

Green Campus Management in Islamic Higher Education: Sustainable Development Goals 13

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Abstract

Universitas Islam Negeri Raden Intan Lampung is committed to advancing green campus management as a proactive response to the challenges of increasing pollution and environmental degradation faced in Indonesia. This research investigates the specific initiatives undertaken by Universitas Islam Negeri Raden Intan Lampung in implementing green campus management. Using a qualitative method with a case study approach, data sources were drawn through in-depth interviews with twenty informants consisting of five university administrators, ten lecturers and students, and five operational staff selected by purposive sampling. To strengthen the results of the interviews, the author also collected data from expert opinions and highly reputable journals related to this research in the same context and issue. All data were analyzed using the Miles and Huberman interactive analysis technique. This research found seven aspects of green campus management at Universitas Islam Negeri Raden Intan Lampung that successfully increase the awareness and participation of the academic community in environmental sustainability. These aspects include i) Institutional Management, ii) Policy and Regulation Management, iii) Education and Curriculum Management, iv) Student Participation Management, v) Reward and Motivation Management, vi) Human Resource Management (Cleaning Staff), vii) Cross-Unit Collaboration Management. This approach forms an environmentally friendly campus culture as a whole.

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INTRODUCTION

The environment is a vast and complex system that includes all the elements around us, both living components such as plants, animals and humans, and non-living components such as air, water, soil and climate (Kaushika et al., 2016). These components are interconnected and interact with each other in ways that profoundly affect the health, sustainability and survival of life on Earth. The environment plays a critical role in supporting the well-being of all living things by providing essential resources such as food, clean water and air, and regulating vital processes such as the climate and water cycle. However, environmental sustainability is not only important for humans, but also for the survival of all life forms (Coutts & Hahn, 2015; Singh & Singh, 2017). Therefore, understanding the

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environment and maintaining its balance is essential to ensure the prosperity of humanity and the entire ecosystem (Reo et al., 2017).

Currently, the environment is facing significant challenges. Human activities such as industrialization, deforestation, pollution and overexploitation of natural resources have led to environmental degradation. These practices are often carried out without considering the long-term impacts on sustainability and the ecological balance that sustains life on Earth (Plummer et al., 2022). From climate change to natural resource depletion, the consequences of human actions are increasingly evident. These alarming trends call for major and urgent changes in human behavior. It is no longer enough to simply recognize environmental problems; we must take collective and decisive action to protect the planet for future generations. Transformations in human behavior must center on responsible environmental management, including the development and enforcement of effective policies and strategies that encourage sustainable practices across all sectors of society.

As khalifah on Earth, humans have a responsibility to protect and preserve the environment. This responsibility is not a modern concept, but has been embedded in religious, cultural and ethical traditions. For example, in Islam, the concept of environmental stewardship is emphasized as a divine mandate. Religious texts such as the Qur'an highlight the importance of caring for the Earth and its resources, urging humans to maintain ecological balance and prevent damage to nature (Al-A'raf 7:56) (Larson et al., 2015). These directives encourage active engagement in environmental conservation, encouraging individuals and communities to be aware of the environmental consequences of their actions and work towards sustainability. The moral and spiritual responsibility to protect the environment is a cornerstone of ethical governance and should be reflected in the creation and implementation of policies that promote environmental conservation.

In this context, educational institutions play an important role in shaping attitudes towards the environment. Universities, in particular, are ideal places to foster environmental awareness and nurture a new generation of environmental stewards. Universities and schools are not just places for academic learning; they are incubators for future leaders, innovators and activists who will determine the direction of environmental policies and practices. Therefore, it is important for educational institutions to integrate environmental education into their curricula and actively promote sustainable practices in their own operations (Chater et al., 2020). In this way, campuses can create a culture of environmental responsibility and empower students to act in their communities. A well-managed campus environment not only supports academic success but also provides a healthy and productive atmosphere for learning, where students can thrive while learning the importance of environmental conservation.

