

Integration of Religious Awareness in Environmental Education

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Abstract

Environmental education plays an essential role in minimizing the alarming rate of environmental damage due to the limited understanding of the community about the benefits of conservation. The primary reason for this research is the exclusion of religious values in environmental education. This study aimed to determine the benefits of integrating religious values and environmental education to raise public awareness on this issue and comprehend the public response toward the integration between religious values and environmental education. This study employed a qualitative approach based on Participatory Action Research (PAR) which allowed the researcher to act as an interventionist, facilitator, and activist by collecting data through interviews, observations, and field notes to produce primary data. The study identifies three significant findings. First, government agencies responsible for environmental issues rarely involve religious leaders in environmental preservation discussions or activities. Second, environmental issues are not the primary topic in religious studies. Third, the community has a misconception that humans are the center of the universe. At the same time, the

universe is only meant to satisfy human needs. The conclusion is that the religious understanding of the community has not yet touched on environmental issues. However, this study was limited to a community in Tambakromo, Pati Regency, Central Java. A study that involves more communities is needed. In addition, the use of survey methods and more participant involvement for future reviewers of similar topics. Thus, it can potentially obtain a comprehensive study result.

Keywords: Integration; Religious Awareness; Environmental Education; Participatory Action Research (PAR).

A. INTRODUCTION

Currently, there has been public negligence of religious values as a determining factor in efforts to preserve the environment. In fact, religious values play an essential role and have a crucial responsibility to empower environmental resources for the sustainability of the ecosystem. As a consequence of the insufficient integration of religious values in the endeavor to raise public awareness of the need for conservation, various environmental damages have been incurred as a result. The desire to meet the needs of life triggers humans to dominate nature, causing damage due to excessive attitudes in exploring nature without paying attention to environmental sustainability and achieving prosperity (Marut, 2004). The analysis released by the UN Environment Program World Conservation Monitoring Center in the FAO report (FAO, 2020) ranked Indonesia in third place in the world after Brazil and the Democratic Republic of the Congo, in terms of its propensity to suffer primary tropical forest loss, with an average loss of 1.47 million hectares per year in

the period 2013-2017 (Sodikin, 2020). This proves that the problem of conservation and environmental sustainability has not been appropriately handled by the government.

At the present time, there has been a growing research interest in the relationship between religion and the environment (Gottlieb, 2003; Jenkins & Chapple, 2011; Tanner & Mitchell, 2016). There are three observable research trends on this issue. The first is the key role of religious lessons in environmental conservation (Harahap, 2015; Safrilsyah, 2014). In addition, Luetz and Nunn (2020) stated that people naturally engaged with religious value and their indigenous traditions in rationalizing the phenomena like climate change. Religion and local precedent play a role in environmental policy (Luetz & Nunn, 2020). The second is religious awareness as an essential factor in environmental preservation (Arbuckle & Konisky, 2015; Windsor, 2012). The facts show that there has been a gradual abandonment of religion due to a lack of knowledge about religious values and an excessive focus on technological superiority. Such conditions lead to a reduction in proper religious practice, resulting in an attitude that tends to ignore all religious prohibitions and orders because people begin to lose their grip on the values of religious teachings. Therefore, it is necessary to foster religious understanding and awareness related to environmental conservation (Yanti, 2016). Third, there needs to be an immediate effort to save the environment from the process of environmental degradation through the movement to build ecological balance and harmony for human sustainability (Abdurrahman, 2003; Burhanuddin, 2016; Herlina, 2017). Utilization of the environment to meet the welfare of life is balanced with

concrete actions for its sustainability to create environmental sustainability. Deforestation activities are carried out on the basis of selection of the appropriate age of the plant followed by replacement plants carried out before the time of felling.

This study aims to respond to previous studies that understanding environmental issues, as well as protecting and maintaining the environment, definitely requires morality derived from religious beliefs, including positive and appropriate attitudes toward environmental conservation (Prabawa-Sear, 2020) to support all efforts to overcome the ongoing environmental damage (Safriisyah, 2014). In addition, this study is intended to complement previous studies on the relationship between religion and the environment. In this line, three questions are presented as an effort to suppress the alarming rate of environmental destruction. These questions are based on the need for mapping community understanding of the importance of environmental preservation through environmental education that is integrated with religious convictions in the following ways. First, how is public awareness of environmental conservation activities; Second, how to integrate religious materials into environmental education; and Third, how the community's response towards integrating religious materials in environmental education in Pati is. There are several conservation benefits to integrating environmental education with matters of faith to foster public understanding and awareness in supporting environmental conservation activities.

