

Sustainable Character Building: A Model for Integrating Coastal Islamic Values into Secondary Education

Nuzulul Afillah¹

Suni Amanah²

Narti Anwarina³

Raikhan⁴

nuzululafillah@gmail.com

sunnyamanah23@gmail.com

silmarona79@gmail.com

reihan.lmg@gmail.com

Abstract: This study aims to analyze the implementation of sustainability values within various educational activities at secondary education, encompassing intracurricular, extracurricular, and co-curricular programs. The scientific novelty lies in the development of a holistic integration model based on iman, ilmu, amal (faith, knowledge, practice) within the context of coastal Islamic education at secondary education. A descriptive qualitative approach was employed to explore how the principles of sustainability spiritual, social, cultural, and environmental are integrated into Islamic-based school activities. Data were collected through observation, documentation, and literature review. The findings reveal that intracurricular activities incorporate sustainability values through ecological responsibility, local resources, and green technologies. Extracurricular programs promote spiritual, social, and cultural sustainability. Co-curricular activities cultivate empathy and moral responsibility. Theoretically, this integration succeeds through a faith-based normative driver (khalifah, amanah, ihsan) that aligns moral identity with stewardship practices, strengthening intrinsic motivation for pro-environmental behavior. This study concludes that Islamic education holds great potential in fostering sustainable character development through a holistic approach, reinforcing Islamic schools as agents of social transformation toward sustainable development.

Keywords: Islamic Education, Sustainability, Intrakurikular, Extracurricular, Co-Curricular, Sustainable Character

Abstrak: Penelitian ini bertujuan untuk menganalisis penerapan nilai-nilai keberlanjutan dalam berbagai kegiatan pendidikan di pendidikan menengah, meliputi program intrakurikuler, ekstrakurikuler, dan kokurikuler. Kebaruan ilmiah terletak pada pengembangan model integrasi holistik berbasis iman, ilmu, amal (iman, pengetahuan, praktik) dalam konteks pendidikan Islam pesisir di tingkat pendidikan menengah. Pendekatan kualitatif deskriptif digunakan untuk mengeksplorasi bagaimana prinsip-prinsip keberlanjutan spiritual, sosial, budaya, dan lingkungan diintegrasikan ke dalam kegiatan sekolah berbasis Islam. Data

¹ Institut Agama Islam Tarbiyatut Tholabah, Lamongan

² Institut Agama Islam Tarbiyatut Tholabah, Lamongan

³ Institut Agama Islam Tarbiyatut Tholabah, Lamongan

⁴ Institut Agama Islam Tarbiyatut Tholabah, Lamongan

dikumpulkan melalui observasi, dokumentasi, dan tinjauan literatur. Temuan ini mengungkapkan bahwa kegiatan intrakurikuler menggabungkan nilai-nilai keberlanjutan melalui tanggung jawab ekologis, sumber daya lokal, dan teknologi hijau. Program ekstrakurikuler mempromosikan keberlanjutan spiritual, sosial, dan budaya. Kegiatan kokurikuler menumbuhkan empati dan tanggung jawab moral. Secara teoritis, integrasi ini berhasil melalui pendorong normatif berbasis iman (khalifah, amanah, ihsan) yang menyelaraskan identitas moral dengan praktik penatalayanan, memperkuat motivasi intrinsik untuk perilaku pro-lingkungan. Penelitian ini menyimpulkan bahwa pendidikan Islam memiliki potensi besar dalam mendorong pengembangan karakter yang berkelanjutan melalui pendekatan holistik, memperkuat sekolah Islam sebagai agen transformasi sosial menuju pembangunan berkelanjutan.

Kata Kunci: Pendidikan Islam, Sustainability, Kegiatan Intrakurikuler, Ekstrakurikuler, Ko-Kurikuler, Karakter Berkelanjutan

Introduction

Modern education is faced with the demand to integrate sustainability values in order to address increasingly complex environmental and social crises (MuhammedZein and Abdullateef 2025). Islamic education, as an integral part of the education system in Indonesia, has great potential to incorporate sustainability values through the curriculum as an effort to preserve culture and the environment (Hajar, 2024), especially in coastal areas that have high social and ecological vulnerability (Athoillah, 2024). This integration is important to shape a generation of high school students who not only master science but also have awareness in preserving the environment and local culture (Subekti and Hilmy 2024). Previous literature reviews highlight several approaches to integrating Islamic educational values with environmental sustainability. Research reveals that Islamic ecological boarding schools can shape students' environmentally conscious character through comprehensive eco-Islamic indicators, such as curriculum, teaching methods, and community partnerships (Athoillah, 2024). Meanwhile, other studies emphasize the importance of Islamic education based on local coastal culture in strengthening identity and tradition through community involvement and the development of Islamic values rooted in local wisdom (Subekti and Hilmy 2024). In addition, research in coastal areas highlights the values of Islamic ecotheology contained in local traditions that nurture the ecological awareness of coastal communities (Latuapo, 2024). Research by Suprapti

shows further evidence that adopting a living heritage approach to preserving the sustainability of Islamic architecture and culture on the north coast of Java (Suprapti and Fatimah 2024).

