

## **TAWHID-BASED GREEN LEARNING IN ISLAMIC HIGHER EDUCATION: AN INSAN KAMIL CHARACTER BUILDING**

**Masturin**

Institut Agama Islam Negeri Kudus

*masturin@iainkudus.ac.id*

**Mhd. Rasid Ritonga**

University of Canberra

*rasid.ritonga@canberra.edu.au*

**Siti Amarah**

Institut Agama Islam Negeri Kudus

*sitiamaroh@iainkudus.ac.id*

### **Abstract**

This study aims to integrate green learning into the curriculum and proposes a holistic conceptual framework for Islamic higher education. This study used a qualitative-thematic approach and collected data through structured interviews with four informants from Islamic higher education institutions with green campus programs who were selected through snowball sampling. The results revealed that the green campus had been implemented in several ways, including the vision and governance of the campus environment, the appropriate waste management, research, and community service, and the learning process in several courses, either explicitly regulated in the written curriculum or implicitly taught in the hidden

curriculum. One of the goals of implementing a green campus is to provide insight to students, lecturers, and other higher education communities about the importance of a sustainable environment through the learning process as a provision when living in a society. In addition, Islamic higher education has budgeted funds for green campus development, although it is limited because it strictly competes with funds allocations for other required campus development. For this reason, the researchers propose *Tawhid*-Based Green Learning, a conceptual framework for developing Islamic higher education responsive to the natural environment, which is reflected in the vision, mission, goals, learning materials, quality assurance, and outcomes. The concern for the environment based on *tawhid* (monotheism) integrated into the curriculum is also a form of human piety, and Islamic higher education has the task of producing graduates who have *insan kamil* personalities. As an implication, Islamic higher education must contribute to reducing the impact of global warming through *tawhid*-based green learning included in curriculum and lecture materials.

**Keywords:** *Tawhid*, Green Learning, *Insan Kamil*, Islamic Education.

## A. Introduction

Global warming impacts the environment, health, and economy. Extreme temperature changes also cause many problems, such as changes in rainfall accompanied by strong winds, floods, and landslides. On the other hand, in the summer or dry season, drought and water scarcity occur in some areas; consequently, the agricultural sector is disrupted, and food supplies are threatened. In addition, the sea absorbs heat to melt the ice sheet, which results in rising sea levels; thus, coastal communities are at high risk when they go to sea. The sea also absorbs carbon dioxide, making the water acidic and endangering marine life.

Extreme weather changes are also the cause of disease outbreaks because microbes are disturbed (McMichael, 2015). Therefore, the government must allocate more budget to overcome the impact of global warming and natural disasters, such as repairing damaged infrastructure, providing assistance to disaster victims, providing health subsidies, warning systems, and other safety management (Lee *et al.*, 2019; Piepiora & Kachniarz, 2019).

Diffenbaugh and Burke (2019) reported that climate change has increased economic inequality, in which the gross domestic product is low in countries with global warming. In addition, Flanagan and Priyadarshini (2021) found that food waste directly affects global warming; thus, education for consumers about the factors causing global warming is necessary. In his research, Rossati (2017) analyzed that global warming affects water warming and encourages increased water-borne pathogens, increasing the transmission of diseases, such as malaria and viruses. Moreover, researching student concerns about global warming at the University of Bahrain, Freije *et al.* (2017) exposed that students in the biology study program had better knowledge than students in other departments. The study recommends integrating environmental concepts into higher education curricula to increase awareness of global warming. Green education can be realized through the *insan kamil* (the perfect individual) strategy, where humans try to realize their status as servants of God to maintain natural order and environmental prosperity (Budiyanti *et al.*, 2020). *Insan Kamil* is the highest human character where human resources are the embodiment of divine values on earth (Rahman & Ritonga, 2021).

Higher education needs to integrate the values of preserving nature to reduce the impact of global warming. In Islam, the obligation to protect nature is stated in the QS. Al A'raf: 85, which means “*nor spread corruption in the land after it has been set in order. This is for your own good if you are 'truly' believers.*” Ulya (2020) exemplifies that the role of the Surabaya government in managing the environment is in accordance with *maqasid sharia* because it pays attention to the welfare of children (*hifz an-nasl*), which includes public policies regarding civil rights and freedoms and the protection of children. Muhamad *et al.* (2020) assert that Islam means emphasizing environmental exploitation by refraining from aggression and abuse. Islam also emphasizes the importance of environmental enforcement and provides guidance to prevent harm.

Environmental conservation must be based on several main things. First, nature is a sign of God's power that must be guarded and preserved. Second, environmental balance emphasizes the objectives of *sharia*, which encourages good deeds for all creatures and the environment. Third, there is the concept of sustainable environmental rehabilitation. Fourth, humans, as representatives of God on earth, have the mandatory responsibility in preserving environment. Fifth, belief is a human pillar in balancing social and environmental piety as a form of faith in Allah the Almighty (Ubaidillah, 2010).

In the Netherlands, for example, green education can be obtained at secondary, vocational, and higher education levels (Kupper *et al.*, 2012). Green education has been deemed a solution that contributes to the problem directly and successfully builds a strong organizational structure, provides adequate knowledge, and offers an interesting way of learning

(Ardoin *et al.*, 2020). Meanwhile, green education in Islamic countries is easier to implement based on the monotheistic values contained in the Qur'an and Hadith. Mohd Yusof *et al.* (2013) explored the application of green technology in the Muslim world by comparing the management of waste disposal systems for producing renewable electrical energy in Islamic and non-Islamic countries. The study emphasizes that Islam urges humankind to be kind to nature and not to abuse the beliefs contained in the Qur'an and Sunnah, which emphasizes the human responsibility to protect and maintain God's creation in a balanced way.

Islamic higher education is established to answer future challenges, i.e., to produce graduates with qualifications in the field of Islam. Following the above fields, alumni of Islamic higher education are scholars who belong to the theoretical and implementable scientific levels. Besides, the alumni are directed to have conceptual and analytical skills to make changes because religion is related to various life problems, such as education, politics, economics, socio-culture, environment, and science. Therefore, building green learning as an environmental concern is essential in realizing piety and sharia goals. In his research, Anthony Jnr (2021) reveals that higher education in Malaysia, which implemented green practices to provide insight into the green campus paradigm from a technology perspective, has produced innovative solutions to sustainable development challenges. In Indonesia, for the period 2021, the University of Indonesia (UI) Green Metric (University of Indonesia (UI) Green Metric, 2021) released a list of the most beautiful and greenest universities in the world and Indonesia, and one of them puts

UIN (State Islamic University) Raden Intan Lampung as the eighth greenest campus in Indonesia, with a score of 7925. Likewise, IAIN Salatiga has built a green *Washatiyah* vision, and these movements to build a green campus need to be integrated into the learning system.