As for Universitas Negeri Islam Raden Intan Lampung, green campus management has become a fundamental part of the institution's overall vision. This vision emphasizes the importance of environmental awareness along with educational advancement. The university recognizes that addressing environmental degradation such as deforestation, pollution, and biodiversity loss is critical to the long-term well-being of local and global communities. As part of its commitment to sustainability, the university has taken significant steps to integrate green practices into its operations and academic programs (Schenk & Johnson, 2022). The university's commitment to environmental responsibility is guided by the ISO 14001:2015 environmental management system, a global standard for the

implementation of effective environmental management practices (<u>Hidayati & Sodikin, 2023</u>). Through this framework, Universitas Islam Negeri Raden Intan Lampung aims to create a sustainable campus that not only reduces its ecological footprint but also becomes a model for other institutions.

The ultimate goal is to create a sustainable and environmentally sound campus environment, achieved through the active participation of all stakeholders-students, faculty, staff, and the wider community (Sachs et al., 2019; Salvia et al., 2019). Universitas Islam Negeri Raden Intan Lampung aspires to be a leading institution in integrative Islamic studies with an environmental perspective, positioning itself as a beacon of sustainability in higher education. By promoting environmental stewardship within the university's academic and administrative structures, it is expected to foster a deeper understanding of ecological issues and inspire future generations to engage in environmental conservation (Anwar et al., 2020; Ragheb et al., 2016).

Since the establishment of the Sustainable and Environmentally Sound Campus Development Team in 2018, Universitas Islam Negeri Raden Intan Lampung has made significant progress in its commitment to sustainability. The team has been instrumental in managing and advancing various sustainability initiatives across campus. These efforts have been recognized globally, as the university achieved a "Four Trees" ranking in the UI Green Metric World University Rankings in 2023. This recognition highlights the university's dedication to reducing its environmental impact and its success in implementing sustainable The Sustainable Development Goals, particularly Sustainable Development Goals 13 which relates to action on climate change. Therefore, the research question raised is: What are the specific steps taken by Universitas Islam Negeri Raden Intan Lampung in implementing green campus management? How do these efforts involve the academic community, such as students, lecturers, staff, and janitors, to create a sustainable campus environment? And, to what extent can the implementation of green campus management at this university become a model in supporting environmental sustainability and sustainable development goals?.

LITERATURE REVIEW

Green campus management is evolving as a strategic approach that seeks to integrate sustainability principles into the governance of higher education institutions. This initiative aims to create a campus environment that supports energy efficiency, better waste management, and preservation of natural resources. This approach is considered relevant in the context of climate change mitigation efforts and supports the Sustainable Development Goals, especially Sustainable Development Goals 13 which focuses on action on climate change (Wu & Shen, 2016).

Various studies show that the implementation of green campus principles includes a number of components, such as energy management policies, environmental conservation, and the active role of the academic community in supporting a sustainable culture (Molokova, 2021). In addition to being a learning space, green campuses also have the potential to become model institutions that reflect responses to global environmental challenges (Fu et al., 2018). In addition to its ecological benefits, the presence of natural elements in the campus environment such as parks or green roofs also has the potential to support students'

psychological well-being. A number of studies suggest that green spaces can reduce stress, improve learning focus, and create a more conducive atmosphere (Kim et al., 2021; Zhou & Lee, 2022).

The successful implementation of green campus management is generally influenced by the participation of various stakeholders. Students, lecturers, and administrative staff need to be actively involved in order to create a comprehensive sustainability system (Abubakar et al., 2016; Pandya et al., 2022). In this regard, education on sustainability integrated in the curriculum is believed to strengthen environmental awareness and responsibility among the younger generation (Patil et al., 2023). Green campuses also reflect an approach that is not only ecological, but also includes social and economic dimensions, making it a holistic effort in developing sustainable education institutions (Araújo et al., 2023; Li et al., 2022). Furthermore, these values can encourage green innovations and practices that have an impact beyond the campus environment (Mahdee et al., 2022).

In the context of Islamic universities, the green campus concept can be an additional point through religious values that are aligned with sustainability principles. The values of khilafah and amanah, as taught in Islam, strengthen awareness of human responsibility for environmental sustainability (Karman et al., 2023; Pandikar et al., 2024). The integration of these values in sustainability practices on campus can be done through Islamic ecology-based curricula and community-based educational programs (Rahman & Jalil, 2021). However, most studies still focus on the technical aspects of green campus management without deeply examining the role of religious values, especially in the context of Islamic universities. In addition, not many studies have explored how the integration of Islamic teachings in the curriculum and campus activities can influence students' sustainability awareness and behavior.