Modern education is faced with the demand to integrate sustainability values in order to address increasingly complex environmental and social crises. In the global context, the concept of Education for Sustainable Development (ESD) has emerged as an effort to instill ecological awareness, social responsibility, and critical thinking skills at every level of education. Through sustainability-oriented education, students are expected not only to understand environmental issues cognitively but also to be able to internalize ethical values, social empathy, and planetary awareness as the basis for action (MuhammedZein and Abdullateef 2025). This integration effort requires a paradigm shift in education that no longer focuses solely on academic aspects, but also on shaping sustainable character and caring for the future of the earth (Torres, Simões, and Pinto 2024).

Despite these advances, existing studies have primarily focused on Islamic boarding schools (pesantren) or elementary education, with limited attention to the senior high school level (SMA/MA) in coastal areas. Furthermore, prior research has not explicitly connected the ecological vulnerability of coastal regions such as marine pollution, abrasion, and declining fish stocks to the need for an adaptive curriculum that embeds sustainability across intra-, extra-, and co-curricular activities. The present study addresses this gap by focusing on Al Amin High School in Tunggul Village, Paciran District, Lamongan Regency, a coastal area with high ecological sensitivity. Unlike previous work by Athoillah et al. on eco-pesantren or Subekti & Hilmy on coastal culture, this study develops a holistic integration model that simultaneously addresses environmental, social, cultural, and spiritual dimensions within a single institutional framework at the secondary level (Athoillah, A., Sukoharsono, E. G., Ciptadi, G., & Yanuwiadi 2024; Subekti and Hilmy 2024).

Secondary education is a very strategic phase of development for instilling sustainability values. During adolescence, individuals are in the process of searching for their identity and forming their value system, so education plays an important role in guiding their moral and social orientation (Parry and Metzger 2023). Several studies show that adolescents have a high level of readiness to understand and take action on

sustainability issues when given a contextual and participatory learning approach (Koçulu 2025). For example, the Young Persons' Plan for the Planet study shows that involving high school students in action-based programs can significantly increase awareness, attitudes, and sustainable behavior (Ian et al. 2019). This confirms that high school is the right time to strengthen students' agency in supporting the sustainable development agenda (Sustainable Development Goals).

Although the urgency has been widely voiced, there is still a gap in the implementation of sustainable values integration at the high school level. Many curricula at this level are still fragmented, with sustainability issues only appearing partially in certain subjects such as geography or biology, without a cross-disciplinary approach. Other obstacles also arise from limited teacher training, a curriculum burdened by national exams, and a lack of school policy support in adopting a whole-school approach to ESD (Wolff and Ehrström 2020). As a result, the potential of high schools as a forum for shaping a sustainability-conscious generation has not been optimally utilized. Therefore, further research is needed to explore ESD integration strategies that are contextual, interdisciplinary, and relevant to the characteristics of high school students.

The scientific novelty of this article is the development of a model for integrating sustainability values specifically into the Islamic education curriculum in the context of coastal Islamic education culture at the upper secondary level. This approach not only emphasizes environmental values but also unique local cultures that are vulnerable to change, thereby making a new contribution to the field of Islamic education and sustainability in coastal areas.

The research problem is how to integrate sustainability values into the Islamic education curriculum to preserve coastal Islamic education culture, and how this impacts the understanding and attitudes of high school students. The purpose of this article is to find patterns of sustainability value integration in the Islamic education curriculum that are contextual and relevant to the preservation of coastal Islamic culture among high school students.

Research Method

This study uses a qualitative approach because it seeks to explore the practice of teaching sustainability values in secondary education to find patterns of integration

with Islamic religious education, especially in coastal areas. The type of research used is a case study method in a secondary education unit in a pesantren environment, namely Al Amin High School in Tunggu Village, Paciran District, Lamongan Regency. This is to find the integration of sustainability values in the Islamic education curriculum in secondary schools located in coastal areas and in pesantren.

Informants in the study were selected purposively, consisting of the principal and curriculum deputy, three Islamic education teachers, and five students selected through purposive sampling, namely class presidents.

Data was collected through in-depth interviews, participatory observation, and documentation studies of the curriculum and teaching materials used. The interviews explored the understanding and perceptions of administrators, teachers, and students regarding sustainability-related programs, as indicated by their understanding of the concept of sustainability, awareness of cultural preservation, and application of these values in learning activities and the school environment. Teachers were asked about the implementation of sustainability activities, while students were asked about the implementation of and their response to these activities. Observations focused on the learning process that integrated sustainability values and activities related to sustainability. Documents obtained as evidence of the continuity of sustainability-related activities included teacher teaching modules, activity program schedules, and activity program schedules.

To ensure data validity, this study employed source triangulation (comparing information from principals, teachers, and students) and technique triangulation (cross-checking interview data with observation results and document analysis). For example, teachers' statements about waste management practices were verified through direct observation of school greening activities and review of the PAI teaching module.

