



CONTEXTUALIZING LAUDATO SI' IN RESPONDING TO THE ECOLOGICAL CRISIS IN SOUTHEAST ACEH

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ABSTRACT

Ecological issues are not just ordinary problems but global issues that affect grassroots communities that are powerless in terms of knowledge, social, economic, cultural, and religious aspects. The objective is to analyze the presence of religious minority communities in responding to the ecological crisis in Southeast Aceh through the contextualization of ecological theology from the encyclical *Laudato Si'*, using a qualitative phenomenological approach through interviews and focus group discussions with 26 participants in 2025. The results of the study show the successful implementation of an integral ecology model that transforms reforestation from a technical action into a practice of faith, supported by the synergistic integration of three dimensions: spiritual as a driver of ecological conversion, social through participatory community structures, and technical with sustainable methods such as agroforestry. The main conclusion offers a transformative solution: that addressing the ecological crisis must begin with a transformation of the heart driven by spirituality, strengthened by community, and manifested in systematic concrete actions, while also becoming a blueprint for contextual and value-based environmental conservation. This research contributes to developing a model that promotes social and cultural awareness, as well as ecological conversion, which can be used to create educational curricula from elementary to university levels. Additionally, it serves as a policy recommendation for both the government and religion regarding ecological education.

Keywords: *Contextualization of Laudato Si and Ecological Crisis*

INTRODUCTION

Contextualizing *Laudato Si'* Responding to the Church's Presence in the Ecological Crisis is essential because it offers a "bottom-up" and marginalized perspective that is often absent in the dominant discourse on religion and ecology. This research emphasizes the "living theology" within minority communities directly facing ecological and social challenges, rather than concentrating exclusively on normative texts or prominent church institutions (Paulus Halek et al., 2025). Its critical contributions lie in (1) deconstructing the homogeneous narrative of religious engagement with the environment in Indonesia. The research also demonstrates that vulnerable communities often develop the most contextual and practical ecological spirituality, owing to their direct connection to the land as a source of identity, faith, and survival (Przybyłowski, 2021). Southeast Aceh faces three main pressures: ecological, socio-religious, and developmental. Deforestation, changing land use for plantations, and climate change that threatens forests and farming livelihoods are all examples of ecological pressures. Socio-religious pressures arise from the implementation of Sharia law, where the Catholic minority community uses ecological action as a cultural tool to communicate

the voice of the majority (Paulus Halek et al., 2025). Development often disregards local rights, making ecological theology a response to double marginalization as a religious minority and dependence on natural resources. This study documents this strategic response before local knowledge is eroded (Widyawati et al., 2025). The ecological crisis that has hit Southeast Aceh, ranging from forest degradation and land conversion to threats to biodiversity, demands a response that is not only technical but also transformative and value-based (Felcis & Felcis, 2020b). It is in this context that Pope Francis' encyclical "Laudato Si'" offers a relevant ethical-spiritual framework to be reviewed and contextualized. The Church has always declared that the teaching of "Laudato Si'" on integral ecology has a significant prophetic and practical role to play in responding to this crisis (Fransiskus, 2015);(Przybyłowski, 2021). This role is realized not only by being a moral voice but also as a catalyst for collective action that combines ecological conversion with inclusive sustainable development at the grassroots level (Marx, 2016). Through this contextualization, the Church can transform the global concerns expressed in the encyclical into contextualized local actions that have a real impact on the preservation of creation in Southeast Aceh (Susanto, 2025).

The issue of environmental degradation has become an urgent global crisis, demanding serious attention and response from all elements of the world community (Omoogun, 2016). The concept of environmental preservation, which includes ecosystem protection, biodiversity conservation, and pollution control, is no longer just an option but an imperative for maintaining the sustainability of planet Earth (Stevanus, 2019). In this context, the balance between human activity and ecological health is a prerequisite for the well-being of present and future generations (Ndolu et al., 2021). In his influential essay, "The Historical Roots of Our Ecologic Crisis," Lynn T. White Jr. presents a provocative thesis that would later stimulate much theological discussion about ecological justice. The core of White's argument points to religious beliefs and cultural systems as the fundamental sources of the environmental crisis we face (Cobb, 2007). In particular, he criticizes the variant of Christianity practiced in the Western world, which he believes has encouraged the exploitation of nature (Streimikiene, 2015). As a solution, White proposes that Western Christian traditions abandon their human-centered (anthropocentric) theological framework and adopt an ecological vision inspired by the spirituality of St. Francis of Assisi and the philosophy of East Asian religions (Singgih, 2020). Although humans inevitably change the natural system, the responsibility to manage it rests squarely on their shoulders. Sadly, not taking this responsibility seriously often leads to actions that hurt the environment, as seen in global warming and the loss of biodiversity (Setiyowati et al., 2025). In response to this crisis, various stakeholders, including religious institutions, have begun to play a significant role. The Catholic Church, with its global reach and moral authority, has made environmental issues an integral part of its social teachings. Pope Francis' encyclical, "Laudato Si'" (2015), is a theological landmark that affirms humanity's responsibility to care for our "common home" (Francis, 2015). This document does not stand alone but continues the Church's long tradition of concern for socio-ecological justice, as laid down by Pope Paul VI in "Populorum Progressio" (1967) (Paulus VI, 2021);(KWI, 2004).