## **B. Literature Review**

Religion and ecology are increasingly in demand and studied by scholars in various countries. Islam provides principles and ethics about the environment. However, Muslim countries are considered to have not shown concern for environmental issues (Saniotis, 2012). In fact, protecting the environment is vital in Islam, and humans are responsible for ensuring safe custody of the environment (Muhammad, 2010). Islam also believes that humans and nature are interdependent, and maintaining the balance of nature is a manifestation of faith and a mission as a servant of Allah (*Abdullah*) and caliph on earth (Kurniawan, 2012). Also, humans depend on nature, which helps them achieve their spiritual goals on earth. Hence, as caliphs on earth, humans have a duty to protect the environment as a form of their devotion as servants of Allah (*tawhid*) (Bt Abdul Rahman, 2020).

The environment is defined as everything that surrounds the living place of creatures, grouped into natural and built environments. The natural environment occurs by itself (given) without human participation in its creation. Conversely, the built environment resulted from people and was developed for certain purposes to support human needs. Natural environments include mountains, mountain areas, valleys, lakes, rivers, straits, beaches, and seas. Meanwhile,

examples of built environments are reservoirs, parks, rice fields, settlements, and industrial areas.

With all the concepts and terminology about nature and the environment, the Qur'an shows that Islam is a friendly religion and even obliges believers to coexist and recognize natural behavior properly because humans themselves will benefit (Kaunain, 2018). Islam is also required to contribute to civilization development by accommodating all aspects, places, and changes in the realities of time and society.

Humans are required to have a certain character towards nature, including maintaining its sustainability (Fathil *et al.*, 2015). In this case, humans are given the opportunity to use nature that provides benefits for them, but they cannot exploit it because it will jeopardize and destroy life. In terms of natural damage, humans are obliged to carry out natural rehabilitation to recover. Nature has been created in a balanced and beautiful way for human life, both production and consumption; thereby, it must be respected, utilized, and protected seriously (Alpay *et al.*, 2013). In this regard, the eco-Islam concept explains the principles and role of humans towards nature according to the Qur'an (Abdelzاهر *et al.*, 2019).

As a Muslim guide, the Qur'an has covered all aspects of human life, and about 750 verses out of 6236 discuss aspects of nature and the relationship between humans and nature (Mănoiu *et al.*, 2016). The trilogy of relations between God as the Creator, humans as caliphs, and the earth (environment) as a place to carry out the caliphate mission needs to be carried out based on comprehensive ethical rules in harmony whereby inequalities that occur with the emergence of natural disasters can be minimized (Rusnatun, 2020).

Education is the most effective way to build character-oriented toward the environment and the balance of the ecosystem. In an Islamic way, environmental education is an essential means for Muslims to know and realize that the universe belongs to Allah, and the position of humans on earth can be known through Allah's regulations, as in QS. 6:38 and QS. 16:66 (Sabrina, 2020). Moreover, the formalization of environmental care into the Islamic education system is non-negotiable. Umiarso and Mawardianti (2018) explained that the foundation of Islamic education is seen from the typology of Islamic education philosophy, including the category of tawhid-based social reconstruction.

Etymologically, tawhid is to unite, make one, or characterize with unity. According to Siradj (2014), in a general understanding, tawhid or *al-'aqidah al-Islamiyah* is an Islamic belief system, which includes belief in Allah by understanding His names and attributes, belief in angels, spirits, demons, devils, and other supernatural beings, belief in prophets, holy books, and other eschatological matters, such as the Day of Resurrection (*al-ba'th*), the Day of Judgment (*Yawm al-Qiyamah*), *al-mustaqim*, and others. Furthermore, Bhat (2018) conveyed that the essence of Islam is tawhid, an act that affirms Allah the Almighty is one; absolute Creator, transcendent, God, and master of everything in the universe. In his view, believing in tawhid is the most fundamental teaching that determines the level and status of whether a person is a Muslim or not.

According to Ainiyah and Karsiyah (2017), the formation of human beings from the Islamic education perspective can be done by integrating faith, science, and charity to create



a balanced culture and human character. Here, the human dimension is not only a physical and biological being but also a multidimensional being who has mental, intellectual, moral, and spiritual capacities (Kartanegara & Anshari, 2020). Albayrak (2011) asserted that the concept of *insan kamil* includes all positive human qualities. Also, Davids and Waghid (2019) assessed that *insan kamil* or perfect human bears responsibility for himself, his actions, and his intuitive relationship with God. Lohlker (2019) defined *insan kamil* as a perfect human being, a perfect person, a complete human being, a universal human, and others.

Hasan *et al.* (2017) argue that human resources with skills in the green environment are indispensable in sustainable development, and this process needs to be integrated into the curriculum in higher education or provided through training. Furthermore, Fachrudin *et al.* (2019) provide ways to implement green education that can be carried out, i.e., through seminars, research, empowerment of student organizations in environmental activities, green campus campaigns, and reducing paper use. Varela-Candamio *et al.* (2018) also found that human behavior in protecting the environment is primarily determined by intrapersonal, motivational, interpersonal, and educational factors. Thus, the management of Islamic education must be directed at producing graduates, who also pay attention to various human intelligence, namely intellectually, spiritually, emotionally, physically, and socially, both within the family and society (Palahudin *et al.*, 2020).

Regarding the need to build ecological and moral education in higher education, Liu (2021) argues that it can be accomplished by combining theory and practice

to increase students' awareness of the environment and ecological civilization. Previously, Shi (2017) designed four knowledge modules on green education, covering concepts and history, methods and tools, topics and applications, and policies and perspectives. The green education model involves practitioners in a participatory and cooperative learning process to find solutions to food problems with social and environmental value (Hou *et al.*, 2020). By employing this model, teaching methods are carried out interdisciplinary, and the messages are lightly to absorb.

In Indonesia, Islamic higher education is a university that provides academic education in several disciplines, including science outside the Islamic sciences. Under the auspices of the Ministry of Religion, three types of Islamic higher education include *Sekolah Tinggi Agama Islam* (Islamic Colleges), *Institut Agama Islam* (Islamic Institutes), and *Universitas Islam* (Islamic Universities). By applying tawhid-based green learning, Islamic higher education in Indonesia is expected to increase the awareness of students, staff, lecturers, and other academic communities to protect and not damage the environment since the consequences are potentially harmful to human survival.