Data analysis followed thematic analysis techniques (Ubaidillah 2022) with the following stages: 1) Data condensation: transcribing interviews, coding raw data into initial themes (e.g., "ecological responsibility," "cultural preservation," "spiritual sustainability"). 2) Data display: organizing coded themes into matrices and tables (see Table 1) to identify patterns across activity types. 3) Conclusion drawing and verification: interpreting patterns and cross-checking with theoretical frameworks

(ESD, khalifah, amanah, ihsān). The coding process was iterative, with categories refined through repeated reading of transcripts and field notes

Result And Discussion

Education of sustainability values in high school

a. Intracurricular Education Programs

Islamic Religious Education (IRE)

In PAI subjects, sustainability values are integrated through materials that emphasize the role of humans as caliphs on earth who are responsible for maintaining the balance of nature and environmental sustainability, In accordance with the words of Allah in the Qur'an Surah Al-An'am verse 165 which reads:

وَهُوَ الَّذِي جَعَلَكُمْ خَلَائِفَ الْأَرْضِ وَرَفَعَ بَعْضَكُمْ فَوْقَ بَعْضٍ دَرَجَاتٍ لِّيَبْلُوكُمْ فِي مَا آتَاكُمْ إِنَّ رَبَّكَ سَرِيعُ الْعِقَابِ وَإِنَّهُ لَغَفُورٌ رَّحِيمٌ

Learning includes understanding environmental ethics in Islam, concepts of social justice, social responsibility, and ecological concern as part of Muslim worship and character. PAI teachers associate this teaching with the practice of activities such as waste management in the school environment, greening, and the invitation to maintain cleanliness as part of maintaining God's creation. This approach is in line with research findings that show that the integration of ecological values in Islamic religious education strengthens attitudes of environmental responsibility in students (Hal et al. 2024)

Craft Subject: Cosmetology and Culinary Discipline

Handicraft subjects in the field of cosmetology and gastronomy instill the value of sustainability through the teaching of techniques and concepts that are environmentally friendly and resource efficient. For example, in gastronomy, students are taught the use of local and healthy foodstuffs, reducing food waste, and managing organic waste as compost. The learning objective is to form students who are able to manage natural resources wisely and responsibly, in line with the principles of sustainable development and coastal local wisdom. This aspect is very important considering that coastal food culture has a strong socio-ecological role. In cosmetology, the value of sustainability is realized through the use of natural ingredients and techniques that do not damage the environment, as well as awareness of the

importance of maintaining skin hygiene and health, as part of sustainable self-care. This approach supports the formation of an attitude of caring for the environment and developing sustainable practical skills (Abdillah et al. 2025).

Specialization Subjects: Electric, Motorcycle Electrical, and Automotive Welding (Machining)

In engineering specialization subjects such as electric welding, motorcycle electrical, and automotive, the value of sustainability is implemented through the introduction of energy-saving and environmentally friendly technology. For example, in motorcycle electrical lessons, students are introduced to electric motorcycles as an alternative vehicle that reduces carbon emissions, in accordance with the principle of reducing negative impacts on the environment (Digilib STEKOM, 2024).

In addition, electric and automotive welding learning emphasizes the importance of tool and machine maintenance to extend service life, reduce e-waste, and use environmentally friendly materials whenever possible. The skills gained by students are expected to be able to support sustainable technology choices in life and work, as well as prepare them as agents of change in preserving coastal environments that are vulnerable to climate change and ecosystem destruction (Abdillah et al. 2025)

The integration of sustainability values in the Al Amin Tunggal Paciran curriculum shows a realization that is consistent with the concept of Islamic education that instills social and ecological responsibility. A holistic approach involving intra-curricular and extra-curricular, as well as craft and engineering subjects provides a contextual and applicative learning framework. This strengthens the role of coastal Islamic education in shaping the character of students who are not only academically intelligent but also concerned about the preservation of the local environment and culture. The challenges encountered mainly revolve around the availability of adequate learning resources and teacher training to implement sustainability values optimally, as also found in literature studies (Hal et al. 2024; Putri et al. 2025).

The integration of sustainability values in the Al-Amin curriculum aligns with the ESD framework by embedding cognitive, skills-based, and affective domains. However, what distinguishes this model is its faith-based normative driver: the concepts of khalifah (stewardship), amanah (trust), and ihsan (excellence in action) create intrinsic motivation for pro-environmental behavior (Ach. Barocky Zaimina

2025). This is not merely an add-on to the curriculum but a moral foundation that shapes students' identity as guardians of the earth.

b. Extracurricular Activities Program

The Art of Hadrah

The purpose of hadrah activities is to foster students' love for Islamic art with religious nuances, strengthen spirituality, and build togetherness in the expression of Islamic culture. Through regular practice and hadrah performances, students learn discipline, appreciate team cohesiveness, and develop an aesthetic sensibility based on religious values. Hadrah is also a da'wah medium that conveys moral and spiritual messages through art, so that it functions as a forum for the formation of students' character and cultural identity (Bie et al. 2025). In the context of sustainability, hadrah plays a role in instilling the spiritual value of sustainability, namely moral and ethical sustainability in social life. Values such as harmony, togetherness, and respect for local traditions are part of cultural sustainability that is important to preserve cultural heritage. Thus, hadrah not only preserves traditional Islamic art, but also teaches students to maintain a balance between modern developments and sustainable cultural preservation.

Band music

The band's music activities aim to foster creativity, confidence, and the ability to work together in a group. Through the process of rehearsals, arrangements, and performances, students learn how to bring together different ideas, manage time, and express themselves positively through music. This activity also encourages students to get to know various genres of music, as well as develop social empathy through works that reflect humanitarian or environmental issues. The band's music reflects the social and emotional value of sustainability. Students learn to appreciate diversity, manage emotions, and build healthy social relationships. In addition, song themes that raise environmental and peace issues can increase awareness of global responsibility (Huang, 2023). In this way, music is an effective means of instilling the value of sustainability literacy awareness to live in harmony with the environment and society.

