

ECOPEDAGOGY IN ACTION: AN ETHNOGRAPHIC EXPLORATION OF ENVIRONMENTAL PRESERVATION STRATEGIES IN PESANTREN

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ABSTRACT

The exploitation of gold mining, environmental degradation, and the evident impacts of global warming signal a societal lack of awareness regarding ecological and social hazards. Recognizing the significance of ecological awareness, educational institutions, particularly Islamic boarding schools, are mandated to contribute to the creation of environmentally conscious communities. This research employs a qualitative ethnographic approach to elucidate the practical strategies employed by Indonesian Islamic boarding schools in environmental preservation. The study encompasses four institutions: Islamic Boarding School Biharul Ulum, Agroecology, Bogor; Islamic Boarding School Daarul Falah Bogor; and Islamic Boarding School Ath-Thoriq, Garut. Findings reveal that all three Islamic boarding schools have cultivated environmental consciousness through ecopedagogy, engaging in activities such as planting productive trees within their premises and the surrounding communities. Ecopedagogy involves selecting superior seeds, planting, fertilizing, and harvesting. Additionally, these institutions partake in environmental conservation by raising livestock, including chickens, goats, cows, and fish. Rooted in the teachings of the Al-Qur'an and Hadith, ecopedagogy is delivered through face-to-face instruction, in-depth discussions, and practical field guidance. This ecopedagogical approach, aligned with Islamic teachings, showcases the commitment of these Islamic boarding schools to instilling environmental preservation values in their students, reflecting a comprehensive approach to ecological consciousness.

Keywords: Ecopedagogy, Environmental Awareness, Environmental Preservation, Pesantren

ABSTRAK

Aktivitas penambangan emas yang eksploitatif, kerusakan lingkungan, dan pemanasan global di masyarakat menunjukkan kesadaran mereka kurang terhadap bahaya ekologi, sekaligus sosial. Lembaga pendidikan seperti pesantren dituntut perannya dalam membangun kesadaran ekologis untuk kondusifitas kehidupan sosial dan kesejahteraan masyarakat secara praktis. Penelitian ini bertujuan mendeskripsikan pendekatan praktis yang di-

terapkan oleh pesantren di Indonesia dalam pelestarian lingkungan. Pendekatan penelitian yang digunakan etnografi kualitatif yang menggambarkan tradisi yang berkembang di kalangan masyarakat dalam pelestarian lingkungan melalui observasi, wawancara, dan dokumentasi. Lokasi penelitian mencakup empat pesantren, yaitu: Pesantren Biharul Ulum, Agroekologi, Bogor, Pesantren Daarul Falah Bogor, dan Pesantren Ath-Thoriq, Garut. Berdasarkan hasil penelitian, ketiga pesantren di Indonesia telah membangun kesadaran lingkungan melalui ekopedagogi dengan menanam pohon-pohon produktif bermanfaat di sekitar pesantren dan masyarakat sekitar. Ekopedagogi dimulai dari pemilihan bibit unggul, penyemaian tanaman, penupukan, dan pembuatan pupuk, hingga masa pemanenan. Di samping itu, sebagian pesantren melestarikan lingkungan dengan pemeliharaan hewan ternak, mulai dari ayam, kambing, sapi, hingga ikan. Ekopedagogi di ketiga pesantren tersebut didasarkan ada Al-Qur'an dan Hadis yang dibelajarkan melalui tatap muka di kelas, pendalaman di ruang-ruang diskusi, dan terjun langsung di lapangan secara terjadwal. Pendekatan ekopedagogi di tiga pesantren di Indonesia tersebut menunjukkan pembelajaran Al-Qur'an dan Hadis pesantren telah menginspirasi santri dalam upaya pelestarian lingkungan hidup dengan ragam dimensinya.

Kata Kunci: Ekopedagogi, Kesadaran Lingkungan, Pelestarian Lingkungan Hidup, Pesantren.

