

Green School Management Model Based on Islamic Values to Realize Sustainable Education in Madrasah

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DOI: <https://doi.org/10.63142/educompassion.v3i3.572>

Received: 24 Mei 2026	Revised: 13 Agustus 2026	Accepted: 20 Agustus 2026	Published: 21 Agustus 2026
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Abstract :

Environmental crises and the growing demand for sustainable development have encouraged educational institutions to transform their governance toward more sustainable practices. However, previous studies on Green School Management have largely focused on environmental programs, eco-friendly facilities, or curriculum implementation, while paying limited attention to institutional governance and the integration of Islamic values. This study aims to develop a conceptual model of Green School Management Based on Islamic Values (GSM-NI) as a governance framework for promoting Sustainable Education in madrasahs. This research employed a qualitative library research approach through a systematic review and conceptual synthesis of literature on Green School Management, Education for Sustainable Development (ESD), educational management, and Islamic environmental ethics. The findings indicate that sustainable madrasah governance should be built upon the integration of seven interrelated components, namely Green Leadership, Green Governance, Green Curriculum, Green Culture, Green Facilities, Green Partnership, and Green Evaluation, which are philosophically grounded in the Islamic values of tauhid, khalifah, amanah, mizan, ihsan, islah, and hifz al-bi'ah. The proposed GSM-NI model demonstrates that sustainable education is achieved not merely through environmental programs but through an integrated governance system that transforms leadership, organizational culture, curriculum, institutional policies, and stakeholder collaboration. The novelty of this study lies in synthesizing Green School Management, Education for Sustainable Development, Educational Management, and Islamic values into a comprehensive conceptual framework for sustainable madrasah governance. The model contributes theoretically to the advancement of Islamic Educational Management and provides practical guidance for policymakers and madrasah leaders in designing environmentally responsible and value-based educational institutions.

Keywords : Green School Management, Islamic Educational Management, Sustainable Education.

Abstrak :

Krisis lingkungan hidup serta meningkatnya tuntutan terhadap pembangunan berkelanjutan mendorong lembaga pendidikan untuk mentransformasikan tata kelolanya ke arah yang lebih berkelanjutan. Namun demikian, penelitian-penelitian terdahulu mengenai Green School Management masih didominasi oleh pembahasan tentang program lingkungan, penyediaan fasilitas ramah lingkungan, atau implementasi kurikulum, sementara aspek tata kelola kelembagaan dan integrasi nilai-nilai Islam belum banyak mendapat perhatian. Penelitian ini bertujuan mengembangkan model konseptual Green School Management Berbasis Nilai-Nilai Islam (GSM-NI) sebagai kerangka tata kelola madrasah dalam mewujudkan Sustainable Education. Penelitian menggunakan pendekatan kualitatif dengan metode library research melalui kajian pustaka secara sistematis dan sintesis konseptual terhadap literatur mengenai Green School Management, Education for Sustainable Development (ESD), Manajemen Pendidikan, serta etika lingkungan dalam Islam. Hasil penelitian menunjukkan bahwa tata kelola madrasah yang berkelanjutan dibangun melalui integrasi tujuh komponen utama, yaitu Green Leadership, Green Governance, Green Curriculum, Green Culture, Green Facilities, Green Partnership, dan Green Evaluation, yang berlandaskan pada nilai-nilai Islam berupa tauhid, khalifah, amanah, mizan, ihsan, islah, dan hifz al-bi'ah. Model GSM-NI menunjukkan bahwa pendidikan berkelanjutan tidak hanya diwujudkan melalui pelaksanaan program-program lingkungan, tetapi melalui sistem tata kelola yang terintegrasi yang mentransformasikan kepemimpinan, budaya organisasi, kurikulum, kebijakan kelembagaan, serta kolaborasi para pemangku kepentingan. Kebaruan penelitian ini terletak pada sintesis antara Green School Management, Education for Sustainable Development, Manajemen Pendidikan, dan nilai-nilai



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Islam ke dalam suatu kerangka konseptual yang komprehensif bagi tata kelola madrasah berkelanjutan. Model yang dihasilkan memberikan kontribusi secara teoretis terhadap pengembangan keilmuan Manajemen Pendidikan Islam sekaligus menawarkan kerangka praktis bagi kepala madrasah dan para pembuat kebijakan dalam merancang lembaga pendidikan yang berorientasi pada keberlanjutan, berwawasan lingkungan, dan berlandaskan nilai-nilai Islam.

Kata Kunci: Manajemen Sekolah; Manajemen Pendidikan Islam; Pendidikan Berkelanjutan.

INTRODUCTION

The environmental crisis has evolved into one of the most complex global challenges of the 21st century. Climate change, increased greenhouse gas emissions, water and air pollution, land degradation, biodiversity loss, and energy crises have had a significant impact on the sustainability of human life (Uralovich et al., 2023). The Intergovernmental Panel on Climate Change (IPCC) report confirms that human activities are the main cause of global warming resulting in an increase in the earth's average temperature, changes in extreme weather patterns, and threats to socio-ecological systems in various countries (IPCC, 2023). This condition shows that environmental problems are no longer just ecological issues, but have developed into development, economic, social, and even educational issues (Perwitasari et al., 2023). Therefore, various countries are encouraged to build an education system that is able to instill ecological awareness, form a character of caring for the environment, and encourage the birth of behaviors that are responsible for the sustainability of the earth (Saleem et al., 2025).

Awareness of the importance of education as an instrument of sustainable development is realized through the Sustainable Development Goals (SDGs) ratified by the United Nations in 2015 (Lin et al., 2023). In this context, education has a strategic position as reflected in SDG 4 (Quality Education), which is interrelated with SDG 11 (Sustainable Cities and Communities), SDG 12 (Responsible Consumption and Production), and SDG 13 (Climate Action) (United Nations, 2015). As an implementation, UNESCO developed the Education for Sustainable Development (ESD) paradigm, which is an educational approach that aims to build students' knowledge, skills, values, and attitudes to be able to make decisions that are responsible for environmental, economic, and societal sustainability (UNESCO, 2020). In the ESD paradigm, the education unit not only functions as a place for knowledge transfer, but also as a learning organization that integrates sustainability principles into the curriculum, school culture, governance, and participation of all school residents through a whole school approach (Perwitasari et al., 2023).

In Indonesia, efforts to build sustainability-oriented education have been realized through various policies, one of which is the Adiwiyata Program developed by the Ministry of Environment and Forestry together with the Ministry of Education (Murdani et al., 2018). The program aims to build a culture of caring and environmental culture in educational units through the development of policies, curriculum, participatory activities, and the management of environmentally friendly facilities and infrastructure (Yamin et al., 2022). However, various studies show that the implementation of environmental education in schools still faces a number of obstacles. Environmental management practices are often oriented towards the fulfillment of assessment or award indicators, have not been comprehensively integrated into the management system of educational institutions, and have not been part of an ongoing organizational culture. This condition shows that the approach to environmental education in Indonesia still tends to be programmatic rather than systemic, so it requires a governance model that is able to integrate environmental aspects into the overall management process of schools or madrasahs.

From an Islamic perspective, concern for the environment is actually an inseparable

part of religious teachings. The Qur'an places man as a caliph *fi al-ardh* who has the responsibility to prosper and maintain the balance of nature (QS. Al-Baqarah [2]: 30). Islam also prohibits all forms of damage to the earth (*fa'ade*) as affirmed in QS. Al-A'raf [7]: 56 and QS. Ar-Rum [30]: 41, and emphasizing the importance of maintaining balance (*mizan*) in life (QS. Ar-Rahman [55]: 7–9). Values such as *amanah*, *ihsan*, *islah*, and *hifz al-bi'ah* in the perspective of *maqasid sharia* provide a strong ethical and spiritual foundation for the development of environmental education. According to Nasr, the environmental crisis is essentially a spiritual crisis due to the disconnection of human relations with divine values (Nasr, 1996), while Fazlun Khalid emphasized that environmental conservation is part of the implementation of the teachings of monotheism (Khalid, 2006). Thus, Islamic education has adequate philosophical capital to develop sustainability-oriented governance of educational institutions.