### **C. Method**

It is qualitative research, and the data were collected through interviews with four faculty leaders at Islamic higher education with a green campus program who were willing to be interviewed with consent. The informant determination technique used snowball sampling since this technique can be applied when the target is not easily accessible (Naderifar *et al.*, 2017). Meanwhile, after going through the confirmation

stage of willingness, the four informants came from Universitas Islam Negeri (UIN) Raden Fatah Palembang, UIN Raden Mas Said Surakarta, UIN Alauddin Makassar, and Institut Agama Islam Negeri (IAIN) Salatiga. The researchers asked several questions, including (1) implementation of green campus in the curriculum, (2) implementation of green campus in learning, (3) results of green campus implementation for graduates, (4) implementation of green campus for lecturers, and (5) institutional policies and budget availability on green campus implementation. Meanwhile, data analysis was carried out by thematic analysis, namely qualitative research data analysis applied to analyze the transcripts that emerged from the interviews for researchers to identify, confirm, verify, and expand the themes later (Galanis, 2018).

#### **D. Results and Analysis**

In this study, the implementation of green campus in learning at Islamic higher education was extracted from several sources, as mentioned in the research methods section. Each higher Islamic education has different policies and views about interpreting and developing a green campus.

##### **1. Environment-Based Curriculum and *inSani* Campus**

Commitment to realizing a sustainable environment through a green campus of UIN Raden Fatah is represented with the tagline as an *inSani* campus (beautiful, harmonious, safe, comfortable, and Islamic). This commitment is a form of Islamic values implementation that exist in the vision of UIN Raden Fatah Palembang. This concept is in line with the thought

of Sibanda (2013) that green knowledge is primarily determined by individual awareness of climate change issues in everyday life.

The Rector's and the Deputy Dean of Academic Affairs create a course related to a sustainable green campus environment. Thus, each faculty must bring up one course related to the environment, such as environmental *fiqh* (Faculty of Sharia), environmental science (Faculty of Science and Technology), cultural ecology (Faculty of Humanities), environmental communication (Faculty of Social and Political Sciences), environmental management (Faculty of Islamic Economics and Business), and others. Its implementation can be recognized in the form of elective courses or core courses. According to Louw (2013), the importance of a green curriculum is to build human habitation according to standards. Higher education has a strategic position in carrying out social transformation in an increasingly modern society related to the impact of climate change. In order to respond to climate change, a green curriculum is necessary.

Furthermore, this green campus implementation impacts alumni by changing the mindset that protecting the environment is crucial wherever they work and are in the community. Building this awareness starts from the curriculum process, the learning process, and the resulting output. Thus, students can become mouthpieces for a sustainable green campus campaign in the community. Meanwhile, for lecturers, implementing a green campus is their involvement in preparing course

maps or semester lesson plans related to environmental themes. Apart from designing semester lesson plans, they are also involved in maintaining a sustainable green campus environment, such as the tree-planting movement, water-saving movement, no smoking movement in class or campus environment, parking order movement, classroom cleanliness, and paperless movement with online lectures or soft files.

At the higher education leadership level, the green campus policy carried out by the rector is a key performance indicator. It is also a key performance index for deans in the institution. Therefore, the leadership formed a green campus institution through a direct decree by the rector. For the time being, the green campus team has proposed funding for planning and is synergistic with the general department. In the future, the leadership of UIN Raden Fatah will turn this green campus into an environmental study institution/center so that it becomes more focused and has its funding. Meanwhile, at the faculty level, the green campus policy is through the rector's instructions, which must be implemented in each faculty's budget work plan.

Jaya (2020) supported Islamic higher education's green campus-based curriculum model to preserve the environment and increase awareness about environmental issues. In addition, Okanović *et al.* (2021) also suggested that higher education currently needs to show competitiveness through environmentally friendly curriculum and learning materials or ecolabelling. Within the framework of supporting sustainable global

development, higher education needs to understand and accept that development must be directed towards low-carbon development goals and a green environment.

## 2. Reforestation and Environmental Sustainability

Hong and Cords (2020) showed that Western countries had used various ways to reduce carbon emissions. According to Feng and Chen (2018), market-based environmental regulation also positively impacts the development of green industries. Meanwhile, for the case in Indonesia, Gade (2015) revealed that Islamic ecological decisions, such as the MUI *fatwa*, are urgently needed to fill critical gaps in global persuasion when non-religious environmental messages fail.

Meanwhile, the green campus at UIN Raden Mas Said Surakarta has been launched since it was still IAIN Surakarta in 2018. The activity began with planting 1000 tree seedlings, a collaboration between the campus, the Surakarta Environment Service, and the Central Java Forestry Service. This green campus aims to educate the community to love the surrounding ecology. The rector said that a green campus means that the campus is managed with commitment and action on reforestation and environmental sustainability, both for the development needs of today and generations to come.

The commitment to green campus implementation is carried out outside the curriculum. The implementation of green learning is conducted with the concept of low energy and paperless, where academic services are application-based and online, including student final

reports. Regarding the implementation of green campus in current learning, all learning processes have led to how individuals use low energy and paperless. Some academic services no longer use paper to commit to a green campus or environment. In the learning process, for some courses, the examination and *munaqosyah* (final paper defense) process or thesis proposal exams are all done online or using a separate application, so they do not use many papers, including eliminating the thesis in paper form.

Concerning the implementation results of a green campus for graduates, they are completely aware of the green environment or green campus. It begins with how the campus educates them by introducing the importance of a green environment in the campus sphere both in the behavior process and its community. Thus, the campus believes its graduates are conscious of a green campus. To the lecturers, regarding the green campus implementation, the campus has told them from the beginning that the faculty's commitment to the green campus is high; thus, air conditioners are not used in some classrooms but are provided with ordinary fans, even though some classes have already had air conditioning. Then, it has also been conveyed to the lecturers not to use many papers to initiate green campus values in their educational process; hence, the lecturers are fully aware.

