

## Religious Education for The Environment: Integrating Eco-Theology in The Curriculum of Islamic Religious and Character Education to Enhance Environmental Education in Indonesia

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### ABSTRACT

Environmental education (EE) is a crucial issue amid acute environmental degradation. This study aims to analyze the content of Islamic eco-theology in Indonesia's Islamic Religious and Character Education (IRCE) curriculum and integrate it into the curriculum as a form of offering ethical spirituality in environmental education to enhance environmental education. This study is qualitative research that incorporates the literature study supported by structured interviews and document studies. Interviews were used to collect data that concerned teachers of high schools of IRCE in Semarang, Central Java. Document studies were employed to address the IRCE curriculum of High Schools, journal articles, and government policy documents. Data analysis used the descriptive-interactive method. The results showed that the curriculum of IRCE emphasizes the affective domain in environmental education matters. However, it does not yet address the cognitive one appropriately, so IRCE teachers teach environmental education by inserting relevant IRCE themes. This study emphasizes the importance of integrating eco-theology in the IRCE curriculum and recommends that Islamic eco-theology be included in the IRCE curriculum in Indonesia so that the inculcation of environmental education values can work better through IRCE learning.

### KEYWORDS

*Islamic Eco-theology, Environmental Education (EE), Islamic Religious and Character Education (IRCE), Curriculum and instruction.*



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## Introduction

Environmental education (EE) has become a strategic issue in various countries in the world in the last six decades (Rojas et al., 2021; Wessels et al., 2021). Established various environmental organizations held various environmental conferences attended by various countries in the world (Tobajas et al., 2021). The conferences included the Intergovernmental Conference on Environmental Education in Tbilisi on 14-26 October 1977, which resulted in the formulation and endorsement of goals, objectives, and guiding principles, as well as the strategy of Environmental Education (Koech, 1988). In addition, there is also an agreement among countries in the world regarding sustainable development, which is realized through the Sustainable Development Goals 2016-2030 (UNDP, 2015).

Environmental degradation has occurred in various countries in the world, including Indonesia (Parker & Prabawa-Sear, 2020). Indonesia has a very high rate of deforestation, which causes the loss of various biodiversity that it has (Hadi et al., 2018; Syahza et al., 2021), and is the largest deforestation country in the world (WowShack Team, 2014), being a country with a large share of greenhouse gases, the third-largest glass in the world (World Bank, 2020), the second-largest contributor to plastic pollutants of the world's oceans (Wright, 2017). Environmental damage is also caused by high gas emissions from deforestation and peatland fires, burning fossil fuels. This is exacerbated by unwise behavior in natural resource extraction, high pollution (Pirmana et al., 2021), and industries that are not environmentally friendly (Handoyo, 2018).

This reality emphasizes the urgency of EE and requires community ecological awareness. Sayyed Hossein Nasr, an Islamic Environmentalist, stated that environmental conservation efforts must revitalize Islamic values and restore the sacredness of nature (Maftukhin, 2016; Sayem, 2019). Conservation efforts currently being carried out still lack spiritual values (Bensaid, 2018; Rusmadi, 2016; Thathong, 2012). Therefore, it is necessary to offer the concept of thinking and acting about the environment that integrates physical aspects, both biotic and abiotic, humans, and Allah SWT as the Creator (Muda, 2020; Quddus, 2012; Rasngat & Jusnaidi, 2015). The concept of eco-theology should be the basis for various environmental conservation efforts, especially in environmental education programs.

So far, studies on EE have tended to focus on three things: first, environmental education studies that examine documents (school curriculum, religious texts, regulations) regarding their loading and concern for the environmental education (Jeronen et al., 2009; Rakhmat, 2022; Wakhidah & Erman, 2022). Second, studies that examine environmental education in the perspective of a community and its implementation in institutions, especially in educational institutions (Cholil & Parker, 2021; Efendi et al., 2017b; Kurniawan & Syifauddin, 2021), and the third is a study that looking for alternatives on how environmental education is carried out effectively and efficiently (Haddad, 2006; Suasti et al., 2018; Sukarjita et al., 2015). The study complements the previous research that discusses the level of environmental education loading at the Islamic Religious and Character Education (IRCE) curriculum, and the

teacher perspective, especially the content of Islamic eco-theology at the Senior High School level.

This study argues that integrating eco-theology into IRCE in the school curriculum is an important and strategic way to solve the environmental problem. The relationship between religion and the environment in the curriculum in Indonesia is very interesting to consider because IRCE emphasizes balance and harmony in the relationship between humans and God, the relationship between human beings, and the relationship between humans and their natural surroundings as evidence of piety to God (Atiqoh & Saputro, 2017). IRCE emphasizes worship and understands and realizes the importance of environmental awareness that is undergoing degradation (Erawati & Rahmayanti, 2021)—integrating the content of Islamic eco-theology in the IRCE curriculum of Senior High School, especially in the cognitive domain to enhance EE in Indonesia.