The incorporation of religious materials in environmental education is able to build community awareness of environmental issues. This fact is based

on several reasons. First, understanding community diversity will impact public awareness of the importance of maintaining the environment through environmental conservation, likely affecting community attitudes and behavior in supporting environmental conservation. Second, the positive response from the community is considered to be able to raise their awareness on environmental issues to control the environmental damage resulting from illegal logging collectively. Third, community awareness is anticipated to enhance people's conservation efforts. Consequently, heightened community awareness will reduce environmentally harmful practices such as excessive resource extraction and illegal logging.

B. LITERATURE REVIEW

1. The role of religion in preventing environmental damage

The environment is a social and cultural condition that can affect individuals and communities, which is shaped by a system known as an ecosystem in which energy transfers from one component to another (Dinata *et al.*, 2013). The disappearance of some components in the energy transfer will highly likely lead to an imbalance in nature and may have implications for environmental damage. The most common environmental damage issue in Indonesia is deforestation (Feng *et al.*, 2021). The extinction of orangutan (*Pongo spp.*) and water pollution (Handayani *et al.*, 2021). Everything is always related to human activities to meet their needs, which negatively

impacts the environment. One of the human actions is clearing land for the sake of planting oil palm, which resulted in the extinction of the orangutan (Nantha & Tisdell, 2009). Another case related to environmental damage is the logging of forests for clearing agricultural and residential land (Kubitza *et al.*, 2018). Handayani *et al.* (2021) reported that the production of Batik by small and medium enterprises in Indonesia caused environmental problems, including water pollution. Unconsciously, human actions that do not pay attention to environmental sustainability will cause environmental damage.

Therefore, the role of religion and its involvement in environmental issues are more substantial. In the recent decade, there have been a lot of studies on religion and environmental issues. Fua *et al.* (2018) reported on environmental care attitudes toward religious education in Indonesia. This study highlighted the emergence of environmental attitudes through religious education, which pointed to the student's creativity, discipline, responsibility, and cooperation in the management of the environment. Meanwhile, Bagir (2015) propounded that religion also plays an important role in environmental issues but lacks contribution from or about Indonesia. Whereas Arbuckle and Konisky (2015) argue that various aspects of theology and religious practice are responsible for lower levels of environmental concern, no convincing evidence has been found for this. This is due to the differences in the traditions of each religion.

Religion promulgates an attitude to protect the environment in every part of the earth. Abdul-Matin

(2010) analogizes the earth to a mosque. Every place on this earth can be used for praying. Therefore, every Muslim must take good care of it. It means that Islam teaches us to love the planet. In other religions like Hinduism, the rituals that correlate to nature, ecology, and environment are *bhakti* (Kaziem *et al.*, 2021). However, religious teachings are not sufficient to contribute to dynamic environmental issues. Religion is needed to move forward, but it is not enough to make the change. Leij (2021) mentioned that there is two discourse of religion and ecology or environmental issues, including religion being responsible for environmental issues and how religion plays a role in terms of environmental crisis surmounted. phenomena.

2. Religion and the Environment

Religion is incessantly associated with socially desirable individual behavior. Karim (2018) stated that religious education could provide a solution to environmental problems. Marcus and McCullough (2021) pinpointed that religion affects individual self-control in responding to the environment. Furthermore, Muñoz-García (2014) articulated that the influence of religion on individual religious attitudes in European society is divided into two, namely the positive and negative perspectives on caring attitudes towards the environment (pro-environment). This pro-environment attitude was demonstrated by female activists in Pakistan, where environmental conditions can have implications

for severe problems, such as poverty and women's powerlessness (Haq *et al.*, 2020). These activists, who call themselves an ecofeminism movement, have the support of Islam (Haq *et al.*, 2020).

According to Muslim (2011), Islamic teachings have determined that Allah regulates the relationship between humans and nature. From the Islamic perspective, as articulated by (Alpay *et al.*, 2013), Allah has created man and nature in a harmonious balance. Balance is a fundamental condition to maintain future sustainability survival, and thus humans shall comply with the concept of balance in all aspects of life, including the environment (Alpay *et al.*, 2013). Sulisty (2018) described Islam as a source of value that is believed to be capable of changing nature into either something useful or harmful. There have been various natural occurrences to be viewed from the perspective of Islam as a lesson learned for all humankind to appreciate the existence and greatness of Allah (Sulisty, 2018). The application of Islamic law regarding the environment takes two implementation instruments, namely through the constitution and non-binding religious law (Ramlan, 2020).