However, the results of research on various previous studies show that studies on Green Schools are still dominated by aspects of physical greening, waste management, energy efficiency, or the implementation of the *Adiwiyata* program. On the other hand, research on Education for Sustainable Development focuses more on curriculum development, sustainability competencies, and learning processes. Meanwhile, the study of Islamic education management generally focuses on the functions of management, leadership, organizational culture, or improving the quality of *madrasas* without explicitly linking them to environmental sustainability issues. As for environmental research from an Islamic perspective, it mostly discusses normative concepts such as *caliphate*, *trust*, or *environmental ethics*, but has not integrated these values into an operational institutional management framework.

Based on these trends, there is a research gap that shows that there is no conceptual model that systematically integrates Green School Management theory, Education for Sustainable Development paradigm, education management theory, and Islamic values in one *madrasah* governance framework. In fact, *madrasas* as Islamic educational institutions have characteristics that allow the internalization of religious values into all aspects of institutional management, starting from planning, organizing, implementing, to evaluation. Therefore, a model is needed that is not only oriented towards physical environmental management, but also builds a green organizational culture based on Islamic values so that it is able to realize sustainable education.

Based on this description, this study aims to develop a Green School Management Model Based on Islamic Values as a conceptual framework for the management of *madrasas* that support Sustainable Education. The novelty of this research lies in the synthesis of four main perspectives, namely Green School Management theory, the Education for Sustainable Development paradigm, education management theory, and Islamic values about environmental conservation. The integration of these four perspectives produces a conceptual model that not only enriches the scientific treasures of Islamic Education Management, but also offers a *madrasah* governance framework that can be used as a reference in policy development, further research, and the implementation of continuing education in the *madrasah* environment.

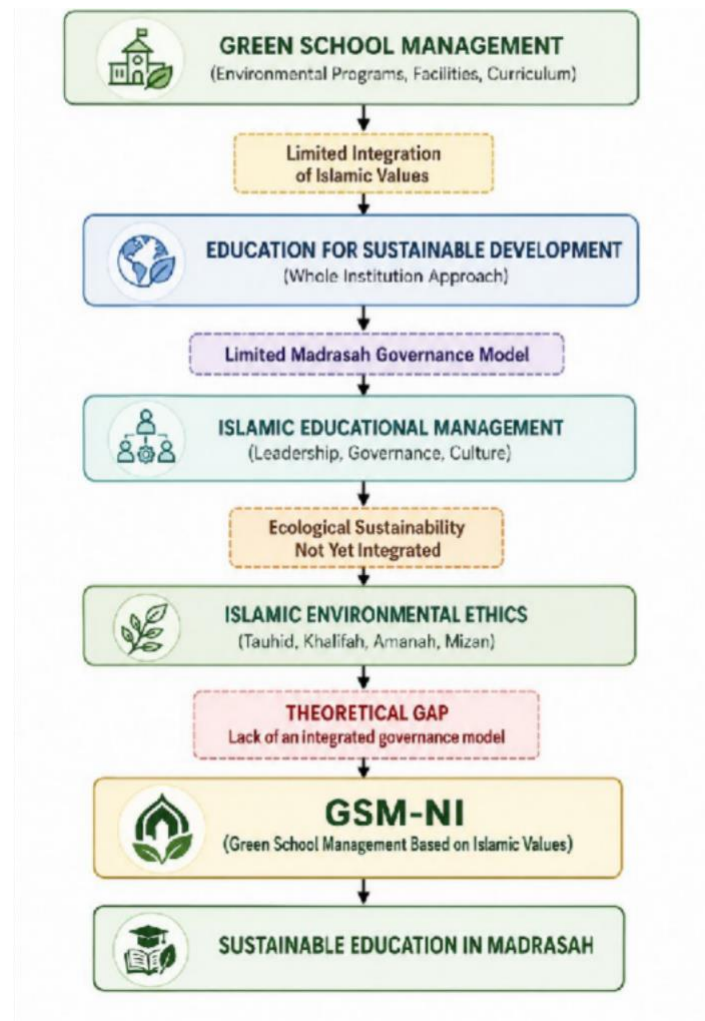


Figure 1. Research Gap in GSM-NI Development

LITERATURE REVIEW

Green School Management

The concept of Green School Management developed in response to the world's increasing attention to the issue of sustainable development and the importance of the role of educational institutions in building community ecological awareness. Green School Management is not only interpreted as the management of schools that have a green environment or environmentally friendly infrastructure, but is an educational governance paradigm that integrates sustainability principles into all aspects of education delivery (Missouri et al., 2025). In this perspective, the school is seen as an organization that systematically builds a culture of caring for the environment through policies, curriculum, leadership, resource management, and the active participation of all school residents. Therefore, Green School Management is a holistic approach that connects ecological, social, cultural, and managerial dimensions to support the creation of sustainable education. This paradigm cannot be separated from the concept of Green Education, which is an educational approach that aims to foster students' knowledge, attitudes, skills, and responsibilities towards environmental conservation. Green Education views that education is not only a process of knowledge transfer regarding environmental issues, but also a process of forming ecological character (ecological citizenship) through learning experiences, habituation, and school culture that supports

environmentally friendly behavior (Khofi, 2024). Thus, the success of Green Education is not only measured from mastering the concept of the environment, but also from changes in the mindset, attitude, and actions of school residents in maintaining environmental sustainability.

In its implementation, UNESCO developed the concept of the Whole School Approach as the main strategy for the implementation of Education for Sustainable Development (ESD). This approach emphasizes that sustainability cannot be realized through classroom learning alone, but must be part of the overall school system. The Whole School Approach integrates aspects of institutional policies, leadership, organizational culture, curriculum, management of facilities and infrastructure, partnerships with the community, and the participation of all school residents in a mutually supportive unit (Goldman et al., 2018). In other words, schools are seen as a learning ecosystem whose components have a responsibility in building a culture of sustainability. This approach is the conceptual basis for the development of Green School Management because it places school governance as the main factor in building sustainability-oriented education.

From the perspective of organizational management, Green School Management is also closely related to the concept of Environmental Management System (EMS). EMS is a management system designed to control environmental impacts through continuous planning, implementation, monitoring, evaluation, and improvement cycles. In the context of education, EMS principles are applied through waste management, energy and water conservation, resource use efficiency, emission reduction, and the development of a healthy and sustainable learning environment (Khasanah et al., 2026). The implementation of EMS shows that environmental management is not an incidental activity, but rather a part of an organizational system that must be planned, implemented, evaluated, and refined continuously.

In addition to the environmental management system, the success of Green School Management is also determined by the quality of governance (Green Governance) and leadership (Green Leadership). Green Governance is a governance model that places sustainability principles as the basis for policy formulation, decision-making, resource management, and institutional evaluation. Environmentally oriented governance requires transparency, accountability, participation of all stakeholders, and integration of environmental issues into the strategic planning of educational institutions (Schelly et al., 2012). In the context of madrasas, Green Governance is not only realized through environmentally friendly policies, but also through the internalization of Islamic values that encourage moral responsibility for nature conservation as a mandate from Allah SWT.

On the other hand, Green Leadership is a key element that moves all organizational components towards the creation of a culture of sustainability. Green Leadership is a leadership style that is able to build environmental vision, provide examples, encourage innovation, and drive the participation of all school residents in preserving the environment. Leaders not only play the role of decision makers, but also as change agents who integrate sustainability principles into all education management functions (Veronese & Kensler, 2013). From the perspective of Islamic education management, this kind of leadership is in line with the concept of transformational leadership based on the values of trust, responsibility, deliberation, and example.

Based on these various concepts, Green School Management can be understood as an educational governance system that integrates the principles of Green Education, Whole School Approach, Environmental Management System, Green Governance, and Green Leadership into the entire education implementation process. Thus, Green School

Management is not only oriented towards the management of the physical environment of the school, but also on the development of organizational culture, strengthening leadership, resource management, and forming the ecological character of all school residents in a sustainable manner. In this study, Green School Management is positioned as the main conceptual framework that will then be integrated with Islamic values to produce a madrasah governance model that supports the realization of Sustainable Education.

Sustainable Education

The concept of Sustainable Education was born as a response to various global challenges, such as climate change, environmental degradation, social inequality, and limited natural resources that demand transformation in the education system. Education is no longer seen only as a means of knowledge transfer, but also as a strategic instrument to form individuals who are able to deal with the complexity of global problems responsibly and sustainably (Stein et al., 2022). In this context, UNESCO developed the Education for Sustainable Development (ESD) paradigm as an educational approach that integrates environmental, social, economic, and cultural dimensions into the entire learning process. Through ESD, students are expected to not only understand sustainability issues, but also have the ability to think critically, make responsible decisions, and actively participate in creating a sustainable future. Thus, Sustainable Education is an educational paradigm that places sustainability as the main orientation in the implementation of education.