Moreover, showing the leadership's commitment to a green campus, UIN Raden Mas Said Surakarta is currently the only faculty with the largest solar cell. So far, solar cells are only used for roadside lights, but the

campus has building F, with most roofs made of solar cells. This solar cell is a renewable energy that can drive several tools, including lights and several other electronic types of equipment. However, in the last three years, this solar cell has stopped a bit because of the high maintenance costs that must be incurred. It is an obstacle that the commitment to a green campus must also be supported at a high cost. However, the campus still believes that among several other State Islamic Higher Education, the largest solar cell is in FEBI. As a result of the above, people possibly believe that the campus is keenly aware of a green campus.

### 3. Environmental Awareness and *Pancacita*

Stankevičienė *et al.* (2020) concluded that a linear “take-make-waste” economic activity should be changed to an economic system that helps solve the problems of resource shortages, negative environmental impacts, and waste management. In this regard, Islam views that the green economy can be seen through the *maqasid sharia* perspective, which focuses on the quality of economic growth, environmental efficiency, and social growth, supporting welfare, one of which is by developing urban farming (Arinta, 2020).

The waste management concept in UIN Alauddin Makassar is seriously implemented through non-academic regulation, known as *Pancacita*, namely a calming, lush campus. These efforts are marked by planting trees, building an eco-healthy waste bank and water management to save water, paper, and electricity



efficiency, and being free from cigarette smoke and air pollution. The rector, staff, and the entire academic community are also trying to realize environmental care programs in their respective units.

Concern for the environment, in this case, only partially enters the activity of forming the character of new students through the material on self-relation with the environment. However, it has become a subject in specific majors and study programs, such as in the Department of Biology and Architecture at the Faculty of Science and Technology. Thus, students are believed to have an awareness of environmental sustainability. In addition, the rector has made a breakthrough with campus structuring that pays attention to a calming, lush environment by building parks in the campus area involving professional garden managers and the clean Friday movement for the entire academic community. All faculty leaders are also instructed to directly oversee the green campus more progressively, including in the fields of research and community service.

#### 4. Green Washatiyah Vision

Oviana and Rijal (2021) found that the role of Islamic universities in fostering student character values is carried out through the formulation of the vision and mission, curriculum, programs, rules, facilities, and implementation of student character-oriented lecture activities. As stated by Sonita *et al.* (2021), as a religion, Islam is a vision and a way of life in taking action, and Islamic universities can take a role in sustainable

economic development through entrepreneurship education. In addition, Rahayu *et al.* (2019) asserted that the development of a life skills curriculum focuses on the vision and mission, community needs, higher education burdens, lecturer materials, curriculum integration, elective courses, learning facilities, and leadership models agreed upon.

In contrast to other Islamic higher education implementing a green campus, IAIN Salatiga chose the term green moderate campus or *Green Washatiyyah* with an environmentally friendly perspective. In collaboration with Semarang State University, IAIN Salatiga designed an environmentally friendly campus environment. On the 51st Anniversary of IAIN Salatiga, the rector conveyed the importance of upholding the philosophy of developing a campus environment based on *Washatiyah* values or a balanced ecosystem (Humas IAIN Salatiga, 2021). Several variables that must be met include (1) setting and infrastructure, (2) energy and climate change, (3) waste management, (4) integrating ecology in courses, (5) funding for research, service, and publications on environmental sustainability, (6) scientific events on the environment, (7) several student organizations related to the environment, and (8) digitization of campus services. The declaration of a moderate green campus responds to disruptions and pandemics to increase environmental awareness.

The faculty leaders said that the moderate green campus had not yet been included in the curriculum, but it is implemented outside the curriculum. Several activities have been carried out by involving the entire

academic community and stakeholders by building infiltration wells, building campus spaces by increasing glass to maximize sunlight entering the room to save electricity, and implementing water, oxygen, air, and low carbon emission conservation.

Moreover, the implementation of a moderate green campus has been carried out by the Tarbiyah Faculty, one of which is through training in composting at the *Compost Corner for Green Washatiyah Campus*. The compost is made from dry leaf litter around the campus. The training was carried out to provide cleaning employees and students with the knowledge to prepare for practical lectures in the community. In addition, students have carried out tree planting movements; fifty of them are productive trees that can be used for their fruit, while the others are living ornamental trees. These activities aim to increase environmental awareness around campus and implement it in their respective home environment.

Meanwhile, the Faculty Student Council has also held an eco-brick workshop to support the Green Washatiyah Campus program. This workshop was held against the background of the increasing use of plastic and plastic-based goods due to increasing technological sophistication and population growth. Eco-bricks are an alternative to non-biological waste utilization that the community can rely on. The principle of eco-bricks is to convert plastic waste into smaller parts/bricks and put them in plastic bottles. The brick is compressed then there is no space; thus, the plastic waste will be stored and maintained in the bottle, and it does not require to be

burned and stockpiled. This eco brick can be a solution to reduce the toxic impact of Bisphenol-A.

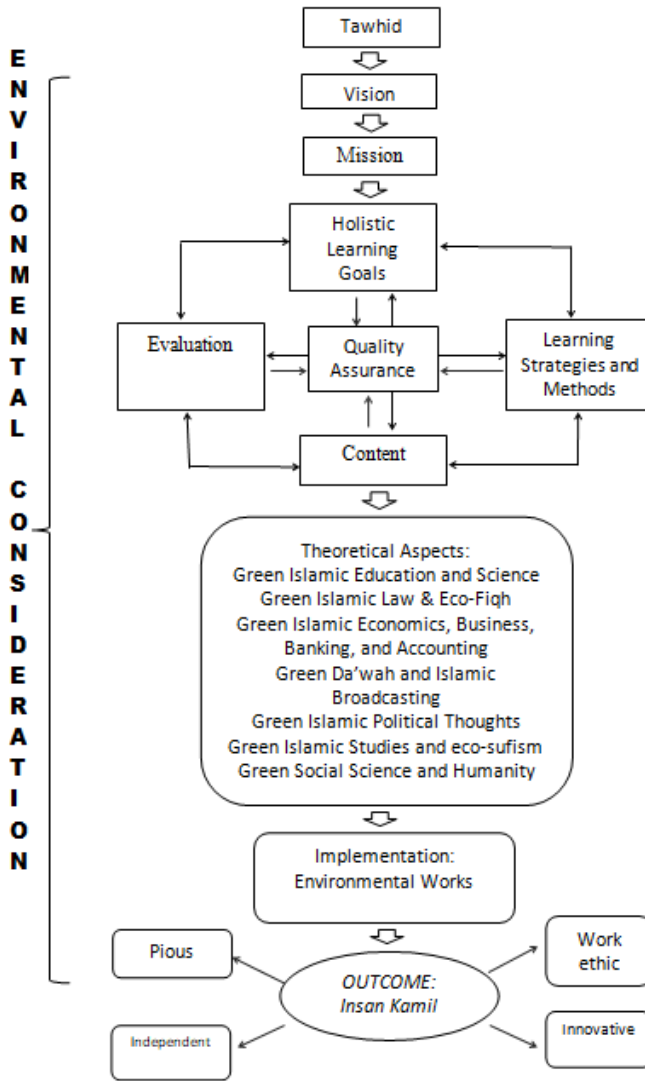
## 5. Tawhid-Based Green Learning Framework