3. Environmental Education in Islam

As a religion that regulates the relationship between humans and God, and between humans and humans. Islam also serves as the basis for managing the balance of nature and the way to preserve it (Hidayat, 2015). Hidayat (2015) proposed the formation of *Adiwiyata Madrasah* as one of the means to achieve this balance. Environmental

education also serves as another strategy by separating waste as a social capital to take heed of the environment (Bushkova-Shiklina & Musikhina, 2020). The concept of environmental education was delivered by the Prophet Muhammad and stated in the Quran, one of which is in Surah Al-A'raf verse 56, which instructs humankind not to cause damage to nature (Nurulloh, 2019). Islam also has several theories on how to care for the environment, including the benefit theory, the approach to the five fundamental goals of Islam (*maqashid al-syari'ah*) and the Sunnah of the Prophet Muhammad (Safrilsyah, 2014).

The rationale for Islamic religious education can be divided into two: to give birth to virtuous people who can enforce justice and to trigger the act of justice by fostering and educating the people (Waghid, 2010). Lahmar (2020) suggested exploring the principles of local wisdom of Islamic education as a learning process and acting as the key to environmental wisdom-based culture. Islam has proposed the concept of the caliphate, based on Allah's preference and the availability of humans to become leaders or caliphs (Mc Taggart, 1991). The concept of the caliphate is intended that humans can become representatives of God to protect nature by preserving it (Fua *et al.*, 2018). According to Dinata *et al.* (2013), Islam proposes three ways of preserving nature. The first is through *ihya'*, or land utilization by individuals. The second is *igta'*, in which the government distributes the land ownership to certain people. The third is by means of *hima'*, in which the government provides the land for the benefit of all (Dinata *et al.*, 2013).

C. RESEARCH METHODS

This study applied the Participatory Action Research (PAR) method, which aims to identify research problems based on the needs of the subjects (Marut, 2004). PAR is intended to raise the critical awareness of research subjects to understand themselves and their environment, as well as to encourage their participation in concrete programs to provide benefits, to encourage some changes for the subjects, and to take action based on the research recommendation. Hence, in this context, the researcher acted as an interventionist, facilitator, and activist. The data were collected without any standard technique, but it emphasized creative and participative efforts (Suparmini *et al.*, 2013).

To raise the awareness of research subjects, we need to provide them with the primary data derived from the results of data collection through interviews, observations, field notes, process materials, and reports. The qualitative interview and report activities were carried out by the researchers. Meanwhile, the validation of the research findings from the cycle process of PAR steps was intended to find the relationship between theory, practice, and social transformation. Primary data were used to reveal informants' experiences and ideas, and expectations related to environmental preservation. Secondary data resulted from exploration of journals and documents to complement the information gap derived from primary data to provide a complete picture of the research subjects.

The research informants as the primary data source were selected and identified based on purposive sampling. Determining prospective informants is based on the inclusion criteria defined according to their characteristics to obtain

a data source that truly represents the community of the research subjects. The inclusion criteria for the intended informants are representative figures from the community, whether formal or informal (Suparmini *et al.*, 2013). Some of the informants' theoretical criteria include: (1) living in the Tambakromo District area with a preference for those living in the area around or near forest plants; (2) having knowledge and experience in forest environmental maintenance activities; (3) becoming a community leader in the neighborhood.

The research, several activities were carried out, as follows: (1) study the role of informants and study the relationship between community members for the purpose of empowerment; (2) formulate real problems through Focus Group Discussion (FGD) to increase their awareness, embed, and sharpen problems; (3) perform actions and observations. It is hoped that the participants can carry out empowerment activities in an appropriate, meaningful way to improve their quality of life; (4) evaluate and reflect. The step includes reporting assessment and formulation proposed to form an empowerment model, while reflection serves as an effort to re-evaluate the policy in depth; (5) formulate detailed and concrete recommendations to increase the continuation of improvement or empowerment efforts.

The data analysis was conducted using interactive and continuous analysis to generate a complete picture of the data. Qualitative data analysis after data collection was followed by data reduction, data display, and conclusion/verification (Miles *et al.*, 1994). The validity of the data was tested using the principle of information triangulation (Suparmini *et al.*,

2013). Meanwhile, the theoretical formulation was carried out by closely examining and studying the ideas generated from the community and translating these ideas into hands-on action, then testing these actions with relevant activities.