Batik

The main purpose of batik activities in schools is to train hand skills, foster appreciation for local art and culture, and preserve Indonesia's cultural heritage. Students are introduced to traditional and modern batik techniques, starting from the process of drawing patterns, tinkering, to natural coloring. This activity trains students' patience, precision, and creativity in producing works of high cultural value (Purwastuti, 2022). Batik activities directly reflect environmental and cultural sustainability values. Through the use of natural materials and eco-friendly dyes, students are taught the importance of maintaining ecosystems in cultural practices. Batik is also a medium to preserve local traditions that are increasingly eroded by modernization. Thus, this activity fosters awareness that sustainability is not only related to nature, but also the preservation of the nation's cultural identity which is part of social sustainability.

Scout

Scout activities aim to shape the character of students so that they become disciplined, independent, and responsible individuals. Through various activities such as camping, exploration, life skills, and social activities, students learn the values of leadership, mutual cooperation, and love for the homeland. Scouts also encourage the development of soft skills such as communication, teamwork, and problem solving (Hadiyani, 2022). From a sustainability perspective, Scouts contain a very strong environmental sustainability value. Outdoor activities foster ecological awareness and a sense of responsibility for environmental sustainability. In addition, the value of social care and economic independence taught through entrepreneurial activities also supports social and economic sustainability aspects. Thus, Scouts become a strategic forum to form a young generation with resilient character, care about the environment, and are ready to maintain the sustainability of life together

Student organization

The goal of student organizations (Student Councils) is to train leadership skills, responsibility, and democratic participation among students. Through various activities such as meetings, work programs, and social activities, students learn to make decisions, make plans, and cultivate a visionary leadership spirit. The Student Council is also an important forum to form social character and increase the sense of ownership of the school (Gheorghe et al. 2025). In the context of sustainability, the

Student Council reflects the value of social sustainability, namely the sustainability of social relations, participatory leadership, and inclusive community development. Through social activities and environmental awareness programs, the Student Council can play a role in building a school culture that is aware of sustainability. For example, with energy-saving campaigns, waste management, or environmental love movements. Thus, the Student Council is not only a leadership training institution, but also a social laboratory for the younger generation to realize sustainable development in the educational environment.

c. Co-curricular Activity Program

Greening of the school yard and the front of the classroom

The main goal of reforestation activities is to create a beautiful, healthy, and comfortable school environment for learning. Through this activity, students are trained to plant and care for plants, understand the function of vegetation on air quality, and improve the aesthetics of the school. Greening is also part of contextual learning where learners learn directly about ecosystems and the role of humans in maintaining the balance of nature (Jiménez-Guerrero, 2022). From the perspective of environmental sustainability, this activity fosters ecological awareness among students. They learned that environmental sustainability starts from simple actions such as planting trees and caring for the garden. This activity also strengthens the sense of social responsibility for nature as a shared heritage for future generations.

Preservation of local traditional clothes

The purpose of local clothing preservation activities is to instill a sense of pride in the nation's culture and train appreciation for the diversity of traditional Indonesian clothing. Through the activity of wearing and learning the philosophy of traditional clothing, students understand the historical value and cultural identity of their region (Larissa and Titisari, 2023). This is also a tangible form of school participation in maintaining national cultural diversity. This activity reflects the value of cultural sustainability, namely cultural sustainability through the preservation of local wisdom. By introducing traditional fabrics such as batik, songket, or weaving, students are invited to appreciate the environmentally friendly production process and support the local economy of the artisans

Monday Ceremony

Monday's ceremony aims to foster discipline, a sense of nationalism, and responsibility as a citizen. Through this activity, students learn to appreciate the symbols of the state, listen to moral mandates, and strengthen solidarity between students. The values of discipline and social responsibility are instilled regularly every week. From the perspective of social sustainability, school ceremonies are a means of forming a sustainable national character. The value of togetherness, leadership, and respect for the rules are the foundation of a harmonious and inclusive social life (Ozbay and Karaoglu, 2022)

Blessing Friday

This activity aims to build social awareness through sharing food, alms, or social services every Friday. Students are trained to have empathy, share sustenance, and appreciate the value of togetherness regardless of social status (Taja et al. 2021). This activity strengthens social and spiritual sustainability that is rooted in morality and social solidarity. By sharing regularly, students learn to maintain a balance between personal needs and social responsibility towards society

Ramadan and iftar together and takjil

This activity aims to strengthen faith and deepen understanding of Islamic values through hands-on practices such as sharing food and fostering a sense of togetherness in the holy month. Students learn the meaning of sacrifice, sincerity, and social care. From the perspective of spiritual sustainability, this activity maintains the continuity of moral and spiritual values in modern life. Through the practice of social worship, students understand the importance of living in a spiritual, social, and environmental balance (Wirawati et al. 2025a).

Social Activities

Social activities aim to foster empathy, solidarity, and concern for others, in the form of collecting social funds for friends who are affected by disasters or illnesses, visiting sick friends, and doing devotional work in the environment around the school. Through this activity, students learn the value of humanity, mutual cooperation, and respect for life. This activity is also a means of character education based on real action in the surrounding environment (Wei et al. 2023). In the context of social sustainability, social activities strengthen social networks and strengthen the foundations of

sustainable humanity. Blood donation, for example, not only helps others but also forms awareness of the importance of health and sustainable social contributions.