As the sample above, several Islamic higher educations is considered to have initiated the development of green campuses to respond to the negative impact of global warming. Specifically, UIN Raden Fatah Palembang has directed the green campus not to be limited to environmental management but also to developing curriculum, courses, and semester learning plans, although it is only in certain subjects. The green campus has also been implemented through appropriate waste management, such as the manufacture of solar cells and eco-bricks. Meanwhile, learning about the environment, in general, is part of a hidden curriculum; therefore, it was less likely to measure the effectiveness of the learning system on the character building of human beings who care about the environment. Furthermore, the budget allocation for a comprehensive green campus implementation is also insufficient. This condition indicates that a more in-depth study is required about the advantages of implementing a green campus for the earth's sustainability in the future.

Furthermore, the differences in environmental learning at each Islamic higher education are primarily determined by their respective visions. In this regard, student character can be built through creative, innovative, applicable, and memorable learning models. Curriculum development can also be performed by integrating

religious knowledge and general science, but not the Islamization of science, because science integration bridges existing knowledge with modernity, technology, and the contextuality of the environment and culture. Thus, the connection between general and religious science is necessary, considering the development of technology, which can no longer be separated from human life. In this case, religious knowledge acts as a filter against the negative impacts that humans neglect to protect nature from exploitative actions. Therefore, an integrated model of environmental learning based on monotheism is needed, where if humans have a love for God, they will be connected with efforts to realize responsibility towards the Giver of the Mandate, Allah the Almighty.

According to Munji (2016), tawhid (monotheism) asserts that God has created the best human being among other creatures to serve Him. According to him, one of these service proofs is demonstrating that people, as servants, can interact with the environment in accordance with the Almighty Creator's guidance. Hutapea et al (2021) recommend that in order to realize the integration of tawhid into learning, it is necessary to conduct training for educators in non-religious subjects, increase teachers' creativity, and provide relevant training. Based on Drake and Reid (2020), in an interdisciplinary curriculum, disciplines remain somewhat different, but there must be robust and explicit connections; boundaries are blurred, and exploration between subjects is expanded.



**Figure 1: Framework of Tawhid-Based Green Learning**

Figure 1 depicts that tawhid is the basis for developing Islamic higher education. In a curriculum that

involves the natural environment elements, the curriculum components of the vision, mission, goals, and learning materials have at least been offered in specific courses or elective courses. However, it would be ideal if each course provided a topic of concern for the environment. Thus, quality assurance is responsible for ensuring that Islamic higher education has integrated the environment as an essential part of building the character and profile of graduates. Up to the present, Islamic higher education has been carried away by entrepreneurship in a narrow sense, namely business. Meanwhile, the definition of entrepreneurship has a broader scope in general, including those with a serious concern for the environment.

As in other Muslim-majority countries, the implementation of environmental awareness in Islamic higher education in Indonesia must be based on an Islamic culture that highly upholds the monotheism values in their daily lives. For this reason, Tawhid-Based Green Learning is one of the models designed to integrate environmental education into the Islamic higher education curriculum based on the value of Islamic monotheism. One reason why monotheism in Muslim countries needs to be considered is to encourage public participation through education in saving the earth from destruction. Here, Islamic higher education must be able to reform the curriculum through knowledge integration as a liaison with the modern and challenging global era.

Based on the data and phenomena found in this study, efforts to completely build a green campus cannot be limited merely to a campus image, but it is possible to

develop it. In addition, green education involves not only teachers/lecturers and students but also practitioners and stakeholders. Concerning this, the problem of global warming is a concern not only in the world of education but also in the world of law, economics and finance, banking, dakwah, broadcasting, politics, social, and Sufi groups.

For example, law enforcement against environmental destruction is a critical aspect in anticipating the severity of global warming. Violations in nature exploration have resulted in environmental damage, such as floods, landslides, polluted seawater, air pollution, and other events resulting from human actions that do not care for nature. Here, legal protection can be done through regulations, such as providing incentives for companies that have innovations to reduce pollution and environmental pollution, implementing carbon taxes, developing green industries, and other policies supporting natural environment preservation.

In the realm of economics and finance, tools that support environmental awareness are needed, for example, the existence of a green economy, green banking, green accounting, and green business. Georgeson *et al.* (2017) defined a green economy as an economic activity that changes the environment to be healthier and the economy to be more inclusive. In the context of education, the development of teaching materials can emphasize the sensitivity of economic activities to environmental protection, such as environmental audit models, the importance of environmental certification, industrial responsibility for waste management, and other materials



related to the positive impact of the environment on economic growth, efficiency, and social life. Likewise, bank financing should be based on an environmental feasibility assessment. In this case, lecturers and students can collaborate to build an environmental-based financing feasibility assessment model.

Furthermore, Islamic dakwah and broadcasting are an important part of the development of Islamic higher education. The green concept can be developed to help promote environmental conservation. Ecological dakwah activities can be carried out through the concept of planting, maintaining, and utilizing the environment (Fitriani & Aliyudin, 2021). Concerning this, the media plays a role in spreading ethical values and moral principles in sustainable development. In addition, places of worship need to pay attention to the functions of natural balance, such as the existence of green open spaces, management of water and waste channels, and optimization of energy-efficient lighting.

Also, Islamic political thought needs to voice the people's aspirations on matters related to the environment. In Europe, Wang and Keith (2020) have explored how radical left parties respond to environmental concerns in their programs and strategies. Political policies contrary to nature conservation for the benefit of the capitalist group need to be studied, and lecturers need to compile political indicators that deviate from natural exploration. Environmental activists also need to continue collecting data and research on the environment considered detrimental to

the community. Specifically, Hashem (2006) showed two typologies of Islamic activists towards the environment: sharia-oriented and form-oriented activists. Meanwhile, in the development of Islamic studies, environmental-oriented social and humanitarian sciences in higher education can be carried out in various forms and methods in promoting nature conservation and eco-Sufism because only humans as manifestations of God can protect nature.