INTRODUCTION

The transformation of traditional Islamic boarding schools (pesantren) in Indonesia is marked by the emergence of eco-theology, a novel theological approach that explores the intricate relationship between Islam and the environment. This evolving concept delves into the connection between spiritual beliefs and environmental degradation, emphasizing the interconnectedness of God, humanity, and nature. In this theological framework, God is seen as the creator, owner, and custodian of both the natural world and humanity (Ituma, 2003; Buitendag, 2022; Kinsley, 1995; Najma, 2013; Nasution, 1998; Abdullah, 1995; Muhammad, 2006). Eco-theology within Islam calls for a heightened environmental awareness, stressing the importance of safeguarding both divinely created and human-influenced aspects of nature. According to Nasution, theologians are tasked with a universal mission, recognizing the entire world as a divine blessing for humanity.

The term "eco-Islamic boarding school" has emerged to characterize institutions that not only embody Islamic teachings regarding the environment but also actively participate in comprehensive environmental conservation efforts, marking a paradigm shift in the commitment of Islamic boarding schools to eco-theological principles. This transformative shift signifies a paradigmatic evolution in the role of Islamic boarding schools, expanding their focus beyond religious education to embrace a holistic commitment to environmental stewardship rooted in eco-theological principles.

Eco-Islamic boarding school-based education has transformed traditional Islamic boarding schools into environmentally conscious institutions, fostering increased participation in various eco-friendly activities. Initiatives include the adoption of environmentally conscious lifestyles, the establishment of health and environmental units within the governance of Islamic boarding schools, and the effective implementation of green building values (La Fua, 2013; Aulia et al., 2018; Arifah et al., 2022; Herdiansyah, et al., 2018; Khitam, 2016).

Several studies have explored eco-theology in various Islamic boarding schools, emphasizing the fundamental principle of environmental stewardship (Tolchah, 2016; Nuha, 2017; Mukholisah, 2018). These investigations showcase the environmental conservation efforts of Islamic boarding schools, giving rise to the term "eco-Islamic boarding school" (Mahzumi, 2017; Latief, 2013; Jumardin, 2014). Both eco-Islamic boarding schools and eco-theology assert that human utilization of the environment must be guided by rational ecological reasoning. Drawing upon Nasr's concept, the earth is considered a human right for utilization (*at-tanfī*) rather than ownership (*al-tamlīk*), implying responsible and restrained use of natural resources within ecological limits (Nasr, 2005). Nature, with its sacred dimension, is deemed inviolable (Nursi, 2018). This metaphysical perspective of Islamic Environmentalism

places the onus on Muslims to be stewards of their environment, framing any opposition to this view as a challenge to God's will (Ayduz, 2000).

These studies typically delve into theoretical discussions of environmental conservation (La Fua, 2013; Arifah et al., 2022). While some Islamic boarding schools demonstrate their commitment to eco-Islamic principles by engaging in activities like environmental clean-ups (Aulia et al., 2028), others discuss environmental preservation within the broader context of life skills (Mahrus & Lukman, 2021).

Existing studies have made significant strides in exploring and highlighting eco-theology within Islamic boarding schools, shedding light on the fundamental principle of environmental stewardship. These investigations have contributed to the recognition of institutions as "eco-Islamic boarding schools," emphasizing the responsible and restrained use of natural resources guided by rational ecological reasoning. The metaphysical perspective of Islamic Environmentalism underscores the sacred dimension of nature and places a moral responsibility on Muslims to act as stewards of the environment, aligning with the principles of responsible resource utilization within ecological limits.

However, while these studies have provided valuable insights, there remains a notable gap in the practical strategies employed by Islamic boarding schools in implementing environmental preservation initiatives. Existing research primarily delves into theoretical discussions and highlights the commitment of these institutions to eco-Islamic principles through various activities. Yet, a more in-depth examination of the specific strategies employed in practical terms, especially within the context of educational settings, is lacking. This study aims to address this gap by conducting a qualitative ethnographic investigation into three distinct Islamic boarding schools in Indonesia, namely Pesantren Biharul Ulum Agroecology (PBUA) in Bogor, Pesantren Daarul Falah (PDF) in Bogor, and Pesantren Ath-Thoriq (PAT) in Garut. Through this, the research aims to contribute a more comprehensive understanding of the practical strategies implemented by these Islamic boarding schools in pursuit of environmental conservation.