PHBN/PHBI activities; Mauid Nabi, Isra Mi'raj, HSN

The purpose of PHBN and PHBI activities is to commemorate national and religious holidays to instill national values and spirituality. Through lectures, art performances, and joint prayers, students learn to appreciate history, get to know the examples of religious figures, and strengthen the unity of the people. From the perspective of cultural and spiritual sustainability, this activity plays a role in preserving religious and national traditions that are part of national identity. Values such as tolerance, brotherhood, and love for the homeland are the basis for the nation's social and spiritual sustainability (Nurjihan and Ainurahmah, 2025)

Integration of sustainability values in activities in secondary education of high school

Integration of sustainability values in school activities Modern education, including Islamic education, has a strategic role in instilling sustainability values in students. Schools not only function as a place for the transfer of knowledge, but also as a place for character formation and complete ecological, social, and spiritual awareness. The integration of sustainability values into intra, extra, and co-curricular activities is a concrete step to face global challenges such as environmental crises, moral degradation, and the fading of cultural identity. Islamic education, with the principle of rahmatan lil 'alamin, has great potential to be a foundation in instilling this awareness through contextual and applicative activities (Rohman et al. 2024)

Environmental Sustainability Dimension

The value of environmental sustainability emphasizes human responsibility for the preservation of nature and ecosystems. In the context of schools, this is implemented through various activities that teach students to maintain a balance between human needs and nature conservation. Activities such as the greening of the school yard and the front of the classroom serve to foster students' ecological awareness through real actions. Students not only plant trees, but also learn about the importance of clean air, waste management, and collective responsibility for the surrounding environment. Programs like this have proven to be effective in shaping environmentally friendly behavior among students (Korol and Shushunova, 2022). In

addition, batik activities are also a form of contextual environmental learning. By using natural dyes and local materials, students are taught the importance of maintaining the balance of the ecosystem while preserving local culture. This activity integrates the values of environmental sustainability and cultural sustainability simultaneously (Sifa Nafis Salsabilla et al. 2024). The Scout activities strengthen environmental values through outdoor activities such as exploration and camping. Students are invited to interact directly with nature, understand the importance of natural resources, and learn the principles of simple and energy-efficient living. This is in line with environmental character education that fosters ecological responsibility (Hasriani et al. 2025).

Social Sustainability Dimension

Social sustainability in education focuses on the formation of individuals who are able to live in harmony, work together, and contribute to the welfare of society. Schools play an important role in instilling the values of empathy, leadership, and social solidarity in students. Student Council (Intra-School Student Organization) activities are a vehicle for social and democratic learning. Through meetings, planning, and implementation of social programs, students are trained to think critically, lead, and appreciate differences. The Student Council can also carry out environment-based activities such as energy-saving campaigns or waste management, thereby strengthening the value of social sustainability (Wiedarjati and Sudrajat, 2021).

School band music activities foster cooperation, empathy, and self-expression. Through music, students learn to manage emotions and appreciate the diversity of ideas in harmony. In fact, the theme of the song can contain social and environmental messages, making music an effective means of spreading the value of sustainability (Huang 2023b). The Friday Blessing activities, social compensation, visiting sick friends, and blood donation reflect high social empathy. These activities instill concern and social responsibility for others, as well as strengthening social networks between school residents. Social empathy-based education like this is an important foundation in building a sustainable society (Bie et al. 2022). In addition, Monday Ceremony activities and National Holiday commemorations (PHBN) also have a significant role. This activity builds discipline, a sense of nationality, and the spirit of mutual cooperation, which are important pillars in social sustainability (Wolff and Ehrström, 2020).

Cultural and Spiritual Sustainability Dimension

The value of cultural and spiritual sustainability includes efforts to preserve traditions, moral values, and faith that are the foundation of human life. Schools are an ideal space to instill these values through arts, religion, and culture-based activities. Hadrah activities are a form of preserving Islamic art with religious nuances. Through the art of Islamic music, students learn discipline, cooperation, and spiritual sensitivity. Hadrah is a da'wah medium that teaches harmony between art, morals, and local culture. This value is included in spiritual sustainability, namely moral sustainability and social ethics (Masduki et al. 2024).

Local clothing preservation activities such as the use of batik or regional clothing also foster pride in national identity and cultural sustainability. This is important in the midst of globalization that can erode local culture (Le et al. 2024). Furthermore, Pondok Ramadhan, breaking the fast together, and for takjil is an activity that strengthens spirituality and social solidarity. Through this activity, students learn to share, empathize, and deepen Islamic values in the modern social context (Wirawati et al. 2025b). The commemoration of PHBI (Isra Mi'raj, Prophet's Birthday, National Santri Day) also serves to maintain the continuity of Islamic values in school life. Through this activity, students get to know the history, exemplary values, and spirit of togetherness of Muslims (Yatim et al. 2025)

Synthesis of Sustainability Values in Islamic Education

Based on the description above, it can be concluded that the integration of sustainability values in schools is a tangible manifestation of the application of the principle of rahmatan lil 'alamin in Islamic education. Education is not only oriented to academic results, but also forms students who have ecological, social, and spiritual awareness. The implementation of activities such as hadrah, student council, batik, scouting, and reforestation shows that schools are able to become a comprehensive sustainability learning center covering aspects of knowledge, skills, and life values. Thus, modern Islamic education must continue to adapt to global challenges without losing its cultural and spiritual roots. Schools that systematically integrate sustainability values will give birth to a green, smart, and moral generation, namely a generation that cares about the environment, is socially resilient, and has noble character.