From a Christian theological perspective, this responsibility is rooted in



Scripture. Although Genesis 1:28 is often interpreted as a mandate to dominate the earth, Genesis 2:15 provides a correction by emphasizing the role of humans as “stewards” tasked with “keeping and cultivating” the Garden of Eden (Manopo, 2021);(Ndolu et al., 2021). This task forms the basis for ecological theology, or eco-theology, a branch of Christian social ethics that explores the relationship between faith and ecological responsibility (Cobb, 2007). Ecological theology offers a framework of values and spirituality to shape individuals' attitudes and behaviors toward the environment (Farooq & Yahya, 2021). As Deane-Drummond (2008) asserts, religion functions as a frame of reference that shapes a system of values, which is then reflected in norms and concrete actions. The Church, as an institution, is seen as an ideal vessel for building a “new community” that values creation (Drummond, 2008). In Indonesia, the Church is challenged to live out this spirit by being “the light and salt of the world” (Matthew 5:13-16) (KWI, 2004). Several forms of concrete contributions have been initiated, such as environmentally conscious sermons, the creation of model gardens, the allocation of funds for reforestation, and encouraging congregations to implement similar practices at home and at work. These grassroots movements have the potential to become a significant transformative force (Fakhrudin et al., 2023). However, the reality on the ground is often complex. In many regions, including Indonesia, there is still a gap between theological awareness and concrete action (Waje, 2023). It is still common to encounter people who neglect environmental cleanliness and exploit nature without consideration (Tarzia & Ilardi, 2024). This situation calls into question the effectiveness of transforming theological values into sustainable ecological behavior (Kristiantoro, 2022).

Previous studies have extensively examined the role of religious communities in the environment. Global and national studies predominantly examine the influence of majority religions or overarching environmental movements (Alauddin, 2020). Meanwhile, research on the specific contributions of the Catholic Church, particularly in the unique local context of Indonesia, is still limited, and few have explored its theological dimensions in depth. The experience of implementing the integral ecology model at the Giri Sonta Convent in Ungaran is one example of the Church contributing through sustainable programs that target environmental restoration and improve the socio-economic welfare of the surrounding community (Farooq & Yahya, 2021). This holistic model is designed as an agent of change that is in line with the SDGs at the local level. The main obstacle lies in the low level of community participation and government support. Nevertheless, the convent's practical approach can inspire other religious communities to raise environmental awareness rooted in spiritual values (Setiyowati et al., 2025). A crucial research gap lies in the lack of studies specializing in the role of the Catholic Church as a “minority” religious community in a specific and critical ecosystem context. This study attempts to fill this gap by taking a case study in Southeast Aceh Regency (Siswantara et al., 2022). The selection of Southeast Aceh as the locus of research is very significant. This region is internationally known as home to strategic tropical forests that serve as global carbon sinks and centers of biodiversity (Perpustakaan, 2025). Pressures on this ecosystem, including the threat of deforestation and forest fires, create a necessity for conservation efforts. In a predominantly Muslim social context, the question of how the minority Catholic Church carries out its ecological

theology role is very interesting and has not been answered by previous research (Putra & Keluanan, 2022). Based on the identification of this gap, the research question is: How is ecological theology, particularly that inspired by *Laudato Si'*, implemented by the Catholic Church in the form of concrete actions to preserve the environment in Southeast Aceh Regency, and what challenges are faced in the process? The objectives of this study are to (1) analyze the Catholic Church's understanding and contextualization of ecological theology in Southeast Aceh, (2) identify and describe the forms of concrete actions taken to preserve the environment, and (3) analyze the supporting factors and challenges faced in its implementation (Boustani, 2025).