METHOD

The research focused on three prominent Islamic boarding schools in Indonesia: PBUA in Bogor, PDF in Bogor, and PAT in Garut. These institutions were established with a commitment to integrating the teachings of the Al-Qur'an and Hadith into the fabric of societal life. From their inception, these Islamic boarding schools have actively engaged in environmental conservation efforts, fostering a collaborative approach with students and the local community while prioritizing an entrepreneurial spirit. To investigate the eco-theology-based learning of the Qur'an and Hadith in these three Islamic boarding schools, the research employed a qualitative ethnographic approach (Marvasti, 2004; Strauss, 2003). This method focused on emphasizing participant involvement and engagement with the studied topic, consideration of the social context during data collection, and sensitivity to the representation of research subjects in textual outputs (Mohajan, 2018; Murchison, 2010; Creswell, 2012). The collection of research data involved observation techniques, in-depth interviews, and documentation practices (Sangasubana, 2011; Ammermann, 2006; Atkinson & Hammersley, 2007). The ensuing data analysis followed an interactive model, encompassing data reduction, presentation, and the formulation of conclusions, culminating in conceptualization or generalization.

RESULTS AND DISCUSSION

The investigation into the environmental practices of the three Islamic boarding schools, namely PBUA in Bogor, PDF in Bogor, and PAT in Garut, has uncovered

compelling findings. All three institutions have actively fostered environmental consciousness through a pedagogical approach known as ecopedagogy. This educational strategy involves a range of activities, including the careful selection of superior seeds, planting procedures, fertilization practices, and the eventual harvesting of crops. In addition to these agricultural initiatives, the Islamic boarding schools engage in environmental conservation efforts by raising livestock, encompassing chickens, goats, cows, and fish. The essence of ecopedagogy, deeply rooted in the teachings of the Al-Qur'an and Hadith, is effectively transmitted through face-to-face instruction, profound discussions, and hands-on field guidance. This ecopedagogical approach, intricately aligned with Islamic teachings, not only underscores the commitment of these institutions to instill environmental preservation values but also highlights a holistic and comprehensive approach to fostering ecological consciousness among their students. In a more detailed description, those findings are delived in this section.

Environmental Education at PBUA

Established in 2014, the PBUA endeavors to impart knowledge about agrarian reform and ecology to both students and the broader community. This educational institution integrates agricultural practices while concurrently upholding the principles of ecosystem sustainability. The founding of the Agroecology Islamic Boarding School aligns with a response to environmental degradation in Cisarua Village and its neighboring areas (Atim, personal communication, October 2021). Mualim Atim, the visionary behind this initiative, grounds the foundation of the school in the Islamic teachings found in the Quran, which explicitly prohibit the exploitation of the environment. Additionally, the residents of Cisarua Village possess local wisdom regarding forest preservation, comprising principles such as protected forest, reserved forest, and opened for agricultural land. The determination of cultivation locations adheres to the guidance of *Abah* (Kasepuhan traditional community leader) (Samsi, personal communication, October 2021).

The eco-theological principles of environmental theology within Islamic boarding schools are embedded in the curriculum, aligning with the institution's vision and mission of nurturing a generation committed to environmental care. This environmentally oriented curriculum is realized through the formulation of an integrated learning model. It involves the exploration and development of materials related to the environment within society, the creation of Islamic environment-focused learning methods, and the implementation of curricular activities aimed at enhancing students' knowledge and awareness of the environment. The curriculum ensures an immersive experience in understanding Islamic teachings about the environment within an eco-friendly pesantren setting.