Rozi (2019), in his study, indicates that Ibn Arabi's concept of the unification of existence (*wahdatul wujud*) and *insan kamil* is very relevant to be used in promoting nature conservation and eco-Sufism because only humans as manifestations of God can protect nature. Ihsan *et al.* (2022) suggested that *Insan Kamil* is sufi teachings about nature and the purpose of human life that are relevant to be integrated in life when humans begin to break away from the purpose and essence of their creation. In this case, higher education has an important role in developing human resources that have superior competencies.

In Islam, human nature is a creature of God, which consists of a physical dimension and a spiritual dimension. In the Qur'an, it is explained that human nature includes biological beings (*basyar*), trust bearers (*insan*), and social beings (*nas*). Humans are creatures of God in the best form and with reason, absorbing knowledge and implementing it. As the noblest creatures created on earth, humans are also responsible for protecting the earth and everything

in it from being used and possible for themselves now and their descendants (generations) in the future. Therefore, Islamic higher education must transform students from inadequate knowledge into functional competencies and formulate a strategic and implementable vision, mission, and goal of Islamic education, which touches all aspects, including the environment as a human habitat.

## **E. Conclusion**

Islamic higher education is established with a noble goal, namely, to carry out education in the religious and general fields by emphasizing the aspect of religiosity. Specifically, the Indonesian people who believe in one God consider religion in all aspects of their lives. Therefore, the postulates in the scriptures are more easily accepted and implemented by society. Likewise, Islam followers highly uphold religious doctrines in their lives.

As in QS. Al-Ahzab: 72, Islam has given a message that humans must continually maintain and preserve the environment so that it is not damaged and polluted; what God has given to humans is solely a mandate to manage it. Islam also does not prohibit humans from utilizing nature and its potential but must comply with the rules set by *Ulil Amri* (government or leaders) and advice from experts. Simultaneously utilizing nature, followed by responsibility and efforts to protect, maintain, and preserve, is necessary. Examples of protecting the environment are not throwing garbage on riverbanks, saving energy, recycling, planting trees, and not poaching.

The prevailing Islamic higher education curriculum emphasizes the philosophical, sociological, organizational, and psychological aspects and does not yet display the humanistic and environmental aspects. Hence, tawhid-based green learning is a proposed model to consider the importance of sustainable environmental development integrated into the Islamic higher education curriculum system. This holistic curriculum needs to be developed to form *insan kamil* graduates who are intellectual, religious, have a noble character, and pay attention to the natural, economic, social, cultural, political, communication, and legal environment based on devotion to Allah the Almighty. For future research, researchers need to expand research samples, develop research instruments, and conduct experimental studies to ultimately determine the effectiveness of the Tawhid-Based Green Learning model in Islamic Higher Education.

## REFERENCES

- Abdelzaher, D. M., Kotb, A., & Helfaya, A. (2019). Eco-Islam: Beyond the Principles of Why and What, and Into the Principles of How. *Journal of Business Ethics*, 155(3). <https://doi.org/10.1007/s10551-017-3518-2>
- Ainiyah, Q., & Karsiyah, K. (2017). Konsep Kesatuan Iman, Iptek dan Amal Menuju Terbentuknya Insan Kamil dalam Perspektif Pendidikan Islam. *Istawa: Jurnal Pendidikan Islam*, 2(2). <https://doi.org/10.24269/ijpi.v2i2.620>

- Albayrak, H. (2011). A metaphorical approach to concept of insan-I kamil. *Turk Kulturu ve Haci Bektas Veli - Arastirma Dergisi*, 60.
- Alpay, S., Özdemir, I., & Demirbaş, D. (2013). Environment and Islam. *Journal of Economic Cooperation and Development*, 34(4).
- Anthony Jnr, B. (2021). Green campus paradigms for sustainability attainment in higher education institutions – a comparative study. In *Journal of Science and Technology Policy Management* (Vol. 12, Issue 1). <https://doi.org/10.1108/JSTPM-02-2019-0008>
- Ardoin, N. M., Bowers, A. W., & Gaillard, E. (2020). Environmental education outcomes for conservation: A systematic review. *Biological Conservation*, 241, 108224. <https://doi.org/https://doi.org/10.1016/j.biocon.2019.108224>
- Arinta, Y. N. (2020). Implementasi Maqashid Syariah dengan Pengembangan Ekonomi Hijau Melalui Urban Farming. *International Journal Ihya' 'Ulum al-Din*, 21(2). <https://doi.org/10.21580/ihya.21.2.4834>
- Bhat, S.-U. (2018). Concept of Tawhid (Unity of God) in Islam: A Study of Relevant Qur'anic Text. *AGU International Journal of Research in Social Sciences & Humanities (AGUIJRSSH) 2018*, 6.
- Bt Abdul Rahman, W. (2020). Lingkungan Pendidikan Islam Dalam Perspektif Al Qur'an. *Alashriyyah*, 6(01). <https://doi.org/10.53038/alashriyyah.v6i01.124>
- Budiyanti, N., Aziz, A. A., & Erihadiana, M. (2020). Strategy of Insan Kamil in Building Green Education. *International*

*Journal on Advanced Science, Education, and Religion*, 3(2). <https://doi.org/10.33648/ijoaser.v3i2.54>

Dauids, N., & Waghid, Y. (2019). Ibn al-Arabi's Idea of Al-insan Al-kamil (the Perfect Human) and Democratic Education. In *Democratic Education and Muslim Philosophy*. [https://doi.org/10.1007/978-3-030-30056-2\\_7](https://doi.org/10.1007/978-3-030-30056-2_7)

Diffenbaugh, N. S., & Burke, M. (2019). Global warming has increased global economic inequality. *Proceedings of the National Academy of Sciences of the United States of America*, 116(20). <https://doi.org/10.1073/pnas.1816020116>

Drake, S. M., & Reid, J. L. (2020). 21st Century Competencies in Light of the History of Integrated Curriculum. In *Frontiers in Education* (Vol. 5). <https://doi.org/10.3389/feduc.2020.00122>

Fachrudin, H. T., Fachrudin, K. A., & Utami, W. (2019). Education Activities to Realize Green Campus. *Asian Social Science*, 15(8). <https://doi.org/10.5539/ass.v15n8p38>