The Catholic Church in Southeast Aceh, through its interpretation of the ecological theology of *Laudato Si'*, has developed a model of ecological spirituality that is manifested in a series of collective and individual actions (Felcis & Felcis, 2020a). These actions, although carried out by a minority community, demonstrate a significant and unique contribution to environmental conservation in this critical region and have the potential to become a model for interfaith collaboration (Cobb, 2007). Key terminology includes "Ecological Theology," which is a theological discipline that reflects on the relationship between faith, God, and all of creation, emphasizing humanity's moral responsibility to preserve and restore the integrity of nature (Mckim, 2020). *Laudato Si'*: Pope Francis' 2015 encyclical on "caring for our common home," which is the main reference document for Catholic Ecological Theology (Fransiskus, 2015). A series of planned efforts to protect, maintain, and restore natural resources and ecosystems (including forests, air, water, and biodiversity) so that their sustainability and function are maintained for present and future generations (Fazey et al., 2018). Ecological issues are truly challenging and enrich the body of thought and contribution of religious involvement in Indonesia. (1) Challenging the Dominant Narrative of Religious Involvement in Conservation, namely from "Religious Authority" to "Faith Communities." The dominant narrative in Indonesia often emphasizes the role of leaders (clerics, priests) or formal religious fatwas/institutions (MUI, KWI). This study shifts the focus to collective practices and interpretations of lay communities, showing that ecological mobilization can be more organic and sustainable when it originates from shared interpretations of faith at the grassroots level (Palos Rey & Diez Bosch, 2024). (2) From the majority religion to minority experiences, which feature non-dominant actors, this study challenges the implicit assumption that religion-based conservation initiatives must be led or dominated by majority groups. It shows an alternative path of ecological spirituality born from the experience of being "the other" (Puglisi & Buitendag, 2020). (3) Enriching the discussion of ecological spirituality in Indonesia, adding Catholic "colors" and the unique cultural locality of Gayo/Alas to the canvas, enriches our understanding of the multifaceted face of ecological spirituality in the archipelago (Messias, 2024). (4) This study enriches the discourse by intrinsically linking ecological issues with issues of rights, identity, and justice for minority communities. It is not just about saving trees but about saving the homes, history, and way of life of a marginalized community (Tatay-Nieto, 2020). The work is an important contribution to the concept of "integral ecology," which rejects the separation between environmental and social crises.

This research focuses on its efforts to: (1) Empirically link the theological



doctrine of “Laudato Si” with practices at the grassroots (local) level; (2) Highlight the role of minority religious actors in environmental issues in Indonesia, which have been dominated by studies of majority religions; and (3) Offer the perspective of “ecological spirituality” as a complementary approach to conservation in critical ecological areas such as Southeast Aceh (Singgih, 2020). This research is expected to not only contribute academically to the study of religion and ecology but also provide a practical overview of the potential synergy between religious values and concrete actions in responding to one of the greatest challenges facing humanity today.

METHODS

This study, entitled “Contextualizing Laudato Si' in Response to the Role of the Church in the Ecological Crisis in Southeast Aceh,” uses a qualitative approach with a phenomenological design, referring to Martin Heidegger's framework of thought (Heidegger, 1962). This approach was chosen to explore the meaning and lived experience of Church actors in interpreting and responding to the ecological crisis based on the spirit of Laudato Si'. Data was collected through two main techniques: in-depth interviews involving nine key participants (two Catholic priests, three church administrators, two community leaders, and two government officials) and focus group discussions (FGD) involving 17 people, consisting of 10 church administrators, three community leaders, two Catholic Youth, and two Church leaders (Patton, 2015). This combination of techniques allowed for an in-depth exploration of individual experiences while also capturing the dynamics of collective understanding (Ollerenshaw & Creswell, n.d.).

Data analysis was conducted hermeneutically following Heidegger's phenomenological data analysis stages, which focus on the unveiling of meaning (*unconcealment*) from the participants' experiences. The process included: first, repeated reading (*reading and re-reading*) to build familiarity with the transcript data. Second, determining meaning units by identifying significant statements related to awareness of the ecological crisis and understanding of Laudato Si'. Third, clustering meaning units into themes to reveal the essential structure of the experience. Fourth, creating a narrative description (*thematization*) that presents a comprehensive understanding of how the role of the Church in the ecological crisis is experienced and understood in the context of their lives in Southeast Aceh.

This field research was conducted over four months, from March to June 2025, in the Southeast Aceh Regency. Theoretically, this research is based on Heidegger's concept of “Being-in-the-World” (Dasein), in which the Church's involvement with the ecological crisis is not seen as a subject separate from the object (nature), but as an entity that is always involved and responsible for it (Clark Moustakas, 1994). The process of data interpretation is thus not only about finding similarities in experience, but also about revealing how the Church “exists” in its world marked by ecological crisis (Manen, 1990).