Religious studies at the PBUA follow the conventional approach found in typical Islamic boarding schools, focusing on the study of Islamic books (Samsi, personal communication, October 2020). Despite the school's expansion into the agricultural domain, it retains its traditional Islamic boarding school identity. In addition to the examination of Islamic law books, a distinctive emphasis is placed on environmental jurisprudence, particularly the magnum opus *fiqh al-bi'ah*. This book elucidates ecological principles grounded in the texts of the holy Quran and the Hadith of Prophet Muhammad, urging humanity to care for and preserve the environment. The teachings are rooted in Islamic principles, exemplified by verses like Qs. Al-Rahmân/55:10, which states, "The environment was created to be utilized by all species," and al-Baqarah/2:29, which emphasizes that natural resources and the environment are created for the benefit of all, with humans entrusted to care for them. The school's leader emphasizes that humans are mere stewards, not owners of nature, asserting that arbitrary exploitation contradicts the purpose of this divine trust (Atim, personal communication, October 2021).

Regarding the hadith of Prophet Muhammad SAW used as a reference, particularly the narration of Jabir bin 'Abdillah, it states, "*Some among us possess land as an asset. They proposed leasing the land for cultivation, suggesting sharing one-third, one-fourth, or one-half of the yield. The Prophet responded, 'Anyone owning land should either cultivate it or offer it to a fellow brother; if unwilling, he must personally ensure the proper upkeep of the land.'*" This hadith underscores the importance of preserving the land for productive use (Atim, personal communication, October 2021). This perspective aligns with the philosophy that as stewards, humans are obligated to sustain both human and natural life. The Islamic boarding school advocates nurturing affection for all creatures, emphasizing its role as a custodian on earth (Atim, personal communication, October 2021).

Islam underscores the importance of sincerity in cultivation, urging individuals to ensure the ongoing sustenance of life for future generations. The religious scholar, *Kiai*, contributes to the redefinition of ecological concepts by fostering an expanded connection that transcends interactions solely between humans or between humans and the Creator. Instead, this extends to the relationship between humans and nature. Central to *Kiai*'s teachings is the concept of human responsibility as custodians, emphasizing the obligation to safeguard the environment and adhere to divine directives against causing harm to the Earth. *Kiai Atim* particularly highlights the mutualistic relationships and interdependence existing between humans and nature, stressing the vital roles each plays in preserving the continuity of life for both parties (*Kiai Atim*, personal communication, October 2021).

Another intrinsic aspect of ecology, according to *Kiai*'s perspective, is that the state of the environment mirrors an individual's faith. In essence, the commitment to environmental conservation serves as a reflection of a person's theological state, showcasing their interpretation of the directives from the Creator and His Messenger (*Kiai Atim*, personal communication, October 2021). In this context, *Kiai* endeavors to impart to students the profound significance of the ecological movement initiated by Islamic boarding schools. Additionally, *Kiai* introduces a more profound approach to interpreting *fiqh*, transcending mere ritualistic knowledge to encompass a broader, universal meaning. Expressing his viewpoint, *Kiai* emphasizes, "*...The concept of ecology in Islam should be obligatory. It is not only *Tauheed* that we must believe in or the five daily prayers that we must perform, but protecting the environment is also obligatory. In fact, the environment is also a trust that we must protect. So I say it is mandatory...*" (*Kiai Atim*, personal communication, October 2021).

In the realm of environmental consciousness, *santri* hold a profound perspective on the essence of Islam. They perceive Islam as a guiding principle and foundation for life, emphasizing the importance of preserving nature. This perception serves as a foundation for students, instilling in them the understanding that safeguarding nature is a fundamental obligation, and they should refrain from causing harm to the Earth. The concept of faith manifests when an individual aligns their behavior with environmental considerations, particularly in matters related to cleanliness and health.