Table below demonstrates a coherent whole-institution approach to sustainability. The key theoretical contribution of this study is the finding that spiritual values do not operate separately from environmental or social values; rather, they reinforce each other. For instance, the concept of amanah (trust) is applied not only to God but also to the environment (school greening) and to society (social services). This integration answers the coastal community's vulnerability to climate change: by training students in energy-saving technologies and ecological awareness, the school prepares agents of change who can mitigate marine pollution and coastal degradation directly. Thus, sustainability education becomes not just an abstract concept but a lived practice addressing real ecological threats faced by Paciran's coastal population

Table: Sustainability Dimensions and School Activity Implementation

Activity Type	Sustainability Dimensions	Implementation & Examples
Intracurricular Education	Environmental, Social, Spiritual	Islamic Education (PAI): Humans as <i>khalifah</i> , environmental ethics, waste management, school greening initiatives.
		Crafts (Prakarya): Use of local food materials, eco-friendly materials, waste reduction practices.
		Technical Specialization: Energy-saving technologies, electric motors, machine maintenance, reduction of electronic waste.
Extracurricular Activities	Spiritual, Social, Cultural	Hadrah: Preservation of Islamic arts, spiritual values, cultural harmony.
		Band Music: Creativity, social empathy, environmental awareness.
		Batik Making: Use of natural dyes, preservation of local cultural heritage.
		Scouting (Pramuka): Ecological awareness, independence, social care.
Co-curricular Activities	Environmental, Social, Cultural,	Student Council (OSIS): Participatory leadership, environmental campaigns, waste management programs.
		School Greening Programs: Planting and maintaining plants, ecosystem

	Spiritual	education.
		Local Clothing Preservation: Cultural appreciation, use of eco-friendly materials.
		Monday Ceremony: Discipline, togetherness, sense of nationalism.
		Blessed Friday (Jumat Berkah): Social empathy, sharing charity, solidarity.
		Ramadhan Boarding Program (Pondok Ramadhan): Faith strengthening, social solidarity.
Social Activities	Social, Spiritual	Blood Donation & Social Services: Empathy, solidarity, social responsibility.
		National & Islamic Holiday Celebrations (PHBN/PHBI): Preservation of religious and national traditions, values of tolerance and brotherhood.

The table demonstrates a coherent whole-institution approach to sustainability by integrating environmental, social, cultural, and spiritual dimensions across intracurricular, co-extracurricular and community activities. Embedding environmental ethics in Islamic Religious Education (IRE) framed through khalifah, amanah and ihsān creates normative drivers that align moral identity with stewardship practices, strengthening intrinsic motivation for pro-environmental behaviour (Zaimina & Munib, 2022). This faith-based framing is particularly powerful in contexts where religious values shape everyday practices and school cultures.

Practically, school greening, crafts using local materials, and technical vocational instruction in energy-efficient technologies form complementary cognitive and skills-based interventions: curriculum knowledge, hands-on skills, and facility improvements together produce durable behaviour change and environmental literacy. These elements mirror the “green school” whole-of-institution model which links curricula, campus operations and community partnerships to sustainability outcomes (Fachri, 2024).

Extracurricular programs (music, hadrah, scouting, OSIS) function as affective and social arenas where empathy, cultural identity, and collective action develop; literature on transformative social-emotional learning suggests such domains amplify ecological concern and civic agency when intentionally designed (Owen, Srinivasan, and Wanless 2025).

Finally, service-oriented activities (blood drives, community festivals) operationalize social solidarity and civic responsibility while offering measurable public-good impacts (Nurhayati et al. 2022); service-learning evidence indicates these practices increase knowledge, prosocial attitudes, and sustained civic participation (Husamah et al. 2025). To maximize impact, the school should adopt assessment metrics linking activity outputs (e.g., trees planted, plastic diverted, donors mobilized) to learning outcomes and community indicators, ensuring scalability and evidence-based refinement (Megasari et al. 2025).

The analysis strengthens the SDGs-based argument by showing how Islamic ethical principles *khalifah*, *amanah*, and *ihsan* provide a moral foundation for integrating sustainability into the curriculum. By aligning intracurricular, co-curricular, and community activities with SDG targets on climate action, quality education, and sustainable communities, the model promotes behavioral change, environmental literacy, and civic responsibility. This approach becomes especially relevant in coastal Islamic schools, where students directly face marine pollution and coastal degradation. The use of measurable sustainability indicators further enhances evaluation and supports policy reforms that institutionalize SDGs-oriented learning in Islamic educational settings.

Conclusion

This study confirms that the implementation of sustainability values at Al Amin Tunggal Paciran High School has been successfully integrated across intracurricular, extracurricular, and co-curricular activities. The theoretical contribution of this research is the development of a Holistic Coastal Islamic Sustainability Model based on iman, ilmu, amal, where faith-based drivers (*khalifah*, *amanah*, *ihsan*) provide intrinsic motivation for pro-environmental and pro-social behavior. This model extends previous ESD frameworks by incorporating spiritual sustainability as a core dimension, not merely a supplement.