Student involvement as agents of change is also an important part of the green campus strategy. Through sustainability-oriented activities, such as greening and waste management, students can develop environmental awareness and responsibility. The habituation approach combined with religious value education is considered effective in instilling environmentally friendly practices consistently (Jamilah et al., 2023). The implementation of green campuses in Islamic universities also shows the synergy between spiritual and ecological aspects. This integration has the potential to increase the effectiveness of sustainability approaches while strengthening students' religious identity (Shin & Preston, 2021).

The overall involvement of the entire academic community is key in creating a sustainable campus culture. The active role of lecturers and administrative staff is needed in supporting sustainability policies through curriculum, governance, and operational policies (Susilo et al., 2023). The link between a green campus and Sustainable Development Goals 13 is reflected in strategies that focus on emissions reduction, energy efficiency, and sustainability education. The use of renewable energy and the reduction of motorized vehicles on campus are said to reduce the institution's carbon footprint (Liu & Wang, 2022). Through their dual role as education centers and agents of social change, green campuses can concretely contribute to climate change action (Wu & Shen, 2016).

METHODS

This research uses a qualitative method with a case study approach to describe and deeply understand the implementation of green campus management at Raden Intan State Islamic University Lampung (Bishop & Kuula-Lummi, 2017; Brennen, 2021; Yusanto, 2020). Data sources in this study were obtained through in-depth interviews with twenty informants selected through purposive sampling technique, consisting of five university administrators (rector, dean, and head of the environmental unit), ten lecturers and students who are active in environmental activities, and five operational staff such as technicians and janitors. The research instrument was structured in the form of an interview guide, which was validated through content appropriateness testing and developed based on theoretical studies and the results of previous studies (Engkizar et al., 2022; Eriyanti et al., 2020).

All data were collected through three main techniques: i) in-depth interviews, ii) direct observation of green campus activities, and iii) analysis of institutional documents. To strengthen the interview results, the author also collected data from expert opinions and highly reputable journals related to this research in the same context and issues and used source and method triangulation techniques. The validity and reliability of the interview results were confirmed by comparing the results of observations and documents, and double-checking with informants (member check). All data were analyzed using the Miles and Huberman interactive model, which includes three main stages: data reduction, data presentation, and conclusion drawing or verification (Engkizar et al., 2024; Satrial et al., 2025). This process resulted in a qualitative data report that reflects the findings comprehensively and in accordance with the study context.

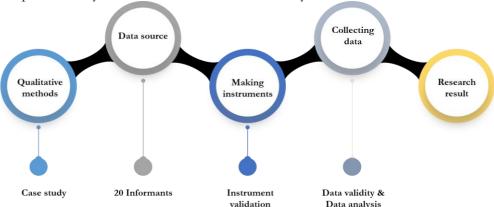


Fig 1. Research Flow

RESULT AND DISCUSSION

The implementation of green campus management at Universitas Islam Negeri Raden Intan Lampung shows significant progress in building environmental awareness and encouraging active participation of the entire academic community. The results of this study indicate that the implementation of the program is not symbolic, but has become an integral part of the institution's culture. The efforts made are designed in a planned manner, covering aspects of policy, education, and participation of the academic community in various sustainability-oriented activities. For more clarity, please see the following figure:

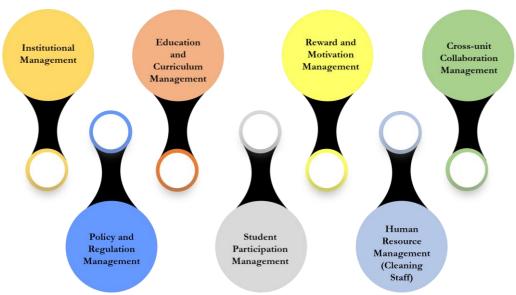


Fig 1. Green campus management

The implementation of green campus management at Universitas Islam Negeri Raden Intan Lampung reflects a systematic and comprehensive effort to build a culture of sustainability in higher education. This program is not only focused on physical and symbolic aspects, but touches various institutional, academic, and operational dimensions that are integrated with each other. The implementation of the green campus at Universitas Islam Negeri Raden Intan Lampung shows that the sustainability approach requires structured and collaborative management, involving all components of the campus, from leaders to cleaning staff. Through this study, seven main forms of management were identified as the foundation for the success of the green campus program at Universitas Islam Negeri Raden Intan Lampung.