RESULT AND DISCUSSION

Holistic Ecological Analysis for Land Selection and Superior Seedlings

The Southeast Aceh reforestation program applies science- and theory-based



holistic ecological analysis. The process of land identification and selection of superior seedlings is in line with a comprehensive qualitative approach (Miles & Huberman, 1992; Sukestiyarno, 2020, 2021) and Julian Steward's cultural ecology concept (Firdaus et al., 2022). Community involvement from the outset reflects Participatory Action Research (Kemmis, McTaggart, & Nixon, 2014), which is supported by studies by KAAprianto et al. (2023) and Feby et al. (2022) as the key to success. The theological foundation reinforces this approach, referring to the principle of stewardship in Genesis 2:15, the hope for the restoration of creation in Isaiah 41:18-20 and Romans 8:19-21, and the doctrine of "Imago Dei." Its conservation ethics are in line with the spirit of *Laudato Si'* and studies of ecological spirituality (Jerpan et al., 2023; Kareli, 2022), as well as legal frameworks such as Law No. 32 of 2009 (Sulistiyawati & Kusumawardhani, 2023). The multi-stakeholder collaboration that has been formed reflects the concept of Ecological Networks (Rochmaniah, 2024) and the metaphor of the body of Christ (1 Corinthians 12:12-27). To achieve ecological restoration and social resilience in the community, this program integrates theory, planning, and action.

Church Strategy for Starting and Running Reforestation Programs

The strategy designed by the Church to start and run a reforestation program is holistic, successfully integrating spiritual, social, and technical dimensions into a coherent model, which is in line with Julian Steward's cultural ecology approach (Firdaus et al., 2022) that emphasizes the interrelationship between cultural adaptation (in this case, religious practices) and the environment (Palos Rey & Diez Bosch, 2024). Its foundation is built on transforming consciousness through a faith-based approach, where sermons, doctrines, and catechesis focus on the call to care for the earth, Genesis 2:15, and the responsibility to restore creation (Romans 8:19-21). This approach is not only in line with the spirit of the *Laudato Si'* Encyclical but is also reinforced by the studies of Jerpan et al. (2023) on ecological spirituality and Kareli (2022) on the ecological church, which together affirm that a strong intrinsic motivation for environmental preservation stems from the formation of a deep theological consciousness (Massaro, 2023). This spiritual motivation is then accommodated in a participatory community structure, which has been empirically proven to foster a sense of collective ownership and responsibility, as confirmed in the studies by KAAprianto et al. (2023) and Feby et al. (2022). This participatory structure is also an actualization of the concept of the Church as an "ecological network" proposed by Rochmaniah (2024) and the function of the Church as the "body of Christ" (1 Corinthians 12). On a practical level, collaboration with the government and social institutions is an application of the principle of Proverbs 15:22 and at the same time fulfills the legal-formal aspects as mandated in Law No. 32 of 2009 concerning Environmental Protection and Management, the implementation of which is discussed by Sulistiyawati & Kusumawardhani (2023). This kind of collaboration ensures the transfer of technical expertise and program sustainability, a principle also found in the Participatory Action Research (PAR) methodology according to Kemmis, McTaggart, & Nixon (2014). Thus, this integrative model is not only effective for physical greening but also succeeds in strengthening social cohesion and community commitment to caring for nature, making it an example of a deeply rooted, sustainable, and theologically and academically grounded environmental movement (Lai &

Tortajada, 2021).

Steps Taken to Prepare Land for Reforestation

Land preparation for reforestation is carried out through planned and holistic technical measures (Sršen & Štefanac, 2023). Manual land clearing is in line with the principles of sustainable agriculture (Feby et al., 2022) and reflects stewardship in Genesis 2:15. Soil conservation via terracing and rorak implements techniques from KAAprianto et al. (2023) and the ecological wisdom of Julian Steward (Firdaus et al., 2022);(Tatay-Nieto, 2020), while also reflecting responsibility for creation (Deuteronomy 26:1-2). The preparation of planting holes (50x50x50 cm) and organic fertilization apply the principles of ecological restoration (Hadi, 2023), similar to the metaphor of beneficial soil in Matthew 13:3-8. Stake marking reflects ecological spatial planning (Prayogi, 2024) and divine order (1 Corinthians 14:33). The commitment to no land burning integrates local regulations, environmental ethics (Tapingku et al., 2022), and the principles of *Laudato Si'* (2015) to protect creation (Nguyen, 2023). Overall, this participatory approach embodies Participatory Action Research (Kemmis, McTaggart, & Nixon, 2014) and the analogy of the church as the “body of Christ” (1 Corinthians 12:12-27), combining ecological science, local wisdom, and theological foundations for ecosystem sustainability.