In line with the development of this concept, UNESCO emphasized that the success of Sustainable Education does not only depend on mastering knowledge about the environment, but also on the development of sustainability competencies. This competency is a set of abilities that enable individuals to comprehensively understand sustainability issues and take appropriate actions in facing various future challenges (Primasti, 2021). UNESCO identified eight main competencies that are the foundation of ESD (Purnamasari & Hanifah, 2021), namely systems thinking competency, anticipatory competency, normative competency, strategic competency, collaboration competency, critical thinking competency, self-awareness competency, and integrated problem-solving competency. The eight competencies complement each other in forming students who not only have environmental literacy, but are also able to analyze the relationship between problems, design innovative solutions, collaborate with various parties, and be responsible for the social and ecological impact of every decision taken. Therefore, Sustainable Education demands a paradigm change in learning from one that is oriented towards material mastery to the development of competencies that support sustainability.

The implementation of Sustainable Education cannot be realized only through curriculum changes, but requires a comprehensive transformation of the governance of educational institutions. This concept then gave birth to the idea of Sustainable School, which is an educational unit that integrates sustainability principles into all aspects of education implementation. Sustainable School not only focuses on the management of the physical environment, but also includes the development of institutional policies, organizational culture, leadership, learning processes, resource management, and partnerships with the community (Khofi, 2024). In this paradigm, schools are seen as a learning ecosystem whose components have a responsibility in realizing sustainability. Thus, Sustainable School is a form of real implementation of Sustainable Education because it connects the pedagogical dimension with an integrated organizational governance system.

The urgency of Sustainable Education has been growing stronger since the adoption of the Sustainable Development Goals (SDGs) by the United Nations in 2015. Education

has a strategic position in supporting the achievement of various sustainable development goals, especially SDG 4 (Quality Education), SDG 11 (Sustainable Cities and Communities), SDG 12 (Responsible Consumption and Production), and SDG 13 (Climate Action). This relationship shows that education not only contributes to improving the quality of human resources, but is also the main instrument in building a society that has ecological awareness, social responsibility, and adaptability to global environmental changes (Rahayu et al., 2024). Therefore, the success of achieving the SDGs cannot be separated from the success of educational institutions in implementing the principles of Sustainable Education in a systematic and sustainable manner.

In the context of Islamic educational institutions, Sustainable Education has a very strong relevance because the principle of sustainability is basically in line with Islamic values that emphasize balance (*mizan*), responsibility as a caliph *fil ardh*, mandate in managing resources, and prohibition of doing damage (*fa'ade*) on the earth. However, the implementation of Sustainable Education in *madrassas* still faces challenges, especially in integrating sustainability principles into institutional management systems. Most environmental education practices still focus on incidental activities or reforestation programs, not yet part of the overall governance of *madrasas*. This condition shows the need for a management model that is able to translate the principles of Sustainable Education into a *madrasah* management system based on Islamic values.

Based on these various concepts, this study views Sustainable Education as an educational paradigm that integrates environmental, social, economic, and cultural values dimensions into the entire process of implementing education through the development of sustainability competencies, institutional transformation, and strengthening organizational culture oriented towards sustainable development. In this study, Sustainable Education is not positioned only as the final goal of education, but also as a normative framework that is the direction of the development of the Green School Management Model Based on Islamic Values. Thus, Green School Management functions as a managerial instrument, while Sustainable Education is a strategic orientation that wants to be realized through sustainable *madrasah* governance.

Islamic Education Management

Education management is a systematic process in managing all educational resources through planning, organizing, implementing, and supervising activities to achieve educational goals effectively, efficiently, and sustainably (Taufik, 2023). In a general perspective, education management is understood as the application of management principles in the implementation of educational institutions so that all organizational components can work in an integrated manner in achieving the goals that have been set. However, from an Islamic perspective, management is not only seen as a technical and administrative activity, but also as a form of trust that must be carried out based on the values of monotheism, justice (*al-'adl*), responsibility (*mas'uliyah*), deliberation (*shura*), professionalism (*itqan*), and benefit (*maslahah*). Thus, Islamic Education Management is a process of managing educational institutions that combines modern management principles with Islamic normative values so that every organizational activity is not only oriented to achieving institutional goals, but also to building character and embodying the benefits of the people (Choir, 2016).

As a system, Islamic Education Management is carried out through four main management functions known as the concept of Planning, Organizing, Actuating, and Controlling (POAC). The planning function is related to the preparation of visions, missions, goals, policies, programs, and strategies that are the direction of the development of educational institutions. Organizing is the process of dividing tasks, forming an organizational structure, coordinating, and managing human resources so that

each element of the organization works in accordance with its role. Furthermore, actuating or leading is the process of mobilizing all resources through leadership, communication, motivation, and coaching so that organizational goals can be achieved optimally. The controlling is carried out through monitoring, evaluation, and follow-up activities to ensure that all programs run according to the plan as well as become the basis for the continuous improvement process (Wendi Rais, 2019). In the context of the development of Green School Management, these four functions are an operational framework to integrate sustainability principles into the entire madrasah management process.

The implementation of these management functions is manifested in the implementation of madrasah management as a form of management of Islamic educational institutions. Madrasah management includes the management of various fields, such as curriculum, students, educators and education staff, facilities and infrastructure, finance, relations with the community, and organizational culture. Unlike schools in general, madrasah management has distinctive characteristics because it combines the goals of national education with Islamic values as a philosophical, ethical, and operational basis in every decision-making process (Syaban, 2019). Therefore, the success of madrasah management is not only measured by the achievement of academic and administrative indicators, but also by its ability to build religious culture, student character, and social responsibility that is in harmony with Islamic principles.

The success of the implementation of madrasah management is greatly influenced by the quality of leadership. From an Islamic perspective, educational leadership is not only understood as the ability to direct and control an organization, but also as a mandate to guide, empower, and set an example for all madrasah residents (Wahid et al., 2022). The leadership model of the Prophet (saw) which is based on the nature of shiddiq, amanah, tabligh, and fathanah is the ethical foundation in the implementation of Islamic education leadership. Madrasah leaders are required to be able to build a clear vision, mobilize all resources, create a collaborative culture, and make decisions fairly and wisely (Faujiah et al., 2024). In the context of Green School Management, madrasah heads have a strategic role as Green Leaders, namely leaders who are able to integrate sustainability principles into policies, programs, organizational culture, and madrasah management practices so as to create an environmentally friendly and sustainable development-oriented learning environment.

In addition to leadership, organizational culture is an important element that determines the effectiveness of education management. The culture of an educational organization is a set of values, norms, beliefs, traditions, and habits that develop in an institution and become a guideline for the behavior of all its members (Wahyuningsih & Murtafiah, 2022). A strong organizational culture will shape the institution's identity, increase the commitment of school residents, and encourage the creation of a conducive work climate (Huda, 2022). In the perspective of Green School Management, the organizational culture is directed to build habits of caring for the environment through various forms of habituation, such as waste management, energy and water saving, greening, and the active participation of all madrasah residents in preserving the environment. The culture is not only built through formal rules, but also through the example of leaders, integration in the learning process, and the strengthening of Islamic values that place environmental preservation as part of the worship and moral responsibility of humans as caliphs on earth.

Based on this description, Islamic Education Management in this study is understood as a madrasah management system that integrates the functions of management, leadership, organizational culture, and Islamic values in achieving

educational goals effectively and sustainably. Islamic Education Management is not only an administrative framework in managing educational institutions, but also a conceptual foundation that allows the integration of sustainability principles into madrasah governance. Therefore, this study positions Islamic Education Management as a bridge between the concept of Green School Management and Islamic values in formulating a conceptual model of Green School Management Based on Islamic Values that supports the realization of Sustainable Education in madrasahs.

Islamic Values in Environmental Conservation

Islam views the relationship between humans and the environment as an inseparable part of the teachings of monotheism (Shihab, 2023). The universe is not just an object that can be exploited to meet human needs, but is a creation of Allah SWT that has certain functions, balances, and purposes in the order of life (Muhaimin et al., 2026). Therefore, environmental preservation is not only understood as a social or ecological obligation, but also as a form of devotion to God that has theological, ethical, and moral dimensions. This view shows that the concept of sustainability has actually been part of Islamic teachings long before the development of the discourse of sustainable development in modern studies. The Qur'an and hadith provide a strong normative foundation regarding human responsibility to nature, while classical and contemporary scholars develop Islamic ecological concepts that are relevant to today's environmental challenges.

