also a commitment to simpler ways of living that respect both human dignity and the limits of the natural world (Colella, 2022; Buencibello & Aton, 2025). The low level of engagement in pro-ecological behavior indicates that while moral awareness may be present, its expression in daily practice remains limited.

At the same time, the contrast between students' ethical orientation and their behavioral engagement highlights the difficulty of transforming moral recognition into consistent ecological action. Awareness of environmental responsibility and agreement with ethical principles do not automatically produce changes in personal habits when the sense of personal obligation and the practical conditions for action are still developing. In many educational contexts, students may value environmental protection and acknowledge the importance of caring for creation, yet everyday behavior is often shaped by social routines, consumption patterns, and the opportunities available within their environment. Studies in religious education note that ecological responsibility becomes more visible when ethical reflection is

supported by concrete experiences, community participation, and institutional practices that encourage sustainable habits (Sánchez-Camacho & Villegas Moreno, 2024; de Oliveira & de Souza, 2025; Seide, 2026). The low level observed in pro-ecological behaviors and lifestyle simplicity reflects the continuing gap between values and practice, suggesting the need for stronger connections between ecological teaching, personal responsibility, and opportunities for students to engage in consistent environmental action.

### **Spiritual Ecology and Moral Responsibility**

The results indicate, as presented in Table 2, that students show very limited integration of ecological concerns into their spiritual life and moral decision-making. This suggests that care for the environment is rarely understood by students as part of their moral or spiritual responsibility and is more often viewed as a practical or social issue. Within the broader pattern of findings, this dimension reflects the weakest expression of ecological responsibility, indicating that ecological concern has not yet become deeply rooted in the moral reflection that shapes personal decisions and long-term commitment. In the context of religious education, this pattern raises important questions about how ecological themes are currently integrated into faith formation. Catholic social teaching consistently presents care for creation as a moral duty grounded in human dignity, stewardship, and responsibility toward the common good (Colella, 2022; Buencibello & Aton, 2025). When students recognize environmental concerns but do not connect them with moral reflection or spiritual meaning, it suggests that ecological teachings may be received primarily as information rather than as part of the deeper formation of conscience. The very low level observed in this dimension points to a limited internalization of the moral and spiritual foundations that support long-term ecological responsibility.

At the same time, this pattern highlights a broader challenge for faith formation, particularly in helping students move from acknowledging ecological values to integrating them into personal conviction and daily life. Moral understanding often develops gradually, beginning with exposure to ethical principles before these principles shape a stable sense of responsibility and action. When this process remains incomplete, students may agree with the idea of caring for the environment but still experience difficulty connecting it with their spiritual identity or personal obligations. Studies in religious education note that ecological responsibility becomes more deeply rooted when environmental concerns are consistently linked to moral reflection, communal practices, and opportunities for students to see care for creation as part of their faith commitment (Christie et al., 2019; Mickey, 2020; de Oliveira & de Souza, 2025). The very low level in spiritual ecology and moral responsibility suggests that current approaches to formation may need to strengthen the connection between ecological awareness, moral reasoning, and lived faith practice so that environmental responsibility is experienced not only as a social expectation but also as a meaningful expression of moral and spiritual commitment.

### **Ecological Self-Efficacy and Commitment to Action**

The results indicate, as presented in Table 2, that students demonstrate limited confidence in their ability to contribute meaningfully to environmental protection and show a weak intention to engage in concrete ecological action. This suggests that although some level of awareness and ethical concern is present among students, these elements do not consistently develop into a strong sense of personal capability or readiness to act. Within the broader pattern of findings, this dimension

reflects a weak expression of ecological responsibility in areas that require initiative, participation, and sustained engagement. In the context of religious education, this pattern highlights a difficulty in translating moral understanding into personal agency. Catholic social teaching emphasizes that responsibility for creation involves not only recognizing moral principles but also responding through concrete participation in the care of the common good (Francis, 2015; Colella, 2022; Buencibello & Aton, 2025). When students acknowledge environmental responsibility but do not perceive themselves as capable actors, the moral call to stewardship may remain distant from their everyday sense of responsibility and influence.

At the same time, the contrast between students' ethical awareness and their low confidence in taking action reflects the continuing gap between recognizing ecological values and practicing them in daily life. Moral beliefs may shape how students understand environmental responsibility, yet action often develops only when individuals feel that their efforts can make a meaningful difference and when supportive conditions encourage participation. In many educational environments, students may affirm the importance of caring for creation but remain uncertain about how their individual actions contribute to broader environmental change. Research in religious education suggests that this gap becomes smaller when ecological teachings are connected with participatory experiences, community initiatives, and opportunities for students to practice responsibility in visible and meaningful ways (Leighter & O'Keefe, 2019; Boustani, 2025; de Oliveira & de Souza, 2025; Seide, 2026). The low level of ecological self-efficacy and commitment to action indicates that while moral awareness may be present, students may still require stronger encouragement, practical engagement, and supportive contexts to develop the confidence needed to act consistently in caring for the environment.