Challenges Faced During the Land Clearing Stage

Land clearing is a complex and interrelated system of problems, exacerbated by difficult topography, challenging vegetation, limited tools, and threats from wildlife (Boustani, 2025). This complexity is a manifestation of rural development challenges as examined in Julian Steward's cultural ecology (Firdaus et al., 2022). However, the community responds with mutual assistance and perseverance strategies, as expressed by the informant: “We use the manual labor of residents working together, even though it takes longer.” This collaborative response is in line with the findings of KAAprianto et al. (2023) and Feby et al. (2022) on the effectiveness of participatory approaches, while also reflecting Participatory Action Research (Kemmis, McTaggart, & Nixon, 2014). Faith education strengthens this community strategy, aligning with Jerpan et al.'s (2023) study on ecological spirituality. From a theological perspective, this perseverance and cooperation reflect responsibility for creation (Genesis 2:15) and the principle of working for God (Colossians 3:23). The resilience of the community, strengthened by its foundation of faith, is the key to overcoming obstacles, making this physical process a tangible practice of faith in caring for our “common home” (*Laudato Si'*), so that challenges become a spiritual journey in our calling as stewards of creation (de Oliveira & de Souza, 2025).

Social and Spiritual Values for Land Rehabilitation and Sustainable Seed Selection

The seed selection process applies a holistic approach that integrates local wisdom with modern science, in line with Julian Steward's concept of cultural ecology (Firdaus et al., 2022). The selection criteria consider technical feasibility, as well as social, economic, and spiritual values for the sustainability of the program. Ecologically, the selection of seedlings that are adaptive to local conditions in Southeast Aceh is an



application of the principles of ecological restoration (Syahrani et al., 2024) and caution in selecting indicator species (Hadi, 2023). Wijaya (2024) integrates economic and social aspects to ensure long-term benefits for the community. Theologically, this approach is based on the recognition that all creation belongs to God (Psalm 24:1) and the calling of humans as wise stewards (Genesis 2:15). The correlation between the community's practical knowledge and technical implementation creates a strong ecological foundation, reflecting the principles of Participatory Action Research (Kemmis, McTaggart, & Nixon, 2014) and the findings of Feby et al. (2022) and KAAprianto et al. (2023) on the importance of community involvement. From a spiritual perspective, choosing the right seeds is a manifestation of moral responsibility in caring for our "common home" (Laudato Si') and reflects ecological spirituality (Jerpan et al., 2023) and wisdom from God (Proverbs 2:6). This approach as a whole reflects a profound understanding of complex local ecosystems and provides a solid foundation for ecologically, socially, economically, and spiritually sustainable land rehabilitation (Goeko, 2024).

Seed Sources in the Implementation of the Reforestation Program

The seed sourcing strategy implemented in this reforestation program is an optimal model that combines community independence with strategic collaboration, an approach rooted in the integral ecology vision taught by the Catholic Church and supported by various theoretical studies (Felcis & Felcis, 2020b). The combination of independent seedling cultivation by the community not only reflects the spirit of active and participatory responsibility as emphasized in *Laudato Si'* (art. 14) but is also in line with the principles of Participatory Action Research (Kemmis, McTaggart, & Nixon, 2014) and the findings of KAAprianto et al. (2023) and Feby et al. (2022) on the effectiveness of community-based approaches in reforestation programs. Biblically, this practice reflects the principle of Genesis 2:15, where humans are called to actively "work and take care" of God's creation (Inostroza, 2025). The collection of local seeds is a practice that is deeply in line with the call of *Laudato Si'* (art. 146) to value local biodiversity, while also reflecting Julian Steward's (Firdaus et al., 2022); (Przybyłowski, 2021) concept of cultural ecology regarding cultural adaptation to specific environments. From a biblical perspective, the use of superior local seeds is reminiscent of the parable of the sower in Matthew 13:3-8, where seeds that fall on good soil produce a bountiful harvest. Meanwhile, government support that complements this model is in line with the principle of subsidiarity in the social teachings of the Church, as well as with the findings of Sulistyawati & Kusumawardhani (2023) on the importance of a legal framework and institutional support in environmental conservation programs. *Laudate Deum* (art. 4) further underscores the urgency of adopting a contextual and effective approach, in which the use of adapted local seeds is a wise response to the ecological crisis. This triune approach creates a sustainable and resilient system, building ecological resilience as studied by Syahrani et al. (2024), while also being a tangible manifestation of respect for "the law written in the universe" (*Compendium of the Social Doctrine of the Church*, art. 459). Thus, the diversification of seed sources is not merely a technical strategy but an actualization of the call to be responsible stewards of creation, glorifying the Creator through the restoration of the integrity of His creation, maintaining intergenerational

justice, and realizing ecological solidarity with the entire community of life.