The main foundation of environmental ethics in Islam is the concept of caliph *fi al-ardh*, which is the position of humans as representatives of Allah on earth who are entrusted with managing, prospering, and preserving nature (Mardiyah et al., 2018), as stated in His words QS. Al-Baqarah [2]: 30. The concept of the caliph emphasizes that humans are not the absolute owners of nature, but managers who are responsible for all the resources that have been bestowed by Allah (Kholil, 2026). This responsibility cannot be separated from the principle of trust, which is the moral obligation to carry out every task honestly, fairly, and responsibly. In the context of environmental conservation, the mandate means that every form of natural resource utilization must consider sustainability, utility, and intergenerational justice (Syauqi et al., 2025). Thus, the concept of caliphate and trust forms the ethical basis that environmental management is a spiritual responsibility that must be realized in every aspect of life, including in the governance of Islamic educational institutions.

In addition, Islam also places the principle of *mizan* as an ecological foundation in maintaining harmony between humans and nature. The Qur'an explains that Allah created the entire universe in a balanced state and commands humans not to destroy that balance (Qibtiyah & Musolli, 2026), as stated in His words QS. Ar-Rahman [55]: 7–9. Balance (*mizan*) includes the relationship between humans and God, fellow humans, and the environment as a unit that affects each other (Fahrurrozi et al., 2025). Therefore, every development activity must pay attention to the carrying capacity of the environment so as not to cause ecological damage. This principle is strengthened by the value of *ihsan*, which is to do every job as well as possible as a form of awareness of Allah's supervision (*muraqabah*). From an environmental perspective, *ihsan* encourages humans to use resources wisely, avoid waste, maintain cleanliness, and carry out various conservation efforts as a form of moral responsibility towards Allah's creation (Wulan, 2025).

These values are then complemented by the concept of *islah*, which is an effort to improve and create benefits for all creatures (Qholbi et al., 2026). *Islah* is not only interpreted as improving social relations, but also includes environmental rehabilitation, natural resource conservation, and various innovations that support the sustainability of life (Haddade, 2016). On the contrary, Islam expressly prohibits any form of *façade* or damage on the earth as affirmed in the Qur'an. Al-A'raf [7]: 56 and QS. Ar-Rum [30]: 41.

Environmental damage is seen as a result of human behavior that goes beyond the limits of exploiting nature without considering ecological balance (Nurrahim, 2026). Therefore, the prevention of facades is one of the main principles in Islamic environmental ethics which demands individual and collective responsibility in maintaining the sustainability of life (Agita & Harun, 2025). In the context of education, the principle of *islah* and prohibition of facades is the basis for the development of an organizational culture that encourages conservation, resource efficiency, and the formation of a character of caring for the environment.

The development of contemporary Islamic thought further strengthens the importance of environmental conservation through the concept of *Hifz al-Bi'ah*, which is environmental preservation as part of the *sharia* *maqasid* (Faizal et al., 2025). Although not included in the five main goals of the classical *maqasid*, a number of contemporary thinkers view the protection of the environment as a prerequisite for the preservation of religion (*hifz al-din*), soul (*hifz al-nafs*), intellect (*hifz al-'aql*), heredity (*hifz al-nasl*), and property (*hifz al-mal*). Fazlun M. Khalid emphasized that the environmental crisis is essentially the result of the loss of human awareness of the principles of monotheism and the mandate of the caliphate (Khalid, 2019). Seyyed Hossein Nasr views that ecological damage is a manifestation of the spiritual crisis of modern humans that separates religion from life (Nasr, 1968). Yusuf al-Qaradawi places environmental conservation as part of the public good (*maslahah 'ammah*), while M. Quraish Shihab and Mujiyono Abdillah affirm that various verses of the Qur'an contain ecological messages that encourage humans to maintain the balance of nature as a form of worship to Allah. The views of these figures show that the concept of *Hifz al-Bi'ah* provides strong normative legitimacy for the development of a sustainability-oriented educational paradigm.

Based on these various values, this study views that environmental ethics in Islam does not consist of independent concepts, but forms an interrelated value system. The Caliph provides an ontological basis regarding the position of humans as the managers of the earth, the mandate is the moral basis in carrying out these responsibilities, the *mizan* directs humans to maintain ecological balance, *ihsan* forms a quality and responsible work ethic, *islah* encourages the creation of innovations and improvements that are oriented towards benefit, the prohibition of facades becomes an ethical limit against all forms of destructive exploitation, while *Hifz al-Bi'ah* provides a normative framework that places environmental conservation as part of the goals of *sharia*. The integration of all these values is the philosophical foundation in this research to develop a Green School Management Model Based on Islamic Values, so that the management of madrasas is not only oriented to organizational effectiveness, but also to the formation of a sustainability culture rooted in Islamic teachings and supports the realization of Sustainable Education.

Conceptual Synthesis of the Development of a Green School Management Model Based on Islamic Values (GSM-NI)

Studies on Green School Management, Sustainable Education, Islamic Education Management, and Islamic values in environmental conservation show that each concept has a different focus of study, but complements each other in building a sustainability-oriented educational paradigm. Green School Management provides an educational institution management framework that emphasizes the integration of environmental aspects into policies, leadership, curriculum, organizational culture, and resource management (Hana Naqiyya Nada et al., 2021). On the other hand, Sustainable Education places sustainability as the main goal of education through the development of students' competencies to be able to respond to social, economic, and environmental challenges responsibly (Putra & Ridwan, 2023). The two concepts are closely related because Green School Management is a managerial instrument, while Sustainable Education is a

strategic orientation to be realized.

In the context of madrasas, the implementation of these two concepts cannot be separated from the principles of Islamic Education Management. Management functions that include planning, organizing, actuating, and controlling are operational mechanisms in managing educational institutions effectively, efficiently, and sustainably (Nurannisa & Rasyid, 2026). However, the implementation of these management functions needs to be aligned with the characteristics of madrasas as an Islamic educational institution that not only pursues organizational effectiveness, but also character formation that connects the principles of Green School Management with the context of providing education in madrasas.

Furthermore, Islamic values such as caliph, amanah, mizan, ihsan, islah, prohibition of facades, and hifz al-bi'ah provide a philosophical and normative foundation for the development of sustainable madrasah governance. These values not only contain moral teachings regarding human relations with the environment, but also form basic principles in policy making, resource management, leadership, and organizational culture. Thus, environmental conservation from an Islamic perspective is not just a conservation activity, but part of the implementation of monotheistic values and responsibility, strengthening Islamic values, and achieving benefits (Sahlan, 2010). Therefore, Islamic Education Management plays a role as an implementing framework for anusia as a caliph on earth. The integration of these values is the main differentiator between the Green School Management model developed in this study and the various Green School models that have been developed previously.

Based on the synthesis of these various literatures, this study views that the development of Green School Management in madrasas requires a conceptual model that is able to integrate managerial, pedagogical, and normative dimensions into one complete framework. The model not only places sustainability as the goal of education, but also as a principle that colors the entire governance process of Islamic educational institutions. Therefore, this study developed a Green School Management Model Based on Islamic Values (GSM-NI) as a conceptual framework that synergizes the theories of Green School Management, Education for Sustainable Development (ESD), Islamic Education Management, and Islamic values on environmental conservation.

The conceptual synthesis produces a number of main components that are interrelated, namely Green Leadership, Green Governance, Green Curriculum, Green Culture, Green Facilities, Green Partnership, and Continuous Improvement. The seven components are not positioned as stand-alone elements, but as a governance system driven by the functions of Islamic education management and based on Islamic values. Thus, the developed model not only offers a sustainability-oriented madrasah management framework, but also provides a philosophical and operational basis that is in accordance with the characteristics of Islamic educational institutions.

RESEARCH METHOD

This study uses a qualitative approach with a *conceptual literature research* design with a descriptive-analytical and conceptual type of library research (Zed, 2014) to develop a Green School Management model based on Islamic Values (GSM-NI). This approach was chosen because the purpose of the research is not to test the relationships between variables empirically, but to identify, compare, and integrate various concepts from several fields of study into a coherent theoretical framework (Moleong, 2007). The literature is positioned as an analysis unit to identify concepts, mechanisms, relationships between variables, as well as theoretical gaps relevant to the development of sustainable madrasah governance models.