Islamic boarding schools, in their commitment to environmental preservation, have delineated two pivotal aspects. Initially, they have pinpointed key social challenges in the northern region of Halimun, encompassing: (1) the shift in mindset among individuals from agriculture to gold mining occupations; (2) minimal community control over land leading to farming and gardening difficulties; (3) a limited knowledge base in farming within the community, coupled with a lack of interest among the youth, hindering creativity; (4) the transformation of the once prosperous Cisarua people into impoverished gold miners. These four factors have resulted in the people of Halimun, Cisarua experiencing: (1) the reinforcement of a consumerist culture perpetuating poverty; (2) a decline in local wisdom ethics; (3) neglect of children's education; (4) vulnerability to health issues due to waste

passing through residential channels; (5) the emergence of slums and low sanitation. Secondly, there is a focus on identifying ecological crisis issues and fostering empowerment. The community has expressed concerns about the environmental crisis, encompassing: (1) natural and environmental damage stemming from gold mining activities in their vicinity; (2) environmental pollution due to the waste from gold mining processing, which flows into rivers, rice fields, and contaminates water catchments that supply residents' wells; (3) a clean water crisis.

The Agroecology Islamic Boarding School embodies transformative eco-theology through several initiatives: (1) fostering human development by cultivating critical awareness within the community through citizen engagement in environmental conservation activities; (2) establishing a core cadre of nature guardians within mountain communities; (3) collaboratively creating ulu-ulu (water sanitation) with the community; (4) offering education on organic farming; (5) jointly utilizing agricultural land with the community; and (6) forging partnerships with other groups and institutions, including Islamic boarding schools and the broader community.

Environmental Education at PAT

The inception of PAT arose from the concerns of Nyai Nisa and her husband regarding the agricultural challenges faced in the West Java region. Contemplating effective ways to enhance farmers' productivity, they turned to the Quran and the Hadith of the Prophet for guidance. Nyai Nisa's husband, affiliated with an Islamic boarding school, delved into the ecological concepts found in the Quran and Hadith, subsequently applying these teachings to the practical aspects of life in Garut. To bring this vision to fruition, they established PAT in 2008. This pesantren is dedicated to ecological restoration, particularly addressing the overuse of pesticide fertilizers stemming from the industrial revolution (Ibang, personal communication, October 2020). Recognizing the historical ties between ecological exploitation and the industrial revolution, which led to environmental degradation, the mission of PAT is to serve as a hub for disseminating sustainable knowledge systems aimed at preserving and nurturing the earth, humanity, and future generations (Nisa, personal communication, May 2021).

PAT adheres to the principle of restoring land to fertile soil, recognizing that humans, as integral components of nature, bear the responsibility of preserving the environment as an essential part of the interconnected web of life. The school emphasizes tree planting, including uncontaminated vegetables, free from the use of chemical substances. In addressing the need for fertilizers, students are encouraged to develop skills in managing these essential nutrients. The school's commitment to environmental conservation aligns with the growing awareness of the importance of ecological sustainability. Well before the advent of the Go Green movement, the Quran and Hadith had already underscored the critical nature of ecological protection. This is explicitly stated in Surah ar-Rum/30:41, emphasizing responsible management of Earth's resources. Prophetic Hadiths further reinforce eco-friendly practices, such as the prohibition of wasteful water use during ablution and the benefits of planting trees or sowing seeds, which also provide sustenance for birds. Islam, as studied in *Bi'ah* Jurisprudence, advocates for a life that is environmentally sensitive, equating the act of protecting the environment with safeguarding oneself. Those who contribute to environmental destruction are considered to be committing a sin (Nisa, personal communication, May 2021).

Guided by this principle, students at PAT not only engage in the study of the Quran and Hadith but are also introduced to the art of tree planting and its upkeep. Rooted in this theological understanding, the school has undertaken environmental empowerment initiatives, yielding organic produce such as rice, tubers, herbal teas, and plants for beauty products.

Every Sunday, students actively participate in farming activities, cultivating various types of food to meet the needs of the boarding school's community. The pesantren encompasses a land area of 7500 square meters, strategically allocated for rice fields, food gardens, animal husbandry, and nurseries.