D. RESEARCH RESULTS

1. Environmental issues have not become the “subject matter” of religious discourse in everyday life

The community has not made religious discourse as the subject matter in environmental conservation activities since they are more interested in discussing the environment from an economic aspect. In their view, religious studies are still limited to the discussion on religious activities, including the worship rituals, which regulates the direct relationship between human and God and social worship, which regulates reciprocal relations between human, such as the command to help each other and not damage the environment. A religious teacher who is commonly referred to as a *kyai* or *ustad* believed that environmental preservation is not the area of his fostering responsibility but is the responsibility of coaching officers of *Perusahaan Umum Kehutanan Negara* (Perum Perhutani, State-Owned Forestry Company). Similarly, one of the community leaders stated that the care and preservation of the forest area is the responsibility of the Perum Perhutani officers. This is an ironic fact since Perum Perhutani officers rarely involved religious leaders in counseling programs on environmental conservation.

“... (such counseling program) is very rare and almost never happened because people consider (environmental conservation) as the duty of Perhutani officers. However, Perhutani officers rarely involved religious leaders in their counseling program or other activities related to environmental preservation” (Supeno, Secretary of Wukirsari Village -Tambakromo, interview, April 19, 2019).

The lack of understanding of the community on religious values makes them consider that environmental education and religious values are unrelated. Thus, in their view, environmental preservation is separated from the practice of religious values. Religious activities, such as *majlis taklim* (Muslim Forum), which are held once a month (*selapanan*) or weekly, have not been able to raise their awareness effectively to support environmental conservation efforts. Therefore, religion, which should serve as a driving force (centripetal) to generate a spirit of preserving the environment, has not yet been appropriately realized. There has been a shared common sense that environmental issues are not the object of the study of religion.

As a result, people consider that they can treat the environment without restrictions. This perceived freedom is apparent from the skyrocketing cases of illegal logging for the sake of meeting their daily needs due to economic hardship. Apart from the low level of religious understanding, the low level of income of the community has also triggered acts of environmental destruction. This is worsened by the fact that the standard income

level is not measured based on the local community (region) criteria but based on the standard parameters of developed or urban communities. They encourage an attitude of craving for wealth, thus triggering the actions to exploit the environment, which encourages a low level of environmental awareness.

2. Environmental issues are not the topical issues in religious studies

Environmental issues are never discussed in the Muslim Forums held in the community. The local religious leaders have never brought about environmental issues as a source of reference for mental development, attitudes, and behavior. This results in a commonly shared belief that environmental preservation activities, such as tree planting and cleaning the environment movement carried out by the community, both by individuals and by groups, are not part of activities rewarded by God. This condition encourages the emergence of a careless attitude that leads to low support for environmental preservation activities.

The low level of public concern for the environment can be influenced by the level of understanding of religious norms that govern environmental matters. Several reasons contribute to this low level of concern: First, during the counseling program, the environmental facilitators had not to include religious knowledge, and socialization of environmental conservation was still limited to describing strategies or ways of environmental preservation. Second, there are no facilities that

support the formation of a religious-based attitude to preserve the environment, such as books, guidelines or implementation instructions for environmental preservation. Third, religious leaders have never brought about or related their speech (*da'wah*) to environmental conservation activities. As a result, the community understands that environmental conservation activities are not related to religious values. This was reflected in comments made by participants. One of the community leaders, when interviewed, he said:

“... I see, that is for sure Sir. However, the problem is that the Perhutani officials, have never touched the religious messages during the counseling, while, the ustadz have also never touched the environmental issues in their speech...” (Kasmuri, Head of Sinomwidodo Village, interview, April 19, 2019).

Developing public understanding and awareness is the first step in shaping behavior that supports environmental conservation. Socialization activities such as developing understanding and awareness that use spiritual-based persuasion are intended to allow the occurrence of internalization in humans. The materials shall start from the notion that the potential wealth of forest areas is a natural resource given by God that must be protected and preserved. This notion shall be responded to and well understood internally by the community. The explanation of the benefits of environmental preservation for life shall use clear examples, such as only cutting down old forest plants. Such examples serve

as an example that can provide an understanding of the benefits of conservation to the community.