Fathil, Mohd., Saam, Z., Sukendi, S., & Nizar, S. (2015). Islam and Environment: Education Perspective. *Al-Ta Lim Journal*, 22(2). <https://doi.org/10.15548/jt.v22i2.128>

Feng, Z., & Chen, W. (2018). Environmental regulation, green innovation, and industrial green development: An empirical analysis based on the spatial Durbin model. *Sustainability (Switzerland)*, 10(1). <https://doi.org/10.3390/su10010223>

- Fitriani, V., & Aliyudin, M. (2021). Dakwah dalam Pendekatan Konsep Ekologi. *Tabligh: Jurnal Komunikasi Dan Penyiaran Islam*, 6(1). <https://doi.org/10.15575/tabligh.v6i1.2154>
- Flanagan, A., & Priyadarshini, A. (2021). A study of consumer behaviour towards food-waste in Ireland: Attitudes, quantities and global warming potentials. *Journal of Environmental Management*, 284. <https://doi.org/10.1016/j.jenvman.2021.112046>
- Freije, A. M., Hussain, T., & Salman, E. A. (2017). Global warming awareness among the University of Bahrain science students. *Journal of the Association of Arab Universities for Basic and Applied Sciences*, 22. <https://doi.org/10.1016/j.jaubas.2016.02.002>
- Gade, A. M. (2015). Islamic law and the environment in Indonesia: Fatwa and Da.wa. In *Worldviews: Environment, Culture, Religion* (Vol. 19, Issue 2). <https://doi.org/10.1163/15685357-01902006>
- Galanis, P. (2018). Data analysis in qualitative research: Thematic analysis. *Archives of Hellenic Medicine*, 35(3).
- Georgeson, L., Maslin, M., & Poessinouw, M. (2017). The global green economy: a review of concepts, definitions, measurement methodologies and their interactions. In *Geo: Geography and Environment* (Vol. 4, Issue 1). <https://doi.org/10.1002/geo2.36>
- Hasan, A., Hassan, M. S. M., & Fauzi, M. N. H. (2017). Exploring a green element to greening the existing curriculum in Polytechnic Malaysia. *Pertanika Journal of Social Sciences and Humanities*, 25(May), 217–223.

- Hashem, M. (2006). Contemporary Islamic activism: The shades of praxis. *Sociology of Religion: A Quarterly Review*, 67(1). <https://doi.org/10.1093/socrel/67.1.23>
- Hong, Z., & Cords, D. W. (2020). How Can Green Tax Laws Spur Green Behavior? An Analysis of the Influence of Chinese Tax Policy on Green Behavior. *Pittsburgh Tax Review*, 17(1). <https://doi.org/10.5195/taxreview.2019.104>
- Hou, X., Ma, Y., Wu, Y., & Wang, W. (2020). Implementing green education of urban families: An action research project in Beijing, China. *Action Research*, 18(1). <https://doi.org/10.1177/1476750319889385>
- Humas IAIN Salatiga. (2021). *51 tahun, IAIN Salatiga siapkan akselerasi menuju Green Wasathiyah Campus*. <https://iainsalatiga.ac.id/web/2021/05/51-tahun-iain-salatiga-siapkan-akselerasi-menuju-green-wasathiyah-campus/>
- Hutapea, R. M., Husnaini, M., & Murad, T. R. (2021). Challenge of Integrating Tawhid in Science and History. *International Journal of Asian Education*, 2(1), 44–51. <https://doi.org/10.46966/ijae.v2i1.89>
- Ihsan, N. H., Sa'ari, C. Z. B., & Hidayat, M. S. (2022). Abdurrauf al-Singkili's Concept of Insan Kamil in Facing The Crisis of Modern Human Morality. *Islam Realitas: Journal of Islamic and Social Studies*, 8(1), 22. [https://doi.org/10.30983/islam\\_realitas.v8i1.5487](https://doi.org/10.30983/islam_realitas.v8i1.5487)
- Jaya, I. (2020). Implementation of Green Campus-Based Curriculum Model at Islamic Universities in Indonesia. *Dinamika Ilmu*, 20(1). <https://doi.org/10.21093/di.v20i1.2015>



- Kartanegara, M., & Anshari, M. (2020). The perfect man (al-Insan al-Kamil) and the recovery of human dignity: Islam and contemporary human being condition. *Islamic Quarterly*, 64(1).
- Kaunain, M. F. (2018). Environmentalism in the Quran. *Resolusi: Jurnal Sosial Politik*. <https://doi.org/10.32699/resolusi.v1i2.501>
- Kupper, H., Laurentzen, R., & Mulder, M. (2012). Recent policy developments in green education in the Netherlands. *Journal of Agricultural Education and Extension*, 18(2), 121–139. <https://doi.org/10.1080/1389224X.2012.655966>
- Kurniawan, D. W. (2012). Human responsibility towards environment in the Quran. *Indonesian Journal of Islam and Muslim Societies*, 2(2). <https://doi.org/10.18326/ijims.v2i2.293-322>
- Lee, J., Park, J., Kim, I., & Kang, D. Y. (2019). Application of vision-based safety warning system to haeundae beach, Korea. *Journal of Coastal Research*, 91(sp1). <https://doi.org/10.2112/SI91-044.1>
- Liu, J. (2021). Research on the construction strategy of green civilization moral education in colleges and universities from the perspective of ecological civilization. *Fresenius Environmental Bulletin*, 30(5).
- Lohlker, R. (2019). ‘Abd al-Karīm al-Jīlī, Waḥdat al-Wujūd, and Reconfiguring Epistemology. *Ulumuna*, 23(1). <https://doi.org/10.20414/ujis.v23i1.362>