PAT has expanded its facilities to include fish ponds and the cultivation of absorbent plants like Parisian grass. These plants play a crucial role in purifying water by filtering out impurities, ensuring it remains clean and devoid of chemical content. The purified water supports the cultivation of organic fish, free from harmful chemicals (Nisa, personal communication, June 2022). Additionally, leveraging its extensive land area, PAT has fostered a rich biodiversity comprising birds, dragonflies, butterflies, reptiles, amphibians, and fireflies. The diverse flora on the premises include medicinal plants like pheasant, binahong, ginger spice leaves, among others. The cultivation of these medicinal plants has evolved into a sustainable business venture, involving the sale of herbal teas and spices that are well-received in the local community (Nisa, personal communication, June 2022).

The variety of flora and fauna was developed with the spirit of the Al-Qur'an and Hadith taught in learning classes. A number of verses in the Qur'an and Hadith explain that humans serve as caliphs on earth and are required to care for the environment. Everything that humans plant, some for humans and some for other God's creatures, such as birds, is seen as alms. There is no specific curriculum for the Qur'an designed for environmental conservation. Environmental material is discussed when the material is related to the environment ((Nisa, personal communication, June 2022).

Environmental Education at PDF

PDF is located in Ciampea, Bogor with a land area of 26.5 ha. The pesantren has great potential for developing conservation in the Bogor area. At this Islamic boarding school, round-the-clock education is developed which is inspired by Islamic teachings, the Qur'an and Hadith (Hanan, Personal communication, April 2022). As an environmentally based Islamic boarding school, PDF has a vision and mission for environmental preservation. These trend messages apply practical preaching since its founding in 1960.

The primary objective of PDF is to cultivate students who are both devout and independent, as emphasized by Kiai Hanan (Personal communication, April 2022). Since its establishment, PDF has progressively expanded its educational offerings, encompassing levels from elementary to upper secondary. The school's curriculum is meticulously crafted to integrate both religious and general subjects, promoting student independence. Aligned with the institution's vision and mission, the Kiai articulates a well-defined environmental concept for the students, emphasizing the need to preserve the environment as per the teachings of the Quran and Hadith. According to the Quranic verse al-Baqarah/2:30, humans are entrusted with the responsibility of managing the earth. In al-Isra'/17:70, God bestows honor upon humans compared to other creatures, entrusting them with the duty of preserving the earth. Additionally, al-Ma'idah/5:32 unequivocally prohibits causing harm to the earth, emphasizing the obligation to undertake repairs (Hanan, Personal communication, April 2022).

The Hadith underscores the imperative for humans to revitalize barren land, instructing them on cultivation techniques. The Prophet, peace be upon him, emphasized the significance of rendering land beneficial for humanity, advocating for both planting and animal husbandry. In accordance with the Quran and Hadith principles, PDF has dedicated 250 M2 of land for cultivating forage. The school cultivates a diverse range of plants, including vegetables, bananas, and robust, productive trees. Complementing these agricultural initiatives, Darul Falah Islamic Boarding School engages in livestock development to bolster its economic sustainability. Students actively participate in livestock rearing, receiving training that extends to the processing and packaging of milk, particularly in the form of yogurt production. The

teachings derived from the Quran and Hadith are not confined to the classroom but are translated into practical actions in the open field, manifesting as initiatives for land empowerment.

The scheduled empowerment of Islamic boarding school land for agriculture and animal husbandry among students involves a structured approach with a focus on environmental conservation. The sequential stages of environmental conservation practices encompass land clearing, careful plant selection, and the systematic planting of chosen vegetation, all supplemented by guidance and support.

1. Land clearing

Land cleaning is needed to remove weeds and prepare good planting media (Mukholisah et al., 2018). The land to be managed is 250M2 as a pilot area to be expanded. Land cleaning is assisted by two garden workers.

2. Selection of plants

The selection of plant varieties is based on criteria such as quality, productivity, and their effectiveness as conservation materials. Among the chosen alternatives are the indigofera zollingeriana and paspalum notatun plants. Indigofera zollingeriana, a tree legume, serves as a high-quality feed ingredient with a protein content ranging from 27.60% to 31% and a dry matter content of 67-81%. In contrast, paspalum notatun, a type of berrhizone grass, exhibits adaptability to less fertile, dry, or flooded conditions and proves versatile for various purposes, particularly in livestock management (Mukholisah et al., 2018).