Literature search is carried out systematically through various academic sources,

including Scopus indexed journals, Google Scholar, SINTA, academic books, as well as official documents of UNESCO and the United Nations related to Education for Sustainable Development (ESD). The search was conducted using a combination of keywords, including: "Green School Management", "green school", "sustainability leadership", "green organizational culture", "environmental governance in education", "Education for Sustainable Development", "whole-institution approach", "systems thinking in education", "Islamic educational management", "Islamic environmental ethics", and "Islamic sustainability".

The literature that is prioritized is publications in 2018–2026, while classical works are still used if they have a fundamental theoretical contribution. The literature selection process is carried out through four stages, namely identification, screening, eligibility, and synthesis. At the identification stage, all literature obtained from the search process is collected and checked to eliminate duplication. The screening stage is carried out through the study of titles and abstracts to determine the relevance to the focus of the research. Literature that meets the initial criteria is then analyzed in depth at the eligibility level. The last stage is synthesis, which is the process of mapping concepts, identifying theoretical contributions, and integrating various perspectives into the GSM-NI model.

Inclusion criteria in this study include: (1) literature that discusses *Green School Management*, *Education for Sustainable Development*, *sustainability leadership*, *environmental governance*, *green organizational culture*, *whole-institution approach*, *Islamic Education Management*, or *Islamic environmental ethics*; (2) have theoretical and empirical contributions that are relevant to the governance of educational institutions; and (3) come from credible academic sources. On the other hand, literature that does not have substantive relevance to continuing education or does not contribute to the formation of conceptual models is excluded from the analysis (Arikunto, 2018). Data from each literature were extracted based on several aspects, namely the identity of the source, the main concept, the theoretical contribution, the mechanism offered, the limitations, and its relevance to the formation of the GSM-NI component. The data is then compiled in a theoretical synthesis matrix to ensure that each component of the model has a clear conceptual foundation.

Conceptual synthesis is carried out through three stages. First, *within-framework synthesis*, which is the identification of the main concepts in each perspective. Second, *cross-framework synthesis*, which is comparison and integration between fields of study to find theoretical linkages and gaps (Sugiyono, 2015). Third, *conceptual integration*, which is the preparation of systematic relationships between components into a Green School Management model based on Islamic Values (GSM-NI). Model validation is carried out at the conceptual level through three strategies, namely theoretical triangulation, cross-framework comparison, and internal coherence testing. This validation aims to ensure that each component of the model has adequate theoretical support, the relationships between components are logical, and the model structure has internal coherence. Therefore, the GSM-NI model in this study has conceptual validity, but still requires empirical testing through case studies, expert judgments, Delphi studies, and quantitative research in subsequent research.

Table 1. Theoretical Synthesis Matrix in the Development of GSM-NI

Perspective	Key Focus	Limitations	Contribution to GSM-NI
Green School Management	Environmental management in schools	Program-oriented	Green institutional practices

Sustainability Leadership	Leadership for sustainability transformation	The spiritual dimension is still limited	Green Leadership
Environmental Governance	Policy and accountability	It is not specifically aimed at madrassas	Green Governance
Education for Sustainable Development (ESD)	Sustainability competencies	The Islamic perspective is still limited	Green Curriculum
Whole-Institution Approach	Institutional integration	The foundations of Islam are still limited	System integration
Systems Thinking	Interconnected systems	Its application in the context of education is still limited	Feedback mechanism
Green Organizational Culture	Common values and norms	Connection with Islamic values is still limited	Green Organizational Culture
Islamic Educational Management	Leadership and administration	Ecological orientation is still limited	Managerial mechanism
Islamic Environmental Ethics	Tauhid, Caliph, Trust	Most of them are normative	Landasan filosofis

FINDINGS AND DISCUSSION

Conceptual Synthesis of Green School Management in the Perspective of Sustainable Education

The development of global environmental issues has prompted a paradigm shift in the management of educational institutions (Faruq et al., 2026). If at first environmental education was understood as an effort to instill ecological knowledge and awareness through certain subjects, then the development of the concept of sustainability shows that education is no longer sufficiently oriented to the learning process in the classroom. Various cutting-edge literature confirms that educational institutions must transform into organizations that apply sustainability principles in all aspects of their management. In this context, the concept of Green School Management exists as an approach that places schools not only as a place to learn about the environment, but also as an institution that implements sustainability values through policies, organizational culture, governance, resource management, and the participation of all school residents (Hapid et al., 2025). The results of the synthesis of various literature show that the concept of Green School has undergone significant development.

In the early stages, Green School is more widely understood as a school that has a green, clean, and healthy physical environment through greening activities, waste management, water conservation, and energy efficiency. This approach places the success of Green Schools on physical indicators that are easy to observe, such as the existence of

green open spaces, school parks, waste banks, or the use of environmentally friendly energy (Handoko et al., 2024). This orientation makes an important contribution to improving the quality of the school environment, but it is still partial because sustainability is seen as an environmental program, not as a paradigm for the management of educational institutions as a whole. Further developments show that Green Schools cannot be separated from the Education for Sustainable Development (ESD) paradigm developed by UNESCO. In the perspective of ESD, sustainability is understood as a transformation process that integrates environmental, social, economic, and cultural dimensions into all educational activities. This approach places schools as learning organizations that are able to build a culture of sustainability through the involvement of all school residents (Meiboudi et al., 2018). Therefore, the success of Green Schools is no longer measured only by the quality of the physical environment, but also by the ability of the institution to shape the character of students, develop sustainability-oriented policies, and create an organizational culture that supports ecological responsibility.

This paradigm transformation shows that Green School Management is a broader concept than conventional environmental education. Green School Management is not only related to the management of environmentally friendly facilities, but includes the entire function of education management which includes planning, organizing, implementing, supervising, and evaluating (Samuel J, 2025). Through this approach, all madrasah policies are directed to support the creation of a sustainable learning environment. Thus, sustainability becomes an integral part of the vision, mission, work program, curriculum development, organizational culture, and decision-making patterns in the madrasah environment.

The literature synthesis also shows that the implementation of Green School Management in various countries has relatively similar characteristics. Most Green School models are built on several key components, namely leadership that has a commitment to sustainability, institutional governance that supports green policies, a curriculum that integrates environmental education, an organizational culture that shapes ecological behavior, efficient management of infrastructure, and partnerships with communities and various stakeholders (Nurkhasanah et al., 2025). These six components form an interconnected system so that the success of the Green School cannot be achieved if only one aspect is developed separately.

The findings show that Green School is essentially a form of transformation of educational organizations towards sustainable educational organizations. In other words, Green School is not just a school greening program, but a governance paradigm that places sustainability as the main orientation of all institutional activities. This perspective is in line with the whole school approach which emphasizes that the success of continuing education can only be achieved if the entire organizational system moves in an integrated manner, starting from leadership, policies, learning, organizational culture, to community involvement (Hendra et al., 2022). However, the results of various studies show that the implementation of Green Schools in Indonesia is still dominated by programmatic approaches. Most of the research focuses on the effectiveness of the Adiwiyata Program, waste management, school environment greening, energy conservation, or increasing students' environmental awareness. These studies make an important contribution to the development of environmental education, but have not fully positioned Green School as an integrated institutional management system. As a result, the success of Green Schools often depends on the sustainability of a particular program or project, rather than on a permanent change in organizational culture. This condition shows that there is a conceptual gap between the practice of Green School and the Sustainable Education paradigm.

Continuing education requires systemic change involving all components of the education organization, while the implementation of Green Schools in many institutions still tends to be oriented towards incidental environmental activities. Therefore, an approach is needed that is able to integrate environmental aspects into the overall management function of educational institutions so that sustainability becomes an organizational identity, not just an additional activity. Based on this synthesis, this study views that Green School Management must be understood as a governance system of educational institutions that integrates leadership, institutional policies, curriculum, organizational culture, infrastructure management, and strategic partnerships in realizing Sustainable Education. With this perspective, sustainability is not only positioned as an educational goal, but also as a basic principle in the implementation of all madrasah activities. This concept is also the initial basis for the development of a Green School Management Model Based on Islamic Values which will be discussed in the next section.