### **Ecological Responsibility**

The overall findings, as presented in Table 2, indicate that students' ecological responsibility remains limited, reflecting a weak integration of environmental concern into their everyday attitudes, decisions, and behaviors. While certain dimensions show emerging awareness and ethical sensitivity—particularly in values and ethical responsibility—these have not yet developed into a coherent and consistent ecological orientation. The pattern of results suggests that students tend to recognize environmental issues at the level of moral understanding and conceptual awareness, yet this recognition does not consistently guide lifestyle choices, spiritual reflection, or sustained action. Within the context of religious education, this pattern reflects a common challenge in the formation of moral responsibility. Catholic social teaching consistently presents care for creation as an expression of stewardship, solidarity, and responsibility for the common good (Colella, 2022; Buencibello & Aton, 2025). However, when ecological concern remains primarily at the level of ethical reflection rather than lived commitment, the moral call to care for creation may not fully influence daily habits or personal decision-making. The results suggest that students acknowledge the importance of ecological responsibility but may not yet experience it as a deeply integrated aspect of their moral and social identity.

At the same time, the differences observed across the dimensions point to a gap between moral recognition and consistent ecological practice. Students appear capable of affirming the ethical importance of environmental care, yet this affirmation does not always develop into personal obligation, confidence in taking action, or long-term engagement. In many educational settings, moral values and environmental awareness can develop through instruction and reflection, but sustained behavior often emerges only when individuals also perceive themselves as responsible actors

within supportive social and institutional environments. Research in religious education suggests that ecological responsibility becomes more deeply rooted when ethical teachings are consistently connected with lived experience, communal participation, and opportunities to practice stewardship within everyday contexts (Sánchez-Camacho & Villegas Moreno, 2024; Nainggolan et al., 2024; de Oliveira & de Souza, 2025; Barete et al., 2026). The overall low level of ecological responsibility reflects the continuing gap between values, awareness, and action, indicating the need to strengthen the integration of ecological teaching, moral formation, and practical engagement so that environmental responsibility becomes a more visible and sustained part of students' lives.

## **Conclusion**

The findings indicate that students demonstrate an uneven development of ecological responsibility across the six examined dimensions. Taken together, these results show that ecological responsibility among students is present in awareness and values but remains fragmented and insufficiently expressed in behavior, moral engagement, and personal initiative. The findings demonstrate that the formation of ecological responsibility among students involves more than developing environmental awareness or ethical agreement with ecological principles. Even when students acknowledge the importance of caring for creation, the integration of these values into personal identity, spiritual reflection, and daily practice remains uneven. The study provides evidence that the challenge of translating ecological teaching into lived commitment is not only theoretical but also observable within student formation. In this way, the findings help expand the global discourse on integral ecology by showing how the relationship between values, moral understanding, and action unfolds within a specific educational and cultural setting, offering insights that may inform faith-based ecological formation in similar institutions.

The findings also provide an important reference point for catechists and religious educators who seek to promote ecological responsibility as part of faith formation. The particularly weak development of spiritual ecology suggests that environmental responsibility is rarely experienced by students as a dimension of their spiritual life or moral vocation. This indicates that environmental teaching within religious education may often remain at the level of information or ethical reflection without sufficiently connecting ecological care with spiritual identity, moral commitment, and everyday practice. For catechists, the results highlight the need to more intentionally integrate ecological themes into faith formation so that care for creation becomes part of the lived expression of belief rather than an external social concern. The data provide practical guidance for educators in strengthening ecological formation, encouraging deeper moral reflection, and creating opportunities where students can connect ecological awareness with concrete actions grounded in faith and responsibility.

## **Recommendations**

Based on the results, there is a clear need to strengthen educational, institutional, and community-based efforts that move beyond awareness toward meaningful ecological practice. Programs and initiatives may place greater emphasis on helping students translate ethical concern into daily habits, while also strengthening their confidence to participate in environmental activities within the

campus and the wider community. Within faith-based educational settings, ecological responsibility may be more effectively developed when care for creation is consistently integrated into moral formation, community service, and campus initiatives. Approaches grounded in religious education and Catholic social teaching encourage students to view environmental stewardship not only as a social concern but also as a moral responsibility connected to human dignity and the common good.

Future research may focus on more specific areas that emerge from these findings. In particular, studies may investigate the cultural, institutional, or educational factors within the college environment that contribute to the gap between students' ethical awareness and their everyday ecological behavior. Research within the field of religious education may also examine how faith formation programs, campus ministry activities, or service-learning initiatives influence students' ability to internalize ecological responsibility as part of their moral and spiritual identity. In addition, qualitative studies may explore how students interpret ecological teachings within Catholic social thought and how these teachings shape their motivations, perceived responsibilities, and barriers to environmental action.

## Declaration on the Use of AI

The authors declare the use of AI tools (ChatGPT and Grammarly) to enhance the readability and presentation of the study. These tools did not influence the original content, analysis, and/or conclusions. The authors affirm that all analyses and interpretations were conducted

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