- Louw, W. (2013). Green curriculum : Sustainable learning at a higher education institution. *International Review of Research in Open and Distance Learning*, 14(1). <https://doi.org/10.19173/irrodl.v14i1.1310>
- Mănoiu, V.-M., Arslan, R., Madani, A., & Düzgüneş, E. (2016). Environmental Education in the Holy Quran. *Lucrările Seminarului Geografic "Dimitrie Cantemir" Nr, 42(42)*.
- McMichael, A. J. (2015). Extreme weather events and infectious disease outbreaks. *Virulence*, 6(6). <https://doi.org/10.4161/21505594.2014.975022>
- Mohd Yusof, F., Rosman, A. S., Mahmood, S., Mat Sarip, S. H., & Noh, T. U. (2013). Green Technology Management in the Muslim World. *Jurnal Teknologi*, 65(1). <https://doi.org/10.11113/jt.v65.1605>
- Muhamad, A., Syihab, A. H., & Ibrahim, A. H. (2020). Preserving Human–Nature’s Interaction for Sustainability: Quran and Sunnah Perspective. *Science and Engineering Ethics*, 26(2). <https://doi.org/10.1007/s11948-020-00192-7>
- Muhammad, A. (2010). Islamic perspectives on marketing. *Journal of Islamic Marketing*, 1(2), 149–164.
- Munji, A. (2016). Tauhid dan Etika Lingkungan: Telaah atas Pemikiran Ibn ‘Arabī. *Jurnal THEOLOGIA*, 25(2), 279–300. <https://doi.org/10.21580/teo.2014.25.2.398>
- Naderifar, M., Goli, H., & Ghaljaie, F. (2017). Snowball Sampling: A Purposeful Method of Sampling in Qualitative Research. *Strides in Development of Medical Education*, 14(3). <https://doi.org/10.5812/sdme.67670>

- Okanović, A., Ješić, J., Đaković, V., Vukadinović, S., & Panić, A. A. (2021). Increasing university competitiveness through assessment of green content in curriculum and eco-labeling in higher education. *Sustainability (Switzerland)*, 13(2). <https://doi.org/10.3390/su13020712>
- Oviana, W., & Rijal, F. (2021). The Role of Islamic Higher Education Institution in Developing Students' Character Value. *AL-ISHLAH: Jurnal Pendidikan*, 13(1). <https://doi.org/10.35445/alishlah.v13i1.418>
- Palahudin, P., Hadiana, M. E., & Basri, H. (2020). Implementasi Standar Pengelolaan Pendidikan Dalam Mencapai Tujuan Pendidikan Islam. *J-PAI: Jurnal Pendidikan Agama Islam*, 7(1). <https://doi.org/10.18860/jpai.v7i1.9776>
- Piepiora, Z., & Kachniarz, M. (2019). The Measurement of Budget Outlays of Local Government Units for Removing the Natural Disasters' Effects – A Case of Polish Municipalities. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3459658>
- Rahayu, R. I., Mohammad Huda, A. Y., Sonhadji, A. K. H., & Utaya, S. (2019). Life skills curriculum planning on Higher Education based on Islamic boarding schools. *International Journal of Innovation, Creativity and Change*, 5(4).
- Rahman, Y., & Ritonga, A. R. (2021). Nationalism and Islam in Religious Learning: Optimization of Insan Kamil Character Building. *Islam Realitas: Journal of Islamic and Social Studies*, 7(1), 42. [https://doi.org/10.30983/islam\\_realitas.v7i1.4517](https://doi.org/10.30983/islam_realitas.v7i1.4517)

- Rossati, A. (2017). Global warming and its health impact. In *International Journal of Occupational and Environmental Medicine* (Vol. 8, Issue 1). <https://doi.org/10.15171/ijoem.2017.963>
- Rozi, S. (2019). Understanding the Concept of Ecosufism: Harmony and the Relationship of God, Nature and Humans in Mystical Philosophy of Ibn Arabi. *Ulumuna*, 23(2). <https://doi.org/10.20414/ujs.v23i1.354>
- Rusnatun, R. (2020). Problematika Dan Solusi Krisis Lingkungan Perspektif Al-Qur'an. *FALASIFA : Jurnal Studi Keislaman*, 11(1). <https://doi.org/10.36835/falasifa.v11i1.283>
- Sabrina, R. (2020). Environmental and Sustainable Development in Islamic Perspective. *Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences*, 3(4). <https://doi.org/10.33258/birci.v3i4.1320>
- Saniotis, A. (2012). Muslims and ecology: Fostering Islamic environmental ethics. *Contemporary Islam*, 6(2). <https://doi.org/10.1007/s11562-011-0173-8>
- Shi, L. (2017). Industrial Ecology Education at Tsinghua University. *Journal of Industrial Ecology*, 21(2). <https://doi.org/10.1111/jiec.12445>
- Sibanda, M. (2013). Green knowledge in teaching and learning in higher education: Evidence from a South African university. *Mediterranean Journal of Social Sciences*, 4(3). <https://doi.org/10.5901/mjss.2013.v4n3p709>

- Siradj, S. A. (2014). Tauhid dalam Perspektif Tasawuf. *ISLAMICA: Jurnal Studi Keislaman*, 5(1). <https://doi.org/10.15642/islamica.2010.5.1.152-160>
- Sonita, E., Miswardi, M., & Nasfi, N. (2021). The Role Of Islamic Higher Education In Improving Sustainable Economic Development Through Islamic Entrepreneurial University. *International Journal of Social and Management Studies*, 2(2).
- Stankevičienė, J., Nikanorova, M., & Čera, G. (2020). Analysis of green economy dimension in the context of circular economy: The case of baltic sea region. *E a M: Ekonomie a Management*, 23(1). <https://doi.org/10.15240/tul/001/2020-1-001>
- Ubaidillah, M. H. (2010). Fiqh al-Biah (Formulasi Konsep al-Maqasid al-Shari'ah dalam Konservasi dan Restorasi Lingkungan). *Al-Qanun*, 13(1).
- Ulya, Z. (2020). Analisis Maqasid Al-Shariah Terhadap Peran Pemerintah Kota Surabaya dalam Mewujudkan Kota Layak Anak. *AL-HUKAMA'*, 10(1). <https://doi.org/10.15642/alhukama.2020.10.1.42-72>
- Umiarso, U., & Mawardianti, I. (2018). Kurikulum Pendidikan Berbasis Tauhid: Landasan Filosofis dan Manajemen Kurikulum SMP ar-Rohmah Putri Boarding School Malang. *Muaddib : Studi Kependidikan Dan Keislaman*, 8(2). <https://doi.org/10.24269/muaddib.v8i2.1626>
- University of Indonesia (UI) Green Metric. (2021). *Ranking by Country 2021 - Indonesia*. <https://greenmetric.ui.ac.id/rankings/ranking-by-country-2021/Indonesia>

Varela-Candamio, L., Novo-Corti, I., & García-Álvarez, M. T. (2018). The importance of environmental education in the determinants of green behavior: A meta-analysis approach. *Journal of Cleaner Production*, 170. <https://doi.org/10.1016/j.jclepro.2017.09.214>

Wang, C., & Keith, D. (2020). The greening of European radical left parties: red and green politics. *Journal of Contemporary European Studies*. <https://doi.org/10.1080/14782804.2020.1792280>