3. Damaging the environment is not considered as a sinful act

The notion related to environmental preservation is basically an activity of 'social worship' which significantly benefits the sustainability of all living creatures. However, this notion has not been understood by the public since the act of environmental destruction is not considered sinful. The religious understanding of the community is limited to worship activities, such as prayer, fasting, and zakat, which is limited to regular worship rituals.

The act of damaging the environment is also triggered by the erroneous understanding that humans are the center of the universe, while the universe is only a means of satisfying their interests. This erroneous belief is clearly seen from the alarming rate of illegal logging in Pakis Village, Tambakromo District. The joint operation carried out by the Tambakromo Sector Police with the Tambakromo Forest Management Unit (Perum Perhutani) revealed teak logs that had been felled at *Petak* (field) 61 C, Pakis Village, Tambakromo District, during the patrol. The officers seized 28 teak logs along with the seven motorbikes of the perpetrators, which had been left behind and brought to the Police Office of Pati District, as stated by Abdul Aziz, head of the Forest Management Office, Tambakromo area:

“...recently, a new case was revealed by officers who found teak wood that had been felled at Petak 61 C, Pakis Village, Tambakromo District. The officers also seized the perpetrator’s motorbike. 28 teak logs and seven motorbikes of the perpetrator, which were left behind were seized and brought to the Pati Police Office” (A.Aziz, Head of Perhutani Office, interview, April 7, 2019).

The startling rate of environmental damage is evidence of the lack of understanding of the community in Tambakromo that environmental conservation is an essential part of what it means to be religious and that its violation this will lead them to sinful acts. This community fails to understand that they must be accountable to God for the damage to the environment around them as a religious community. This condition is apparent from the low level of communal loyalty in controlling the individual member of the community that urges the rampant practice of buying and selling illegal timbers. A large number of sawmills and wood craftsmen in the Tambakromo area is a driving force for residents to carry out environmental damage activities. The availability of several prospective buyers (collectors) from various professions, such as wood craftsmen, home furniture industry, and others, is another factor for illegal logging, thus resulting in a proliferation of timber black market activities. The increasing sale of illegal timber in the black market is a sign of the unstoppable growth of environmental destruction, thus damaging the sustainability of the environment.

E. DISCUSSION

The low level of public awareness of environmental conservation activities was influenced by several factors. First, the limited understanding of the support of religious knowledge about environmental conservation makes people feel that they do not have spiritual support to take action. Second, the limited message conveyed by religious leaders in their preaching is that there are legal norms that oblige them to preserve the environment. Third, the absence of accessible references for the community to support environmental awareness since religious books does not provide an explanation of the importance of environmental preservation. Fourth, there is an understanding that environmental conservation is not the responsibility of religious leaders but it is the responsibility of Perum Perhutani officers.

The community shall perform its duties and responsibilities according to its respective fields. However, there seems to be a partial understanding of the community duties and responsibilities, so the objectives of environmental conservation are not yet in line with expectations. Religious leaders, through their religious speeches, foster the community's attitudes and mindset to comply with religious law in their daily activities. This role seems to contradict to the role of Perum Perhutani officers who shall provide the community with a notion on how to care for the environment to preserve the forest area. Furthermore, community groups are obligated and responsible for carrying out all religious orders and abandoning their prohibitions whenever and wherever they are. In its essence, all community groups understand that the forest is a natural resource that must be

protected and preserved. Hence, it is vital to integrate the roles of these three elements through the environmental program for implementation activities to effectively achieve the goals of environmental preservation.

Environmental preservation requires collaboration between all components of society. There shall be no discrimination in the community so that environmental sustainability receives equal treatment from anyone. The different treatment between groups will give an understanding that the responsibility of environmental preservation of forest areas is limited to particular groups instead of for all the community. This different view may lead to a misunderstanding in the community, often leading to conflict. Communities who feel the disadvantage of environmental preservation of the forest since they are restricted from taking advantage of the forest environment, will fight back due to policy discrimination. Such conditions will lead to uncontrollable mass conflict, and the impact will threaten the sustainability of environmental conservation activities. Such conflict of interest once occurred in West Lampung, since the community logged forests given their dissatisfaction with the government's discriminatory policies that favored Forest Concession Rights.