First, Institutional Management. The implementation of a green campus at Universitas Islam Negeri Raden Intan Lampung begins with institutional strengthening through the establishment of the Sustainable Campus Development Team. This team is tasked with coordinating, designing, and evaluating all programs related to environmental sustainability. The direct appointment by the Chancellor shows structural support from the leadership for this program, which plays an important role in integrating green principles into university governance. A department head said, "We all have responsibilities, and cooperation between departments is key to the success of this green campus movement" (Informant 2).

The implementation of a green campus at Universitas Islam Negeri Raden Intan Lampung begins with strategic steps on the institutional aspect through the establishment of the Sustainable Campus Development Team. This team has an important function in designing, coordinating, and evaluating all programs related to environmental sustainability in a structured manner (Effendi & Mardiana, 2024; Yanuwardhana & Waseh, 2024). The direct appointment by the Rector signifies a commitment from the leadership level to support the implementation of environmentally friendly principles in institutional governance. Through this institutional strengthening, sustainability efforts are not only the responsibility of certain individuals or units, but are integrated into the overall university managerial system.

Second, Policy and Regulation Management. The policy aspect is the main foundation in shaping the behavior of the academic community towards the environment. Universitas Islam Negeri Raden Intan Lampung has implemented a number of regulations such as the prohibition of littering and smoking in campus areas, as well as implementing an environmentally friendly waste management system. This policy is not symbolic, but implemented consistently and integrated into campus culture. One student stated, "This program has opened our minds that small things like sorting waste can have a big impact on the campus environment?" (Informant 11).

The policy aspect is an important foundation in shaping an environmentally conscious culture among the academic community of Universitas Islam Negeri Raden Intan Lampung. The implementation of regulations such as the prohibition of littering, the prohibition of smoking on campus, and environmentally friendly waste management show the institution's commitment to sustainability. These policies are not only formally implemented, but also carried out with consistency, so that they become part of the habits and values upheld in campus life. This approach strengthens the internalization of environmentally responsible behavior, and creates a campus atmosphere that supports the creation of a green ecosystem in a sustainable manner (Chen et al., 2023; Huddart et al., 2022).

Third, Education and Curriculum Management. Environmental sustainability is also integrated into the academic dimension, particularly the learning curriculum. The lecturers link ecological issues with Islamic values as a contextual approach to foster spiritual and moral awareness among students. This effort strengthens the understanding that protecting the environment is part of religious responsibility. A lecturer said, "We do not only teach theory, but also how Islamic values teach us to protect nature as a trust" (Informant 7).

The integration of environmental sustainability in the academic dimension at Universitas Islam Negeri Raden Intan Lampung is done through curriculum development that links ecological issues with Islamic values. This approach aims to instill moral and spiritual awareness among students, so that they not only understand the importance of environmental conservation from a scientific perspective, but also see it as part of religious responsibility (Fua et al., 2018). Thus, environmental education is not separate, but integrated in a holistic and contextual learning process, forming the character of students who care and behave in an environmentally friendly manner.

Fourth, Student Participation Management. Students are given ample space to actively contribute to the green campus program, one of which is through involvement in the Environmental Ambassador program. These ambassadors become the driving force in campaigns and activities aimed at increasing awareness and environmentally friendly behavior among students. This active participation creates shared ownership and responsibility for campus sustainability. An environmental ambassador revealed, "We feel empowered to educate our friends and be a real example in protecting the environment" (Informant 18).

Students at Universitas Islam Negeri Raden Intan Lampung play an important role in supporting the green campus program through active involvement in various initiatives, especially in the Environmental Ambassador program. This program

provides participation space for students to become agents of change who encourage ecological awareness in the campus environment. The ambassadors are involved in planning, implementing, and evaluating activities, such as environmental campaigns, training, and managing green events. This involvement not only increases students' understanding of sustainability issues, but also forms a sense of collective ownership and responsibility for the preservation of the campus environment (Naik et al., 2021; Susilo et al., 2023).

Fifth, reward and motivation management. To increase participation and create a positive competitive climate, the university provides awards through the Environmental Management Awards (EMA) program. These awards are given to faculties, departments, and individuals who demonstrate commitment and innovation in environmental management. This strategy serves as additional motivation for the academic community to contribute more to protecting the environment. An administrative staff stated, "This award encourages us to continue to innovate and not just carry out the routine" (Informant 1).