Optimal Planting Strategy

This optimal planting strategy is successful because of the holistic integration of traditional ecological knowledge with modern scientific techniques, reinforced by a deep spiritual and social approach. The agroforestry system implemented is not only in line with the findings of KAAprianto et al. (2023) on the importance of vegetation diversification in reforestation but also reflects the wisdom of Isaiah 65:21-22 on building and planting for future generations. The determination of the right climatological timing based on local knowledge demonstrates a deep understanding of ecological dynamics, which is also the focus of the study by Syahrani et al. (2024), while reflecting respect for the laws of nature as part of God's creation (Genesis 8:22). The precision of planting techniques with optimal depth and spacing is an application of the principles of restoration ecology as described by Hadi (2023), while water conservation through mulching actualizes the principle of intergenerational justice in *Laudato Si'* (art. 159) on the preservation of water resources. The aspect of sincere community involvement not only builds ecological networks as stated by Rochmaniah (2024), but also reflects the spirit of mutual cooperation as the body of Christ (1 Corinthians 12:12-27) and the practice of Participatory Action Research (Kemmis, McTaggart, & Nixon, 2014). This multidimensional combination creates an artificial ecosystem that is able to adapt to the local conditions of Southeast Aceh, ensuring a seedling survival rate of 80-90% as projected, while also building a foundation for long-term sustainability for ecosystem rehabilitation, which theologically fulfills humanity's calling as the image of God (*Imago Dei*) to restore the wholeness of creation.

Participation of Local Communities in Supporting Planting Activities

The participatory model of the reforestation program in Southeast Aceh is symbiotic and sustainable, representing a concrete manifestation of the ecological ecclesiology developed by Kareli (2022). The community is involved not only as laborers but also as program owners, fostering a sense of collective ownership. This involvement, as expressed by RN, theologically reflects the concept of the Church as the "body of Christ" (1 Corinthians 12:12-27), where each member contributes according to their gifts. The fact that participation "reached 100% of the target participants" proves the effectiveness of the Participatory Action Research approach (Kemmis, McTaggart, & Nixon, 2014), which prioritizes community involvement from the planning stage while actualizing the principle of subsidiarity in Catholic social teaching. Meanwhile, the reduction in "maintenance costs by up to 50%," as noted in the observations, not only demonstrates economic efficiency but also reflects the principles of distributive justice and solidarity, which are pillars of integral ecology in *Laudato Si'* (art. 159). This participatory approach, which is also in line with the findings of Feby et al. (2022) and KAAprianto et al. (2023) on the success of community-based greening programs, not only guarantees the technical success of planting but also builds community resilience in maintaining long-term environmental sustainability. The "community pride" manifested in the published documentation of activities is evidence of the formation of strong social capital, as conceptualized in the Ecological Network theory (Rochmaniah,



2024). Theologically, this sense of pride and ownership can be seen as the fruit of spiritual transformation initiated through faith education, which encourages congregations to see environmental preservation as an integral part of their calling as stewards of creation (Genesis 2:15). Thus, this participation model successfully transcends short-term pragmatic interests and builds a sustainable commitment rooted in values of faith, social solidarity, and ecological responsibility, which ultimately embodies the spirit of “being stewards of God's creation” as affirmed in *Laudato Si'* (art. 217).

Tree Care Measures

Based on an analysis of the reforestation program in Southeast Aceh, it can be concluded that this post-planting care strategy has been successful due to the synergistic integration of modern technical knowledge with local wisdom, supported by a structured monitoring system and sustained community participation. The combination of regular watering, weed management, organic fertilization, and a spiritual approach creates a comprehensive care system. Theoretically, this approach is in line with the concept of integral ecology in *Laudato Si'* (Pope Francis, 2015) and the principle of Shared Christian Praxis (Groome, 1980), which combines theological reflection with concrete action. From a theological perspective, consistent plant care practices reflect ecological spirituality (Kristiantoro, 2022), in which caring activities become concrete symbols of stewardship based on Genesis 2:15. This activity also reflects the hope for the restoration of creation in Romans 8:19-21, as affirmed in the DIKPLHD document (2024). This collective care model represents the church as a community of stewardship of life (KWI, 2019) with a structured monitoring system that reflects the principle of accountability, as in the parable of the talents (Matthew 25:14-30). This strategy not only ensures the survival of seedlings with a success rate of 80-90% but also builds long-term ecological resilience through the spiritual transformation of the community. The post-planting care program becomes a vehicle for forming an ecological community that not only restores the environment but also human relationships with God, fellow human beings, and all of creation, while also serving as a concrete response to the global ecological crisis (Global Forest Watch, 2024).