Practical implications: Islamic schools in coastal areas can adopt this model by (1) embedding environmental ethics into PAI lessons, (2) utilizing local resources in craft subjects, (3) integrating sustainability themes into extracurriculars, and (4) implementing co-curricular activities that link moral education to real environmental action. Policy makers should support teacher training and provide resources for green technology in vocational subjects.*

This study is a single-case design (one school), limiting generalizability. The sample was relatively small, and data relied partly on self-reports. Long-term behavioral change was not measured. For Future research directions use multi-site comparative studies, longitudinal research, and experimental designs are recommended. Additionally, incorporating neurocognitive or emotional analytics could empirically demonstrate how joy and spiritual meaning enhance sustainability learning."

REFERENCES

Abdillah, H. T., Purnama, M. S., Elmami, P. A., & Azahra, S. (2025). The humanistic approach of PAI teachers in enhancing religious intelligence to mitigate bullying behavior among junior high school students. *Nama Jurnal Tidak Diketahui*, *12*(1), 53–62. <https://doi.org/10.17509> (DOI tidak lengkap)

Ach. Barocky Zaimina, Bahrul Munib. 2025. "Green Islam Education: Model Pembelajaran Ekopedagogi Berbasis Fikih Lingkungan Di Sekolah Islam Urban." *MANAGIERE: Journal of Islamic Studies and Social Science* 4(1). doi: <https://doi.org/10.35719/managiere.v4i1.2329>.

Athoillah, A., Sukoharsono, E. G., Ciptadi, G., & Yanuwadi, B. 2024. "Eco-Islamic Boarding School Indicators for Increasing Environmental Awareness and Sustainable Development in Indonesia." *Wacana Journal of Social and Humanity Studies* 27(1):26–36. doi: <https://doi.org/10.21776/ub.wacana.2024.027.01.04>.

Bie, Q., Shi, Y., Li, X., & Wang, Y. (2022). Contrastive analysis and accuracy assessment of three global 30 m land cover maps circa 2020 in arid land. *Sustainability*, *15*(1), 741. <https://doi.org/10.3390/su15010741>

Gheorghe, I.-R., Drakou, A., Ioachim, M. F., & Gheorghe, C.-M. (2025). Students' perspectives on social sustainability: Developing an integrated higher education framework. *Education Sciences*, *15*(10), 1332. <https://doi.org/10.3390/educsci15101332>

Hasriani, H., Hamim, U., & Mahmud, R. (2025). Strengthening scouting character values through a moral integrated approach for elementary school students. *Indonesian Journal of Innovation Studies*, *26*(3). <https://doi.org/10.21070/ijins.v26i3.1463>

Hilmy, M. (2025). Research impact and sustainability in education: A conceptual

literature review. Sustainability, *17*(1), 198–208. <https://doi.org/10.3390/su14052759> (DOI tidak sesuai judul)

Huang, T. (2023). Research on the integration strategy of music teaching and environmental education under the perspective of ecological civilization. *3C TIC: Cuadernos de Desarrollo Aplicados a las TIC*, *12*(2), 173–191. <https://doi.org/10.17993/3ctic.2023.122.173-191>

Husamah, Rahardjanto, A., Permana, T. I., & Lestari, N. (2025). Islam and sustainability issues, how far has the relationship progressed? A bibliometric analysis. *Social Sciences & Humanities Open*, *12*, 101703. <https://doi.org/10.1016/j.ssaho.2025.101703>

Ian, C., Roberts, J., Urbaniak, S., et al. (2019). Education for sustainable development: A study in adolescent perception changes towards sustainability following a strategic planning-based intervention—The young persons' plan for the planet program. *Sustainability*, *11*(20), 5817. <https://doi.org/10.3390/su11205817>

Jiménez-Guerrero, P. (2022). What are the sectors contributing to the exceedance of European air quality standards over the Iberian Peninsula? A source contribution analysis. *Sustainability*, *14*(5), 2759. <https://doi.org/10.3390/su14052759>

Koçulu, A. (2025). Developing secondary school students' sustainable living awareness to help achieve the sustainable development goals. *Sustainability*, *17*(11), 4757. <https://doi.org/10.3390/su17114757>

Korol, E., & Shushunova, N. (2022). Analysis and valuation of the energy-efficient residential building with innovative modular green wall systems. *Sustainability*, *14*(11), 6891. <https://doi.org/10.3390/su14116891>

Larissa, T., & Titisari, B. (2023). Traditional aspects in sustainable fashion practice. *Journal of Creative Industry and Sustainable Culture*, *2*, 144–161. <https://doi.org/10.32890/jcisc2023.2.10>

Le, T.-H., Dang, P., & Bui, T. (2024). Towards sustainable products and services: The influences of traditional costumes in promoting sustainable fashion. *Sustainability*, *16*(22), 9800. <https://doi.org/10.3390/su16229800>

Masduki, A., Prayudha, P., Niu, P., & Wajiran, W. (2024). Hadroh music as a means of religious communication. *International Journal of Visual and Performing Arts*, *6*(1), 65–73. <https://doi.org/10.31763/viperarts.v6i1.1337>

Megasari, S., Burniat, Hilmin, & Noviani, D. (2025). Integration of Islamic education in the Sustainable Development Goals approach (SDGs). *World Journal of Islamic Learning and Teaching*, *2*(2), 6–14. <https://international.aripafi.or.id/index.php/WJILT/article/view/373>