Actions that need to be implemented

In order to reduce the fast-paced increment of environmental damages due to social behavior, some actions are required to foster religious emotions in society to sensitize the community on the need for a

more faith-aware and harmonious interaction with their environment. The life of religious people is marked by the presence of God in their actions since they feel close to God and are always under God's supervision (Kadir, 2003). That attitude instills new awareness that has the capacity to foster environmental conservation efforts. In order to establish public awareness, we need to educate the community with materials relating to spiritual values based on religious norms. It consists of the following: (1) human life cannot exist without reciprocal connections with other creatures; (2) the wealth of the forest environment was primarily created for human welfare, but its utilization must be harmonious with the sustainability of all living things.

Suparmini *et al.* (2013) indicated that the achievement of environmental conservation is always based on the integrated planning and implementation with the local wisdom-based activities of agricultural systems, nature conservation, and the use of technology based on customary provisions and the local principle of *pikukuh*, which have been instilled in the community mindset of the Baduy and carried out with full awareness by all members of the community. The different finding between these researches lies in the emphasis on the growing religious-based awareness through the integration of environmental education in the community. Public awareness of environmental preservation grows and develops because of religious messages in environmental education materials. This means that activities to preserve the environment are part of the practice of religious values.

An awareness of belief reaches its peak if that awareness gains a stable position amidst various other aspects of the surrounding, such as the temptation of work, wealth, and other economic activities. There shall be a shared belief that the environment, such as a forest area, is a living creature with the right to live and must be respected and preserved to provide benefits to humans as mandated by God. Such understanding indicates a form of awareness and recognition by the public, including the community living in forest areas.

In managing nature and the environment, Allah has mandated humans with three things (Nurulloh, 2019). The first is *the al-intifa* relationship, meaning that humans are welcome to take advantage of nature and reuse it for their prosperity and benefit. The second is the *al-i'tibar* relationship, meaning that humans are ordered to be able to take lessons from various natural events. The third is the relationship of *al-islah*, meaning that humans are obliged to continue to protect and preserve the environment. These points indicate that humans who live in the universe with all their gifts of strength and wealth should be able to integrate these three points in their actions equally between taking advantage, taking lessons, and preserving nature.

Thus, in order to realize the mandate, the activities carried out are, first, integrating environmental education materials with religious teachings carried out by extension workers from the Perhutani service involving religious leaders. Second, explaining the relationship between religious teachings about the importance of

protecting and preserving the environment which is carried out by religious leaders when conveying religious teachings in joint study forums. Third, communicating between officials from the agency and religious leaders in community development activities to update environmental education materials to avoid missing the latest information. Communities that understand religious teachings are a driving factor to love and preserve the environment.

F. CONCLUSION

The integration of religious materials in environmental education fosters public awareness that supports environmental conservation activities. The increasing community awareness of environmental concerns is due to a growing understanding that environmental conservation activities are part of religious values. Activities that support and carry out environmental preservation are rewarded with two benefits. The first benefit is the ability to pass the well-preserved and sustainable natural wealth to our descendants and the next generation an environment, thus keeping it away from natural disasters caused by environmental damage. The second benefit is the good deeds of avoiding environmental destruction, which indicates the willingness to carry out environmental conservation activities in a sustainable manner because such behavior is passed on to the family and offspring.

There is a strengthening of the theory of environmental discrimination against the awareness of preserving the

environment, that people with various statuses and roles have the same obligation to act and support environmental conservation. Strict policies and treatments are needed to strengthen and support community activities to preserve the environment and provide sanctions for destructive actors. Discriminatory policies and different treatment of community groups will lead to a social gap, which results in endless social conflicts due to the feelings of resentment they generate. This research on the integration of religious awareness in environmental education is not free from its shortcomings and limitations. Further developments in the research preparation are required so that these limitations do not affect the overall results.

The research limitations include the following; the research was only carried out in a limited area of several rural forest environments in Tambakromo District with limited data collection of about four months; the research only used a qualitative method that involved only a few informants, making it impossible to generalize the results to a broader area. It is recommended that more research should be conducted using a survey methodology involving larger and more representative respondents in order to obtain a more detailed study result. Thus, this would help fill in the research gaps that have been identified in this study.