How to Face Challenges

Strategies for dealing with challenges such as pest attacks and extreme weather conditions have been successfully implemented through a multi-layered approach that combines prevention, natural intervention, and comprehensive ecological adaptation. This approach is theoretically in line with the concept of Integrated Pest Management (Hadi, 2023) and the principles of ecosystem resilience (Syahrani et al., 2024), while also reflecting the principles of integral ecology from *Laudato Si'* (Pope Francis, 2015), which emphasizes the interconnectedness of all elements of the ecosystem. By prioritizing affordable and environmentally friendly local materials, and supported by a regular community monitoring system, this program not only addresses immediate problems but also builds long-term ecosystem resilience. Theologically, this approach is based on the understanding that God's creation is essentially “very good” (Genesis 1:31) and that humans are called to be wise stewards (Matthew 25:14-30) by using natural resources responsibly. The use of natural materials and minimalist intervention techniques



reflects a respect for the integrity of creation as taught in *Laudato Si'* (art. 115-118), while perseverance in the face of weather challenges reflects the spirit of hope and perseverance in Romans 5:3-5 and James 1:2-4. The practice of regular community monitoring also demonstrates the application of the principle of the body of Christ (1 Corinthians 12:12-27), where each member supports and is responsible for the restoration of creation. This strategy is reinforced by the application of Participatory Action Research (Kemmis, McTaggart, & Nixon, 2014), which enables the community to collectively develop contextual solutions, in line with the findings of KAAprianto et al. (2023) on the effectiveness of community-based approaches. Through a combination of local wisdom, modern ecological principles, and ecological spirituality developed by Kristiantoro (2022), this program has succeeded in building a resilience system that not only addresses short-term disturbances but also creates an ecosystem that is adaptive to long-term climate change, while realizing the call of faith to “cultivate and keep” God’s garden of creation (Genesis 2:15) in the Southeast Aceh region.

Tree Growth Monitoring Process

The tree growth monitoring process in this reforestation program implements a structured, participatory system that integrates technical and spiritual aspects, reflecting the integral ecology approach emphasized in *Laudato Si'* (Pope Francis, 2015). Periodic monitoring with measurable parameters forms the basis for objective evaluation, as explained by JP (March 9, 2025) regarding the recording of “tree height, trunk diameter, and leaf health,” which is in line with the principles of ecological monitoring in the study by Syahrani et al. (2024) and the Participatory Action Research approach (Kemmis, McTaggart, & Nixon, 2014). Theologically, this careful monitoring practice reflects the spirit of responsible stewardship of God’s creation (Luke 12:48b), in which the community is called to be faithful in small ways in caring for the trees entrusted to them. The monitoring system implemented was successful due to a combination of simple scientific methods and organized community involvement, forming what DIKPLHD (2024) refers to as a community-based environmental management system. With clear parameters, consistent documentation, and transparent reporting mechanisms, this program is not only able to track the physical development of trees but also builds collective accountability that reflects the principle of shared responsibility as members of the body of Christ (1 Corinthians 12:26). This participatory approach also actualizes the method of *Shared Christian Praxis* (Groome, 1980), in which theological reflection on the stewardship of creation is manifested in the concrete action of regular monitoring. This mechanism ensures that any problems can be identified early and dealt with quickly, while strengthening the community’s sense of ownership, which is the foundation of long-term ecological resilience (KAAprianto et al., 2023). By setting a survival target of 85% and conducting periodic evaluations, this program not only measures technical success but also serves as an indicator of the community’s commitment to fulfilling its calling as the image of God who restores the integrity of creation, while embodying the principle of intergenerational justice emphasized in *Laudato Si'* for the sustainable future of Southeast Aceh.

Program Evaluation

The evaluation of this reforestation program is used comprehensively and systematically for future development through several key approaches that reflect the principles of adaptive learning in *Participatory Action Research* (Kemmis, McTaggart, & Nixon, 2014). The evaluation is used to improve seedling selection based on field performance, as explained by JP (March 9, 2025): “If a tree species has a low survival rate, we will replace it with a more adaptive species in the future.” This evidence-based approach is in line with the findings of Syahrani et al. (2024) on the importance of species adaptation based on local ecological conditions, while also reflecting practical wisdom (phronesis) in the Christian tradition that prioritizes learning from experience. Theologically, this mechanism of continuous evaluation and improvement actualizes the spirit of ecological conversion emphasized in *Laudato Si'* (art. 217-219), whereby communities actively reflect on their actions and continually renew their commitment to care for creation. The well-documented trial-and-error process also reflects the principle of responsible stewardship based on the Parable of the Talents (Matthew 25:14-30), in which faithful servants develop and increase what their master has entrusted to them. The evaluation system that has been implemented has become a driving force for continuous improvement, building an adaptive learning mechanism that allows for continuous refinement based on field evidence, as is the principle of learning from nature in integral ecology (Pope Francis, 2015). This approach not only ensures that each subsequent reforestation cycle will be more effective and targeted but also builds the long-term resilience of the program through a process that is in line with the principles of sustainable development in DIKPLHD (2024) and strengthens the Church's calling as a learning community that continues to grow in the work of creation restoration.