MuhammedZein, F. A., & Abdullateef, S. T. (2025). Quality education for sustainable development: Evolving pedagogies to maintain a balance between knowledge, skills, and values—Case study of Saudi universities. *Sustainability*, *17*(2), 635. <https://doi.org/10.3390/su17020635>

Nurhayati, N., Nasution, M. S. A., Hasibuan, R. R. A., & Afendi, H. (2022). Human trafficking in the perspective of Maqashid Al-Sharia. *Jurnal Ilmiah Islam Futura*, *22*(2). <https://doi.org/10.22373/jiif.v22i2.12304>

Owen, R., Srinivasan, M., & Wanless, S. (2025). Evolving transformative social and emotional learning with an ecological perspective. *Social and Emotional Learning: Research, Practice, and Policy*, *6*, 100126. <https://doi.org/10.1016/j.sel.2025.100126>

Ozbay, I., & Karaoglu, S. (2022). Reflection of policy documents in early years

educational settings during the COVID-19 pandemic. *Educational Research and Reviews*, *17*(7), 198–208. <https://doi.org/10.5897/ERR2022.4249>

Parry, S., & Metzger, E. (2023). Barriers to learning for sustainability: A teacher perspective. *Sustainable Earth Reviews*, *6*(1), 2. <https://doi.org/10.1186/s42055-022-00050-3>

Purwastuti, L. A. (2022). Batik as a craft teaching-learning medium to preserve values of local wisdom in elementary schools in Bantul, Indonesia. *Humanika*, *22*(2), 91–98. <https://doi.org/10.21831/hum.v22i2.53888>

Rohman, A., Kurniawan, E., Syifauddin, M., Muhtamiroh, S., & Muthohar, A. (2024). Religious education for the environment: Integrating eco-theology in the curriculum of Islamic religious and character education to enhance environmental education in Indonesia. *Nadwa: Jurnal Pendidikan Islam*, *18*(2), 201–226. <https://doi.org/10.21580/nw.2024.18.2.21094>

Sifa Nafis Salsabilla, A. B. N., Pramana, A., Valentine, A., Attilargo, G., & Ganeswara, G. M. (2024). Analisis penggunaan batik secara efektif pada implementasi produk lokal: Perspektif keberlanjutan untuk mendorong ekonomi warga setempat. *Aktivisme: Jurnal Ilmu Pendidikan, Politik dan Sosial Indonesia*, *1*(2), 24–31. <https://doi.org/10.62383/aktivisme.v1i2.174>

Subekti, S., & Hilmy, M. (2024). Constructing education in sustaining Islamic values based on local culture among the fisherfolk community. *Al-Hayat: Journal of Islamic Education*, *8*(2), 711. <https://doi.org/10.35723/ajie.v8i2.575>

Taja, N., Nurdin, E. S., Kosasih, A., Suresman, E., & Supriyadi, T. (2021). Character education in the pandemic era: A religious ethical learning model through Islamic education. *International Journal of Learning, Teaching and Educational Research*, *20*(11), 132–153. <https://doi.org/10.26803/ijlter.20.11.8>

Torres, R., Simões, A. R., & Pinto, S. (2024). Research impact and sustainability in education: A conceptual literature review. *Education Sciences*, *14*(2), 147. <https://doi.org/10.3390/educsci14020147>

Ubaidillah, U. (2022). The implementation of multicultural Islamic education values at Tengger community local culture (An ethnographic study in Sapikerep Village, Sukapura, Probolinggo). *Journal Education Multicultural of Islamic Society*, *2*(1), 24–36. <https://doi.org/10.33474/jemois.v2i1.13589>

Wei, W., Zhang, G., Li, C., Zhang, W., & Shen, Y. (2023). Mechanism and control of asymmetric floor heave in deep roadway disturbed by roof fracture. *Sustainability*, *15*(8), 6357. <https://doi.org/10.3390/su15086357>

Wiedarjati, D. K., & Sudrajat, A. (2021). What make students participate in school organizations? The role of motivation and school environment. *KnE Social Sciences*. Advance online publication. <https://doi.org/10.18502/kss.v6i2.9987>

Wirawati, S. M., Abdullah, A., Gymnastiar, I. A., Rokhim, A., & Arthawati, S. N. (2025). Ramadan as a momentum for character development: A values education approach in the Islamic school curriculum. *Indonesian Journal of Studies on Humanities, Social Sciences and Education*, *2*(1), 92–117. <https://doi.org/10.54783/m41z5324>

Wolff, L.-A., & Ehrström, P. (2020). Social sustainability and transformation in higher educational settings: A utopia or possibility? *Sustainability*, *12*(10), 4176. <https://doi.org/10.3390/su12104176>

Yatim, H., Jayadi, K., Jamilah, J., Abduh, A., & Prusdianto, P. (2025). Integrating

cultural heritage into education: The supportive role of schools in traditional festivals in West Sulawesi. *Discover Education*, *4*(1), 379. <https://doi.org/10.1007/s44217-025-00847-2>

Yusri, D., Usmaidar, U., Alam, A. P., Siregar, T. R. A., Zailani, M. B., & Syahroni, A. (2025). Implementation of Islamic da'wah through Islamic music art hadroh to students of the Malaysian civilization guidance students, Selangor Malaysia. *International Journal of Science Education and Cultural Studies*, *4*(1), 39-46. <https://doi.org/10.58291/ijsecs.v4i1.352>