REFERENCES

- Abdul-Matin, I. (2010). *Green deen what Islam teaches about protecting the planet* (Mary Anne Stewart & Kirsten Janene-Nelson, Eds.; 1st Ed.). San Francisco: Berrett-Koehler Publishers.
- Alpay, S., Özdemir, I., & Demirbaş, D. (2013). Environment and Islam. *Journal of Economic Cooperation and Development*, 34(4), 1-22. <https://www.proquest.com/scholarly-journals/environment-islam/docview/1518511203/se-2>
- Arbuckle, M. B., & Konisky, D. M. (2015). The role of religion in environmental attitudes. *Social Science Quarterly*, 96(5) 1244-1263. <https://doi.org/10.1111/ssqu.12213>
- Bagir, Z. A. (2015). The importance of religion and ecology in Indonesia. *Worldviews*, 19(2), 99-102. <https://doi.org/10.1163/15685357-01902002>
- Burhanuddin. (2016). Integrasi ekonomi dan lingkungan hidup dalam pembangunan yang berkelanjutan. *Jurnal EduTech*, 2(1). <http://dx.doi.org/10.30596%2Fedutech.v2i1.565>
- Bushkova-Shiklina, E. V., & Musikhina, T. A. (2020). Environmental education of students as a factor in social capital development (through the example of the practice of household waste separate collection). *Perspektivy Nauki i Obrazovania*. <https://doi.org/10.32744/PSE.2020.6.22>
- Creswell, J., & Clark, V. P. (2011). Choosing a mixed methods design. *Designing and conducting mixed methods research*, 53-106.
- Dinata, Y., Febriamansyah, R., Firmansyah, N., Harrop, S. R., Kartika, E. C., Khalid, F. M., Mangunjaya, F. M., McKay, J. E., Premana, Y., Ritonga, R. R., Rolis, F., Suhendri, J.,

- Susanti, A., & Winarsa, S. (2013). *Integrating religion within conservation: Islamic beliefs and sumatran forest management* (Issue August).
- Feng, X., Qiu, H., Pan, J., & Tang, J. (2021). The impact of climate change on livestock production in pastoral areas of China. *Science of the Total Environment*, 770 (2021): 144838. <https://doi.org/10.1016/j.scitotenv.2020.144838>
- Fua, J., Wekke, I., Sabara, Z., & Nurlila, R. (2018). Development of environmental care attitude of students through religion education approach in Indonesia. *IOP Conference Series: Earth and Environmental Science*, 175, 012229. <https://doi.org/10.1088/1755-1315/175/1/012229>
- Gottlieb, R. S. (2003). *This sacred earth: Religion, nature, environment*. New York: Routledge. <https://doi.org/10.4324/9780203426982>
- Haberman, D. L. (2017). Hinduism Devotional love of the world. In *Routledge Handbook of Religion and Ecology*. Routledge.
- Handayani, W., Widianarko, B., & Pratiwi, A. R. (2021). Toward water friendliness in batik production: addressing the key factors on water use for batik production in Jarum village, Klaten Regency, Indonesia. *Environmental Science and Pollution Research*. <https://doi.org/10.1007/s11356-021-16743-9>
- Haq, Z. A., Imran, M., Ahmad, S., & Farooq, U. (2020). Environment, Islam, and women: a study of eco-feminist environmental activism in Pakistan. *Journal of Outdoor and Environmental Education*, 23(3), 275–291. <https://doi.org/10.1007/s42322-020-00065-4>
- Harahap, R. Z. (2015). Etika Islam dalam mengelola lingkungan hidup. *Edutech: Jurnal Ilmu Pendidikan Dan Ilmu Sosial*, 01(01). <https://doi.org/DOI: http://dx.doi.org/10.30596%2Fedutech.v1i01.271>

- Herlina, N. (2017). Permasalahan lingkungan hidup dan penegakan hukum lingkungan di Indonesia. *Jurnal Ilmiah Galuh Justisi*. <https://doi.org/10.25157/jigj.v3i2.93>
- Hidayat, A. (2015). Pendidikan Islam dan lingkungan hidup. *Jurnal Pendidikan Islam*, 4(2), 373. <https://doi.org/10.14421/jpi.2015.42.373-389>
- Jenkins, W., & Chapple, C. K. (2011). Religion and environment. *Annual Review of Environment and Resources*, 36(2011). <https://doi.org/10.1146/annurev-environ-042610-103728>
- Kadir, A., M. (2003). *Ilmu Islam terapan menggagas paradigma amali dalam agama Islam*. Yogyakarta: Pustaka Pelajar.
- Kaziem, A. E., He, Z., Li, L., Wen, Y., Wang, Z., Gao, Y., & Wang, M. (2021). Changes in soil and rat gut microbial diversity after long-term exposure to the chiral fungicide epoxiconazole. *Chemosphere*, 272(2021), 129618. <https://doi.org/10.1016/j.chemosphere.2021.129618>
- Kubitza, C., Krishna, V. v., Urban, K., Alamsyah, Z., & Qaim, M. (2018). Land property rights, agricultural intensification, and deforestation in Indonesia. *Ecological Economics*, 147, 312–321. <https://doi.org/10.1016/j.ecolecon.2018.01.021>
- Lahmar, F. (2020). Islamic education: An islamic “wisdom-based cultural environment” in awestern context. *Religions* 11(8), 409. <https://doi.org/10.3390/rel11080409>
- Leij, D. V. (2021). *The possibilities for interreligious dialogues on ecology in Indonesia A literature review* (M. I. Ahnaf, Ed.; First Edition). Center for Religious and Cross-cultural Studies, CRCS.
- Luetz, J. M., & Nunn, P. D. (2020). *Climate change adaptation in the pacific islands: A review of faith-engaged approaches*