In order to encourage active participation of the entire academic community and build a positive competitive culture, Universitas Islam Negeri Raden Intan Lampung initiated the Environmental Management Awards (EMA) program. This program gives appreciation to faculties, departments, and individuals who show high dedication and innovation in campus environmental management. Through this approach, the university not only recognizes tangible contributions to sustainability, but also creates incentives that encourage new initiatives. This reward strategy serves to strengthen the collective spirit to continue developing sustainable green practices (Faezah et al., 2022; Sharma et al., 2021).

Sixth, human resource management (cleaning staff). The role of cleaning staff is not only limited to carrying out routine tasks, but also involved in technical training on waste sorting, waste management, and green space maintenance. This capacity building shows that every element of the campus has a strategic role in environmental conservation. A cleaning staff expressed his pride, "We are proud to be able to participate in keeping the campus clean and green. This is not only a duty, but also an honor for us" (Informan 6).

The role of cleaning staff at Universitas Islam Negeri Raden Intan Lampung receives serious attention in the green campus program by not only focusing on daily operational tasks, but also on capacity building through technical training. They are equipped with skills in waste segregation, environmentally friendly waste management, and campus green space maintenance. This step shows that environmental conservation is a shared responsibility that strategically involves all elements of the campus. Through the active participation of cleaning staff, campus sustainability programs can be implemented more consistently and thoroughly.

Seventh, cross-unit collaborative management. The green campus at Universitas Islam Negeri Raden Intan Lampung cannot be run sectorally, but through a collaborative approach between academic, administrative, and operational units. This cross-unit synergy ensures that sustainability principles are applied thoroughly in university policies and activities. It also strengthens a culture of cooperation and collective responsibility in maintaining the campus environment. The head of one department stated, "We all have responsibilities, and cooperation between departments is the key to the success of this green campus movement" (Informan 7).

The implementation of the green campus program at Universitas Islam Negeri Raden Intan Lampung prioritizes a collaborative approach that involves all units on campus, whether academic, administrative, or operational. This approach ensures that sustainability principles are not only applied in one aspect, but across all university policies and activities. This cross-unit collaboration also strengthens a culture of mutually supportive cooperation and increases the sense of collective responsibility among the academic community in maintaining the sustainability of the campus environment (Clevenger, 2019; Klein, 2017) . Thus, the success of the green campus program is the result of well-coordinated joint contributions.

The implementation of the green campus program at Universitas Islam Negeri Raden Intan Lampung shows how sustainability values are integrated into various lines of campus managerial in a structured manner. The institutional aspect is developed through the establishment of a special team in charge of designing and evaluating environmental policies. In the field of policy, regulations are implemented to encourage environmentally responsible behavior. Education and curriculum become a means of strengthening ecological awareness, which is not only theoretical but also rooted in Islamic values. Student involvement is facilitated through leadership programs such as Environmental Ambassadors that are participatory and transformative. Campus physical infrastructure is directed towards efficiency and sustainability, in line with increasingly integrated waste management. Awards and appreciation activities such as the Environmental Management Awards are also a form of motivational management that strengthens the collective culture of protecting the environment. All of these strategies are interconnected, showing that environmental conservation efforts do not stand alone, but are managed through a multidimensional approach that reflects the institution's commitment to sustainability.

CONCLUSION

The green campus management at Universitas Islam Negeri Raden Intan Lampung shows that the institution has taken strategic steps to support environmental sustainability, particularly in relation to Sustainable Development Goal 13. The university has successfully engaged its academic community including students, lecturers, administrative staff, and janitors through various initiatives such as the Sustainable Development Program, the establishment of Environmental Ambassadors, and the implementation of environmentally friendly regulations. Through a holistic approach that combines Islamic values with sustainability practices, Universitas Islam Negeri Raden Intan Lampung has not only increased its community's awareness and participation on environmental issues, but also created a sustainability model that can be adopted by other educational institutions. Concrete measures such as waste management, campus greening, and carbon footprint reduction have shown effectiveness in mitigating climate change impacts while strengthening the religious identity of the campus community. The implementation of green campus management at this university has succeeded in becoming clear evidence that educational institutions can play an active role as agents of change in addressing global environmental challenges and become inspirational models for sustainable environmental preservation.

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