Education Programs by the Church

The environmental education programs organized by the Church can be grouped into four complementary strategic approaches based on a solid theoretical framework. The integration of environmental values into spiritual and catechetical activities is the main foundation, as explained in JP (March 9, 2025) regarding “ecological catechesis for the faithful” and “retreats that integrate faith and ecology.” This approach is theoretically in line with the *Shared Christian Praxis* model developed by Groome (1980) and the concept of ecotheology in *Laudato Si'* (Pope Francis, 2015), while also reflecting the ecological spirituality studied by Kristiantoro (2022) on environmental stewardship as a form of worship. From a biblical perspective, this approach is rooted in the understanding that all creation belongs to God (Psalm 24:1) and that humans are called to be responsible stewards (Genesis 2:15). This spiritual approach is reinforced through the use of various communication channels, as stated by BP (March 9, 2025) regarding the delivery of messages “through catechesis, sermons, or joint meetings,” which demonstrates the application of the principle of multimodal communication in environmental education. In addition, this program develops practical environmental education through habit formation, as reflected in various applied activities that emphasize not only theoretical knowledge but also the formation of concrete habits. Finally, the development of a collaborative network with various stakeholders



represents the implementation of the ecological network concept proposed by Rochmaniah (2024) and the principle of synodality in the Catholic Church. This church environmental education program is successful because of its comprehensive approach that combines spiritual transformation with practical training, involves all levels of the congregation, and builds an inclusive collaborative network. This educational model, which focuses not only on theoretical knowledge but also on the formation of practical habits and skills, creates a solid foundation for sustainable behavioral change in caring for the environment in the church community and beyond, while realizing the Church's calling as a sacrament of salvation for all creation in accordance with the integral ecological vision proclaimed in *Laudato Si'*.

How the Church Involves the Congregation in Reforestation Programs

The Church implements a highly effective strategy for involving the congregation in reforestation programs through a holistic and inclusive approach based on the theory of *Participatory Action Research* (Kemmis, McTaggart, & Nixon, 2014) and the principles of integral ecology from *Laudato Si'* (Pope Francis, 2015). A spiritual approach and family values are the main foundations of congregational involvement, as explained in JP (March 9, 2025) about “a heart-to-heart approach, emphasizing that this program is a shared task as guardians of God's creation.” Theologically, this approach is based on the concept of stewardship in Genesis 2:15 and the principle of fellowship (*koinonia*) in Acts 2:42-47, where the community of believers is seen as a “big family building together,” as described by BP (March 9, 2025). The intergenerational and sustainable approach noted in the observation involves “school students (grades 7-9)” in planting and a “rotation plan” for long-term care, representing the concrete implementation of the principle of intergenerational justice in *Laudato Si'* (art. 159) and the concept of sustainable ecological education according to Kristiantoro (2022). This structured rotation system not only ensures continuity of care but also builds an intergenerational ecological network, as stated by Rochmaniah (2024), while reflecting the spirit of ecological solidarity that characterizes ecological ecclesiology (Kareli, 2022). The success of community involvement, marked by a satisfaction rating of 9/10 and 100% participation of the target participants, proves the effectiveness of a strategy that combines spiritual approaches, participatory communication, structural involvement, and sustainable systems. This model not only successfully mobilized participation but also built a high sense of ownership through the actualization of the principles of subsidiarity and participation in the social teachings of the Catholic Church, which are key to the sustainability of the reforestation program in Southeast Aceh and the realization of the Church's vision as a community that preserves life and redeems creation from ecological damage.

CONCLUSION

This reforestation program proves that environmental conservation efforts based on spirituality can be a transformative practice of faith. This program is not merely a physical project but a pilgrimage of worship to restore our “shared home,” where each stage is carried out with an awareness of caring for the work of the Creator. Its main strength lies in the synergistic integration of spiritual, social, and technical dimensions.



The Church embodies faith in concrete action through a participatory community structure, reflecting the principle of the Church as the Body of Christ, where each member contributes according to their gifts. On a practical level, the program implements intelligent and sustainable ecological approaches, such as no-burn land preparation, local seed selection, and agroforestry systems, which reflect intergenerational justice. Through education and cross-generational engagement, this program has succeeded in fostering an ecologically conscious community of faith. In the end, the program stands out as a great example of integral ecology because it successfully brings together personal change, community support, and practical sustainable actions, providing a complete solution to the ecological crisis through a “liturgy of life” that helps heal the environment.

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