Islamic Values as the Foundation of Green School Management

The transformation of Green School Management towards a sustainable madrasah governance model is not enough based only on modern management approaches and the Education for Sustainable Development (ESD) paradigm. As an Islamic educational institution, madrasahs have characteristics that distinguish them from public schools, namely the integration between educational goals, Islamic values, and the formation of students' morals. Therefore, the development of Green School Management in the madrasah environment requires a philosophical foundation sourced from Islamic teachings so that sustainability is not only understood as a demand for global development, but also as part of the implementation of religious values (Abdullah & Nasrulloh, 2026). The results of the synthesis of the Qur'an, hadiths, and various studies on Islamic environmental ethics show that environmental conservation is an integral part of Islamic teachings.

In contrast to the anthropocentric paradigm that places humans as the center of natural utilization, Islam views humans as caliphs *fi al-ardh*, namely representatives of Allah who are entrusted with prospering and maintaining the balance of nature. This perspective emphasizes that the relationship between humans and the environment is not solely a relationship of utilization, but a relationship of responsibility based on the value of worship (Lestari, 2026). Thus, environmental management in an Islamic perspective has not only an ecological dimension, but also a theological and moral dimension.

The findings of the study show that there are several main values in Islam that have direct relevance to the development of Green School Management. The first value is monotheism, which is the belief in the oneness of Allah which gives birth to the realization that the entire universe is His creation. In the context of education management, monotheism is the basic orientation that directs all madrasah management activities so that they are not solely oriented to organizational effectiveness, but also to spiritual responsibility. The awareness of monotheism forms a paradigm that protecting the environment is part of obedience to Allah so that all institutional policies must reflect the values of sustainability as a form of servitude.

The second value is the caliphate, which is the leadership mandate given by God to humans to manage the earth responsibly (Milla et al., 2025). The results of the synthesis show that the concept of caliphate has a very close relationship with leadership theory in education management. A madrasah head not only carries out the administrative function as the manager of the institution, but also bears a moral responsibility to ensure that the entire educational process takes place in a fair, sustainable manner, and provides benefits for the environment. Thus, leadership in Green School Management is not only understood as the ability to manage the organization, but as a form of implementing the

caliphate's mandate.

The third value is trust, which is the principle of accountability in carrying out each responsibility (Milla *et al.*, 2025). From the perspective of Green School Management, the mandate is the basis for the development of transparent, participatory, and responsible madrasah governance. All policies regarding resource management, budget use, energy utilization, and management of educational facilities must be carried out effectively without causing damage to the environment. Thus, the principle of trust strengthens the concept of good governance in education management through the dimension of religious ethics.

The next findings show that the concept of *mizan* (balance) makes an important contribution in building a sustainability paradigm. The Qur'an illustrates that Allah created nature with a balance that must be maintained by humans. In the context of madrasah management, *mizan* can be translated as the principle of balance between educational needs, resource utilization, and environmental conservation. Institutional policies consider not only economic efficiency, but also ecological impacts and long-term sustainability (Habibah *et al.*, 2025). Therefore, the concept of *mizan* expands the meaning of organizational effectiveness to an effectiveness that maintains harmony between humans, nature, and God.

In addition, this study found that the value of *ihsan* has a strategic position in building a green organizational culture. *Ihsan* contains the meaning of doing work optimally with the awareness that all human activities are under the supervision of Allah (Kumala & Jazilurrahman, 2025). From a management perspective, these values encourage the birth of a work culture that is disciplined, responsible, and has concern for the environment. Simple habits such as saving water, reducing plastic use, managing waste, and maintaining the cleanliness of madrasahs are no longer understood as administrative obligations, but as part of the implementation of *ihsan* values in daily life. The next value is *islah*, which is an effort to make continuous improvements. The results of the synthesis show that the concept of *islah* is in accordance with the principle of continuous improvement that has developed in modern management theory.

Green School Management cannot be understood as a program that is completed after obtaining a specific award or certification, but is an ongoing process that requires continuous evaluation, reflection, and innovation. Therefore, every environmental policy in madrasahs must always be reviewed in order to be able to adapt to the challenges and needs that continue to develop. Furthermore, this study found that all of these values lead to a broader goal, namely *hifz al-bi'ah* or environmental protection as part of efforts to realize benefits (Adhania, 2023).

Although the concept of *hifz al-bi'ah* has not explicitly become one of the main goals of classical *maqāṣid al-syarī'ah*, various contemporary studies place it as a development of the principles of preserving life (*hifz al-nafs*) and preserving posterity (*hifz al-nasl*). This perspective shows that environmental conservation is a prerequisite for the realization of quality and sustainable human life (Mustofa & Isbir, 2025). Thus, Green School Management in the madrasah environment not only aims to create environmentally friendly schools, but also contributes to the achievement of the benefits of the wider community.

The results of the above synthesis show that Islamic values do not stop at the normative level, but can be translated into operational principles in madrasah governance. *Tawhid* provides spiritual orientation, the caliph forms a leadership paradigm, the mandate becomes the basis for organizational accountability, *mizan* directs balance in policy making, *ihsan* builds a quality work culture, while *islah* encourages innovation and continuous improvement. The integration of all these values results in an ethical and

philosophical foundation that strengthens Green School Management so that sustainability is understood as part of the implementation of Islamic teachings, not just a response to global environmental issues.

Based on these findings, this study argues that the development of Green School Management in madrasas is not enough to only adopt modern education management concepts and ESD paradigms. Islamic values must be placed as the foundation that gives direction to the entire process of institutional management. Thus, sustainability is no longer understood as an external goal driven by the demands of global development, but becomes part of the institutional identity of madrasas rooted in Islamic teachings. This synthesis then became the basis for the development of the Green School Management Model Based on Islamic Values (GSM-NI) as a conceptual framework for sustainable madrasah governance.

Green School Management Model Based on Islamic Values (GSM-NI)

The results of the synthesis of the concept of Green School Management, the Education for Sustainable Development (ESD) paradigm, education management theory, and Islamic values resulted in a conceptual model called Green School Management Based on Islamic Values (GSM-NI). This model was developed as a madrasah governance framework that integrates ecological, pedagogical, managerial, and spiritual dimensions into one complete system. In contrast to the Green School model, which has been more focused on managing the physical environment or implementing green school programs (Syukur et al., 2021), GSM-NI views sustainability as a basic principle in the entire process of implementing education in madrasas. Thus, environmental management is not positioned as an additional program, but becomes part of the institutional identity that is realized through leadership, governance, curriculum, organizational culture, partnerships, and evaluation based on Islamic values.

Based on the results of the literature synthesis, this study identifies that the implementation of Green School Management in madrasas is built through six main components, namely Green Leadership, Green Governance, Green Curriculum, Green Culture, Green Facilities, and Green Partnership. The six components do not stand alone, but form a system that is interconnected and moves dynamically towards the realization of Sustainable Education. All of these components obtain the normative direction and legitimacy of Islamic values which include monotheism, caliph, amanah, mizan, ihsan, and islah. Therefore, the GSM-NI model not only explains what madrasas should do in realizing sustainability, but also explains why the practice is part of religious responsibility. The findings of the study show that Green Leadership is a core driver component in the GSM-NI model.

This position is based on the results of a synthesis that shows that organizational change is always initiated by leadership that has a vision and commitment to sustainability (Audhiya et al., 2026). In the ESD paradigm, the transformation of schools into sustainable institutions requires leadership that is able to move all school residents through a whole school approach. Meanwhile, from the perspective of education management, the head of the madrasah has a strategic function in setting visions, formulating policies, allocating resources, and building organizational culture. The values of the caliph and trust in Islam further strengthen this position by placing leadership as a form of moral responsibility to maintain a balance between human interests, the environment, and devotion to Allah. Thus, Green Leadership is the main driver that connects Islamic values with madrasah governance practices.

The second component is Green Governance, which is an institutional governance system that integrates sustainability principles into all madrasah policies. Green Governance includes the preparation of sustainability-oriented visions and missions, the

development of environmentally friendly policies, efficient management of resources, and the application of the principles of transparency, accountability, and participation (Syukur et al., 2023). In the GSM-NI model, Green Governance does not only function as an administrative instrument, but also as a mechanism that ensures that all institutional activities run in accordance with the values of mandate and mizan. Therefore, every madrasah policy must consider its impact on environmental sustainability while providing benefits to the community.