3. Planting plants

The chosen plants, consisting of 250 Indigofera and 450 Paspalum notatun, were transported to the designated burial site. A total of 250 planting holes were carefully prepared, and the planting process adhered to the established principles of forage plant cultivation. To ensure the successful execution of the program, students from Madrasah Aliyah Daarul Falah class XI actively participated in the digging and planting procedures (Mukholisah et al., 2018).

4. Mentoring

Mentoring plays a pivotal role in the successful implementation of conservation initiatives at PDF. This mentoring involves both representatives from the school management and the active participation of students. Students are provided with valuable knowledge and skills in forage cultivation, serving as essential capital for their understanding. The substantial impact of student involvement underscores its significance in the accomplishment of conservation objectives. Meanwhile, management representatives are entrusted with assessing the outcomes of conservation efforts, particularly in terms of enhancing students' knowledge, meeting dietary needs, and enhancing land quality (Mukholisah et al., 2018). The success of Daar al-Falah's environmental conservation efforts not only draws from religious principles but also reflects the dedicated commitment of Islamic boarding school managers to transform the environment positively.

Based on the description of the research results, it can be stated that environmental crises on various scales are rooted in human behavior whose life orientation tends to be materialistic-hedonistic. Mistakes in how humans view their environmental systems contribute greatly to environmental damage. A dichotomous perspective that views nature as a separate part of humans and an anthropocentric understanding that considers humans as the center of the natural system play a major role in environmental damage (Van Dyk, 2009; Saniotis, 2012). This perspective has given rise to exploitative behavior towards preserving natural resources and the environment. Materialism, capitalism and pragmatism combined with science and technology are contributing to worsening environmental damage on a global and local scale. Saving the environment has been carried out by many groups, including through education,

although it has not been able to keep up with the rate of environmental damage that is occurring.

Islam teaches environmental theology by emphasizing moral values as solutions to humanitarian problems, such as environmental damage (Abdillah, 2010). This effort to explore the spiritual values of Islamic ecology is an enrichment of the treasures of Islamic prophetic ecology to offer an alternative ecological concept, transformative ecology (Berger, 1991; Latief, 2013). Environmental theology taught by Islam is a dialectical process between Islamic religious spiritual values and ecological values which Nasr calls ecological moral theory whose dialectical process is carried out through the internalization stage, objectification stage and externalization stage (Bisri, 2011; Fawaid, 2016 ; Werff, et. al., 2014; Ridwanuddin, 2017; Tholchah, 2016).

Kiai at the Agroecology Islamic Boarding School, Daarul Falah Islamic Boarding School, and Ath-Thoriq Islamic Boarding School see that humans have the responsibility to build the earth so that it is perfect through planting, building, repairing and reviving it, as well as avoiding destructive actions (Mukholisoh et al., 2018; Millah et al., 2020; Zulmuqim et al., 2020). Human errors in their interactions with various natural components and natural resources in an ecosystem cause environmental crises, degradation of environmental quality and disasters. Islamic boarding school managers are aware that environmental destruction in various forms includes arbitrary actions against the environment. Arbitrary actions towards the environment are detrimental and have a negative impact on personal quality. People who exploit and destroy nature try to rob the universe of its existence and life and try to sue and usurp God's rights and power. As believers, humans must reflect on environmental theology in the process towards the salvation of all of God's creation (Kholis & Karimah, 2017).

Islamic boarding schools under the guidance of Kiai at the Agroecology Islamic Boarding School, Daarul Falah Islamic Boarding School, and Ath-Thoriq Islamic Boarding School have taught students to read the Al-Qur'an and Hadith well, especially those related to the environment and contextualized in practical life. The learning of the Qur'an and Hadith in three Islamic boarding schools regarding the environment is not merely theoretical knowledge, but rather applied learning under the guidance of experts. The curriculum at the three Islamic boarding schools has been designed to be practical to provide students with both knowledge and practice (Siswanto, 2008, Nuha, 2017; Astuti, & Kusakabe, 2016;).