and opportunities. Springer Nature Switzerland AG.
https://doi.org/10.1007/978-3-030-40552-6_15

Marcus, Z. J., & McCullough, M. E. (2021). Does religion make people more self-controlled? A review of research from the lab and life. In *Current Opinion in Psychology*, 40(2021),167-170. <https://doi.org/10.1016/j.copsyc.2020.12.001>

Marut, D. K. (2004). *Riset aksi partisipatoris: Riset pemberdayaan dan pembebasan*. Yogyakarta: Insist Press.

McTaggart, R. (1991). *Action research: A short modern history*. Victoria: Deakin University Press.

Miles, B. M. & Huberman A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. London: SAGE Publications, Inc.

Muñoz-García, A. (2014). Religion and environmental concern in Europe. *Archive for the Psychology of Religion*, 36(3). <https://doi.org/10.1163/15736121-12341289>

Nantha, H. S., & Tisdell, C. (2009). The orangutan–oil palm conflict: economic constraints and opportunities for conservation. *Biodiversity and Conservation*, 18(2), 487–502. <https://doi.org/10.1007/s10531-008-9512-3>

Nunn, P. D., & Luetz, J. M. (2021). Beyond Belief. In J. M. Luetz & P. D. Nunn (Ed.), *Beyond Belief: Opportunities for Faith-Engaged Approaches to Climate-Change Adaptation in the Pacific Islands* (hal. 1–14). Springer International Publishing. https://doi.org/10.1007/978-3-030-67602-5_1

Nurulloh, E. S. (2019). Pendidikan Islam dan pengembangan kesadaran lingkungan. *Jurnal Penelitian Pendidikan Islam*, 7(2). <https://doi.org/10.36667/jppi.v7i2.366>

- Prabawa-Sear, K. & Parker, L. (2020). Environmental education in Indonesia creating responsible citizens in the global south?. London: Routledge. <https://doi.org/10.4324/9780429397981>
- Ramlan, S. (2020). Implementing Islamic law to protect the environment: Insights from Singapore, Malaysia, and Indonesia. *Asia Pacific Journal of Environmental Law*, 23(2), 202-230. <https://doi.org/10.4337/APJEL.2020.02.05>
- Safirliyah. (2014). Agama dan kesadaran menjaga lingkungan hidup. *Substantia*, 16(1). <http://dx.doi.org/10.22373/substantia.v16i1.4918>
- Sulistyo, A. (2018). Konsep pendidikan lingkungan hidup dalam pandangan Islam. *Cahaya Pendidikan*, 4(1). <https://doi.org/10.33373/chypend.v4i1.1281>
- Suparmini, S., Setyawati, S. & Sumunar, D. R. S. (2013). Pelestarian lingkungan masyarakat baduy berbasis kearifan lokal. *Jurnal Penelitian Humaniora*, 18(1), 8–22. <http://dx.doi.org/10.21831/hum.v18i1.3180>
- Tanner, R., & Mitchell, C. (2016). *Religion and the environment*. London: Palgrave Macmillan. <https://doi.org/10.1057/9780230286344>
- Waghid, Y. (2010). Islamic education. In *International Encyclopedia of Education*. <https://doi.org/10.1016/B978-0-08-044894-7.00561-3>
- Windsor, H. C. (2012). Islam and the environment. *Religions: A Scholarly Journal*, 2012(1). <https://doi.org/10.5339/rels.2012.environment.3>
- Yanti, N. (2016). Pendidikan agama dan moral dalam perspektif global. *Al-Ishlah Jurnal Pendidikan*, 8(1), 89–104. <https://doi.org/10.35445/alishlah.v8i1.29>