Furthermore, the Green Curriculum functions as a medium for internalizing sustainability values to students. The results of the synthesis show that continuing education is not enough to be realized through a specific subject, but must be integrated into the entire learning process. In the context of madrasahs, the Green Curriculum allows the integration between science, Islamic values, and environmental education so that students not only understand ecological issues cognitively, but also develop attitudes and behaviors that are responsible for the environment (Chotimah, 2019). This approach reinforces the goal of Islamic education which emphasizes not only the mastery of knowledge, but also the formation of character (morals) and spiritual awareness.

The next component is Green Culture, which is an organizational culture that encourages the formation of ecological habits in daily life. This culture is manifested through the example of teachers and madrasah heads, habituation of environmentally friendly behavior, strengthening disciplinary values, and active participation of all madrasah residents in preserving the environment. In an Islamic perspective, Green Culture is rooted in the value of courtesy that encourages each individual to do good consistently, even if it is not under the supervision of others (Azzahra & Masyithoh, 2024). Therefore, Green Culture is a bridge that connects institutional policies with changes in the behavior of madrasah residents.

In addition to organizational culture, the success of Green School Management also requires the support of Green Facilities, namely the management of facilities and infrastructure that is oriented towards efficiency and sustainability. Green Facilities not only include the provision of green open spaces, waste management, water conservation, or efficient use of energy, but also ensure that all madrasah facilities are designed to support an environmentally sound learning process. In the GSM-NI model, facilities are understood as learning resources that allow students to learn through hands-on experience on sustainability practices. The last component is Green Partnership, which is the development of a network of cooperation between madrasahs and parents, the community, the government, universities, the business world, and social organizations in supporting sustainable education. The results of the synthesis show that the success of Green Schools cannot be achieved through internal efforts alone of institutions, but requires the involvement of various parties as part of the education ecosystem.

From an Islamic perspective, the partnership is in line with the values of *ukhuwah*, *ta'awun*, and *deliberation* which emphasizes the importance of collaboration in realizing the common good. Therefore, the Green Partnership expands the role of madrasahs as learning centers that are able to move the community towards a more sustainable living culture (Anggraini et al., 2018). Based on the relationship between these components, this study formulates the working mechanism of the GSM-NI model as a process of organizational transformation. The process begins with the internalization of Islamic values as a philosophical foundation that forms the vision of sustainability of the madrasah. The vision is then translated by Green Leadership into various institutional policies through Green Governance.

Furthermore, the policy is implemented through the Green Curriculum, Green Culture, Green Facilities, and Green Partnership so that all madrasah residents are

involved in sustainability practices. The interaction between these components gradually forms a green organizational culture which is the main prerequisite for the realization of Sustainable Education. Thus, Sustainable Education is understood not as the result of one particular program, but as a consequence of integrated madrasah governance. The GSM-NI model produced in this study shows that sustainability in madrasahs is the result of synergy between spiritual, managerial, pedagogical, and ecological dimensions. This integration is the main differentiator between this model and the Green School concept that developed earlier.

If conventional Green Schools are more oriented towards physical environmental management and environmental education, then GSM-NI places Islamic values as a normative foundation that gives direction to the entire madrasah management process. Thus, environmental conservation is not only understood as a strategy to improve the quality of education, but also as part of the implementation of Islamic teachings that aim to realize the benefits and sustainability of life.

Based on the results of the synthesis of the concept of Green School Management, the Education for Sustainable Development (ESD) paradigm, education management theory, and Islamic values regarding environmental conservation, this study formulated a conceptual model called Green School Management Based on Islamic Values (GSM-NI). The model describes the interconnectedness between the components that form sustainable madrasah governance, starting from Islamic values as a philosophical foundation, leadership as the main driver, institutional governance as an implementation system, to the formation of a green organizational culture that leads to the realization of Sustainable Education. Thus, this model not only explains the elements that make up Green School Management, but also shows the mechanism of relationships between elements in producing an integrated madrasah management system. The visualization of the conceptual model is presented in Figure 1.



Figure 1. Green School Management Model Based on Islamic Values (GSM-NI)

The Green School Management Model Based on Islamic Values works through a gradual process of institutional transformation. Based on the results of the literature synthesis, this study found that the success of realizing Sustainable Education does not start from the provision of environmentally friendly facilities or the implementation of environmental programs alone, but from the formation of a leadership paradigm that is oriented towards sustainability. Therefore, Islamic values are placed as a philosophical foundation that shapes the perspective of the head of the madrasah in carrying out his leadership function. The first stage begins with the internalization of the values of monotheism, caliph, amanah, mizan, ihsan, islah, and hifz al-bi'ah into the institutional vision.

These values form a leadership orientation that views environmental preservation as part of the religious mandate. At this stage, the head of the madrasah plays the role of a green leader who directs all madrasah residents towards a culture of sustainability. The second stage is realized through Green Governance. The vision of sustainability is translated into various institutional policies, such as the preparation of madrasah strategic plans, budget management that pays attention to the principles of efficiency, the provision of green school regulations, and the establishment of a monitoring system that supports sustainability.

Thus, sustainability becomes part of the organizational governance system, not just an incidental program. The third stage is the process of implementing policies through the Green Curriculum, Green Facilities, and Green Partnership. At this stage, the curriculum internalizes the value of sustainability in learning, facilities provide a learning environment that supports ecological practices, while partnerships expand community

participation in the development of madrasas. The three components complement each other so that learning about sustainability takes place conceptually and practically.

The fourth stage produces Green Culture as a madrasah organizational culture. This culture is reflected in the habits of madrasah residents to save energy, manage waste, maintain environmental cleanliness, use resources responsibly, and make concern for the environment part of daily life. From an Islamic perspective, culture is a manifestation of the values of *ihsan* and trust that have been internalized in the behavior of individuals and organizations. The last stage is the formation of Sustainable Education. At this stage, sustainability is no longer understood as a specific program goal, but has become an institutional character that is reflected in leadership, policies, organizational culture, learning, and the madrasah's relationship with the community. Thus, Sustainable Education is the result of an organizational transformation process that takes place systematically through the integration of Green School Management and Islamic values.

Conceptual Validation of GSM-NI

The validation of the GSM-NI model was carried out at the conceptual level because this study uses a qualitative library research design and does not involve the collection of empirical data from specific madrasas. Therefore, the validation carried out is not intended to prove the effectiveness of the model empirically, but rather to ensure that the structure of the model has a theoretical basis, logical intercomponent relationships, and internal consistency.

The first conceptual validation is carried out through theoretical triangulation. Each component of GSM-NI is compared with several relevant theoretical perspectives. Green Leadership is based on the study of leadership and sustainability leadership; Green Governance is related to environmental governance and institutional management; The Green Curriculum deals with ESD; Green Facilities is related to environmental management; Green Partnership deals with a collaborative and whole-institution approach; Green Culture is supported by organizational culture theory; while Green Evaluation is related to the functions of evaluation, control, and continuous improvement.

The second validation was carried out through cross-framework comparison, which compared the structure of GSM-NI with the framework of Green School Management, ESD, Islamic Education Management, and Islamic environmental ethics. The comparison shows that each framework has certain strengths, but it has not simultaneously provided an explanation of the relationship between Islamic values, leadership, governance, pedagogy, facilities, organizational culture, partnerships, and evaluation in the context of madrasas.

The third validation is carried out through internal coherence testing. This test is performed by examining the logical relationship between each layer of the model. Islamic values serve as normative foundations; Green Leadership translates values into vision and commitment; Green Governance institutionalizes this vision; Green Curriculum, Green Facilities, and Green Partnership are the implementation spaces; Green Culture internalizes practices into habits; and Green Evaluation provides a feedback mechanism for system improvement. The results of the conceptual validation show that GSM-NI has theoretical coherence, structural consistency, and conceptual plausibility. Nevertheless, conceptual validation cannot be equated with empirical validation. This model cannot yet be used to state the causal relationship or effectiveness of implementation. Empirical testing through expert judgment, Delphi studies, case studies, development research, and quantitative research is still needed.

Implications of the Model for Sustainable Madrasah Development

The Green School Management Model Based on Islamic Values (GSM-NI) developed in this study has broad implications for the development of madrasas as

sustainability-oriented educational institutions. These implications are not only related to environmental management aspects, but also include strengthening the Islamic education management paradigm, transforming organizational culture, developing institutional policies, and contributing to the achievement of sustainable development goals. In contrast to the Green School approach which is more widely understood as the implementation of environmental programs, the GSM-NI model places sustainability as a basic principle that integrates the entire process of implementing education in madrasas. Thus, sustainable madrasah development is no longer understood as an effort to improve the quality of the physical environment alone, but as a process of institutional transformation that takes place comprehensively.