Islamic boarding school Kiai emphasizes the teachings of Islamic theology, nature has a sacredness that needs to be protected, not exploited arbitrarily. Kiai as interpreters of holy books emphasize that environmental problems arise as a result of the "ignorant hands" of humans who are unable to maintain God's trust. Ethics towards the environment in Islam reconstructs two relationships between humans and nature, namely nurturing mode and interventionist mode (Sarvestani & Shahvali, 2008). The relationship between God, humans and nature is completely integrated (Suwito, 2017; Quddus, 2012; Sayyem, 2019; Madjid, 1999). Apart from that, the Kiai construct fundamental problems faced by the surrounding community, economics and limited access to resources, so that even though the theological basis surrounds the ecological movement in Islamic boarding schools, the Kiai also introduce an economic approach to the community to attract the sympathy of the community so that they are moved to get involved in these activities (Subair , 2012; Suwito, 2017; Fata, 2014). Kiai conceptualizes economic benefits in the short, medium and long term. This choice is not without reason. Even though the fundamental problem lies in awareness of understanding the importance of building relationships with nature, if economic problems are not resolved, it will become an obstacle in maintaining the continuity of the movement.

It is interesting to observe that Islamic boarding school students and the surrounding community as other actors in environmental conservation are members of community groups

that care about the environment. The meaning of ecology reflected in society can be seen from strong individuals and farming groups. Farmers understand the complexity of the ecological problems that occur, after witnessing damaged environmental and residential conditions, including living welfare due to massive environmental damage. The interaction between the Islamic boarding school and the community, the process of interpreting environmental problems and the theological constructions of the *Kiai*, are disseminated through the general public's recitation forum. Here there is a process of transformation of the meaning of eco-theology in accordance with the meaning of the *kyai*. This condition shows a portrait of ecological meaning carried out by actors in Islamic boarding schools depending on the meaning process of the *kyai* themselves. The *kyai*'s individual reflection on the meaning of ecology became the theological basis for the *santri* and the community involved in the movement. It is important to note, even though the *Kiai* in each Islamic boarding school have different knowledge and development orientation, they have the same spirit, to restore public awareness to preserve the environment in its various dimensions. The variety of Islamic boarding school development is unique and needs to be cared for.

Environmental conservation built and developed by the Agroecology Islamic Boarding School, Daarul Falah Islamic Boarding School, and Ath-Thoriq Islamic Boarding School shows the meaning of the environment based on: (1) cultural factors that influence the process of interpreting Islam and its teachings and (2) leadership factors and educational patterns, the interpretation of the *kyai* interpreted as a single interpretation, and became a common understanding for those involved in the Islamic boarding school movement. The theological construction of the Agroecological Islamic Boarding School, Daarul Falah Islamic Boarding School, and Ath-Thoriq Islamic Boarding School is in accordance with the ecological moral theory put forward by Nasr, to make peace with the earth (nature), people must make peace with Heaven as a spiritual order. Reality shows that the rapid development of modern science and technology has resulted in the secularization of the cosmos. The secularization of the cosmos has separated humans from their environment. The desacralization and secularization of the cosmos over the centuries has made humans develop a character of subjugation to nature, giving rise to a serious environmental crisis (Cornelissen, 2008; Miri, 2007; Sayem, 2019; Suwito, 2008; Nisa et al., 2017; Nurkamilah, 2012).

CONCLUSION

The research findings highlight three Islamic boarding schools: PBUA, PDF in Bogor, and PAT in Garut—that have implemented practical approaches to instill environmental preservation among students. The educational process commences with the introduction of Quranic verses and Hadith related to the environment and its conservation. Following this, students receive hands-on training on cultivating crops, tending to plants, nurturing animals, and more, all under the guidance of knowledgeable experts. This hands-on educational strategy is designed to foster environmental awareness and encourage students to protect and care for their surroundings effectively.

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