Theoretically, this research contributes to the scientific development of Islamic Education Management through the synthesis of Green School Management, Education for Sustainable Development (ESD), education management theory, and Islamic values in one complete conceptual framework. So far, Green School studies have developed more in the perspective of environmental education with an emphasis on waste management, greening, energy conservation, or the implementation of the Adiwiyata Program. On the other hand, the study of Islamic Education Management generally focuses on the functions of management, leadership, organizational culture, and quality improvement of educational institutions without explicitly linking them to environmental sustainability issues.

This research brings together the two fields of study through a governance model that positions sustainability as an integral part of the implementation of Islamic education. Thus, the GSM-NI model expands the scope of Islamic Education Management from an administrative orientation to institutional governance that is responsive to global ecological challenges. In addition to enriching the perspective of Islamic education management, the GSM-NI model also contributes to the development of the concept of Green School. The results of the synthesis show that Green School should not be understood only as a school that has a green physical environment, but as an educational organization that builds a culture of sustainability through leadership, governance, curriculum, organizational culture, partnerships, and responsible resource management. In the context of madrasas, this dimension is strengthened through the internalization of Islamic values that make environmental conservation part of the religious mandate. This perspective expands the Green School paradigm from a technical approach to a philosophical, ethical, and institutional approach. The practical implications of the GSM-NI model can be seen in strengthening the role of madrasah heads as green leaders.

The results of the study show that the success of building a sustainable madrasah is not only determined by the availability of environmentally friendly facilities, but is greatly influenced by leadership that is able to build a vision of sustainability, mobilize all madrasah residents, and integrate Islamic values into the decision-making process. Therefore, the head of the madrasah does not only function as an educational administrator, but also as a change agent who directs institutional transformation towards an organizational culture that cares about the environment. Leadership based on the values of the caliphate and trust allows sustainability policies not to stop at the administrative level, but to become part of the moral commitment of all madrasah residents.

The GSM-NI model also provides implications for curriculum development and learning processes. The integration of sustainability principles into the curriculum allows students to understand the relationship between Islamic teachings, social responsibility, and environmental preservation more comprehensively. Environmental education is no longer positioned as additional material, but becomes a perspective that colors various

subjects, co-curricular activities, and habits in the madrasah environment. Through this approach, students are expected not only to have knowledge about environmental issues, but also to be able to develop ecological characters that are reflected in attitudes, behaviors, and daily habits. Thus, madrasahs play a role as a learning space that forms a generation of Muslims who have spiritual awareness as well as ecological responsibility.

From an institutional perspective, the GSM-NI model provides direction for the development of a sustainability-oriented organizational culture. Organizational culture is an important element because it is able to bridge institutional policies with the behavior of madrasah residents. When values such as trust, *ihsan*, discipline, responsibility, and concern for the environment are internalized consistently through various institutional activities, a green organizational culture will be formed that becomes the identity of the madrasah. This culture not only supports the effectiveness of the implementation of Green School Management, but also strengthens the institutional character as an Islamic educational institution that integrates religious values with sustainability practices. In the long run, such an organizational culture will create more sustainable behavioral change than the implementation of incidental environmental programs.

At the policy level, the GSM-NI model has high relevance to the development of continuing education in Indonesia. So far, various policies, such as the Adiwiyata Program and the implementation of Education for Sustainable Development, still focus a lot on environmental indicators and school activities. The model offered in this study provides a more comprehensive perspective by placing institutional governance as the main foundation in building sustainable madrasahs. Therefore, the GSM-NI model can be used as a frame of reference in the formulation of madrasah policies that integrate aspects of leadership, governance, curriculum, organizational culture, facility management, and partnerships in an integrated manner. This approach allows the implementation of sustainability policies to be more systematic, measurable, and sustainable.

In addition, the GSM-NI model contributes to efforts to achieve the Sustainable Development Goals (SDGs), especially SDG 4 (Quality Education), SDG 11 (Sustainable Cities and Communities), SDG 12 (Responsible Consumption and Production), and SDG 13 (Climate Action). The integration of Islamic values into madrasah governance shows that the achievement of global development goals should not be understood as an agenda separate from religious values. On the contrary, Islamic teachings can be a source of value that strengthens the implementation of sustainable education through character building, organizational culture development, and management of educational institutions that are responsible for the environment. This perspective shows that madrasahs have strategic potential as agents of change in supporting sustainable development at the local and national levels. However, this study has limitations because it uses a library research approach so that the resulting GSM-NI model is still conceptual. The relationship between components in the model is compiled based on the results of the synthesis of various theories and previous research, so that it has not been empirically tested in the context of madrasah implementation.

Therefore, further research is needed to test the validity, effectiveness, and implementation of this model in different types of madrasahs with different characteristics. The empirical testing can be carried out through case study approaches, research and development, and mixed methods so that the relationship between Green Leadership, Green Governance, Green Curriculum, Green Culture, Green Facilities, Green Partnership, and Sustainable Education can be analyzed in more depth. Overall, the implications of the GSM-NI model suggest that sustainable madrasahs development requires a paradigm shift from a program-oriented approach towards integrated institutional governance. Sustainability is not only realized through the provision of a

green physical environment, but through visionary leadership, environmentally friendly policies, a strong organizational culture, learning that internalizes sustainability values, and partnerships involving various stakeholders. When all of these components are built on the foundation of Islamic values, madrassas not only become educational institutions that support Sustainable Education, but also become a space for the formation of a Muslim generation that has spiritual integrity, ecological concern, and social responsibility in realizing the benefits of humans and the environment.

CONCLUSION

This research succeeded in developing the Green School Management Model Based on Islamic Values (GSM-NI) as a conceptual framework for madrasah governance that supports the realization of Sustainable Education. The results of the synthesis of Green School Management theory, the Education for Sustainable Development (ESD) paradigm, the theory of Islamic Education Management, and Islamic values regarding environmental conservation show that sustainability in madrasas is not enough to be realized through a partial greening program or environmental education, but requires an integrated institutional governance transformation. The GSM-NI model developed places Islamic values as a philosophical foundation that directs the entire management process through seven main components, namely Green Leadership, Green Governance, Green Curriculum, Green Culture, Green Facilities, Green Partnership, and Green Evaluation. The integration between these components forms a governance system that is not only oriented to organizational effectiveness and environmental conservation, but also to the formation of ecological, spiritual, and social character of madrasah residents.

The main contribution of this research lies in the development of a conceptual model that integrates ecological, pedagogical, managerial, and spiritual dimensions into a single madrasah governance framework. In contrast to the concept of Green School which has been focusing more on the physical aspects of the environment or the implementation of green school programs, GSM-NI views sustainability as the basic principle of the implementation of Islamic education which is manifested through leadership, policies, organizational culture, learning, resource management, and partnerships based on Islamic values. Thus, this research enriches the treasures of Islamic Education Management while expanding the discourse on Green School Management through the integration of the sustainable development paradigm with Islamic values in the context of madrasah governance. Practically, the GSM-NI model can be used as a reference for madrasah heads, education managers, and policymakers in designing sustainability-oriented madrasah management systems. The application of this model has the potential to strengthen an environmentally friendly organizational culture, integrate Islamic values into all management functions, and support the achievement of the Sustainable Development Goals (SDGs), especially SDG 4 (Quality Education), SDG 11 (Sustainable Cities and Communities), SDG 12 (Responsible Consumption and Production), and SDG 13 (Climate Action). Through this approach, madrasas are expected not only to become educational institutions that produce academically outstanding graduates, but also to form a generation of Muslims who have ecological awareness, social responsibility, and spiritual integrity in facing the challenges of sustainable development.

This research has limitations because it uses a library research approach, so the GSM-NI model produced is still conceptual and has not received empirical validation in various madrasah contexts. Therefore, further research needs to test this model through field studies, both with qualitative, quantitative, and mixed methods approaches, to evaluate the relationship between model components, measure the effectiveness of its implementation, and refine the model according to the characteristics of diverse madrasas.

Thus, GSM-NI is expected to develop from a conceptual framework to a governance model that is empirically tested and applied in supporting the development of sustainable madrasahs.

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