## Literature Review

### 1. Environmental Education and Islamic Eco-theology

Environmental Education (EE) is education that develops human awareness of the interaction of the physical, socioeconomic, cultural, and human biological systems; that enables students to develop the “knowledge, values, attitudes, and practical skills to participate responsibly and effectively in anticipating and solving environmental problems, and the management of the quality of the environment (UNESCO, 1977). Parker & Prabawa-Sear identified three types of EE: education *about* the environment which focuses on knowledge, EE *for* the environment, which focuses on maintaining or improving the environment, and education *in* the environment, which can be glossed as outdoor education (Parker & Prabawa-Sear, 2020)

Islamic eco-theology is a form of constructive theology that explains the relationship between religion and the environment. The environmental crisis is related to profane issues and spiritual issues caused by misunderstandings in interpreting religion and the environment (Masyhuda et al., 2021). Islam has a framework for environmental education. The philosophical foundation of Islamic eco-theology includes all the concepts and teachings that are often referred to in Islamic law (*Sharia*), the creation of the universe by God (*ilm al-khalaq*), and human responsibility to utilize, maintain and preserve the environment (Bilal, 2017).

Islamic eco-theology has been used to describe the teachings of environmental conservation in Islam as a form of environmental education since the late 1960s (Khalid, 2002; Kurniawan & Syifauddin, 2021; Mahzumi, 2018; Masyhuda et al., 2021; Oprea et al., 2017). However, apart from Islamic Eco-theology, several researchers use other terminology to discuss environmental education in Islam, such as Islamic Ecology (Fikriyati, 2017; Saniotis, 2012), and Eco-Spirituality (Asmanto, 2015; Crowe, 2013). In this study, the term Islamic eco-theology is used to explain the Islamic perspective on environmental education.

Islam also highly upholds environmental sustainability. 261 words in the Qur'an discuss the world created by Allah with the term *Al-Khalaq* (creation), and 485 words have

a direct meaning of the earth using the term *Al-Ardh* (Deen, 1990). In the Qur'an, there are more than 750 verses related to nature, and 14 letters related to animals and natural phenomena (Rodin, 2017). In addition, there are several other terms in the Qur'an related to ecology, namely: (1) *al-bi'ah* (environment); (2) *al-'aalamiin* (all nature); (3) *al-samaa'* (the sky or the universe); (4) *al-insan* (human); (5) *al-an'am* or *daabbah* (fauna); (6) *al-nabaat* or *al-kharst* (flora); (7) *al-maa'* (water); (8) *al-riih* (air); (9) *al-shams* (sun); (10) *al-Qamar* (month); (11) *al-burj* (star); and (12) *al-jabal* (mountain) (Zulfikar, 2018; Suhendra, 2013).

Islamic eco-theology has four principles consisting of the principle of monotheism (*tauhid*), the principle of *Khalq*, the principle of *Mizan*, and the principle of *khilafah-amanah*. First, is the principle of monotheism. The principles of monotheism are related to the discussion of nature and its Creator, all of His creation, and the importance of protecting it. The principle of monotheism implies that everything in nature is a sign of God's greatness and is a manifestation of God. Allah is present in all his movements and steps in establishing relationships with nature and other creatures (Helfaya, Kotb, & Abdelzaher, 2019; Quddus, 2012; Meraj, 2016). The foundation of this monotheism emphasizes that Allah created the universe and everything in it as a picture of unity in plurality. Nature provides a source of inspiration and guidance for understanding God and his creation (Sanjotis, 2012). By uniting the natural environment, human social, political, and economic aspects, life will be more stable and secure, leading to universal green brotherhood (Helfaya et al., 2019).

Second, the principle of *Khalq*. *Khalq* in the Qur'an is used to describe Allah's creation. The *Khalq* principle implies that nature is something sacred, a state of essential goodness, and shows that everything created by Allah must have the potential for goodness, beauty, and benefits that humans must understand must understand. Human awareness of the beauty and wisdom of this creation will lead to pro-environmental human behavior (Khalid, 2002). Third, the *Mizan* Principle. This principle teaches that Allah has created this universe with perfect balance (Khalid, 2002). Environmental balance is widely quoted in the Qur'an with the terms '*adl*, *qadar*, and *mauzun*. In addition, there are also terms *Mizan*, *haq*, and *qist* (Meraj, 2016). Fourth is the principle of *Khilafah-Amanah*. The principle of the caliphate implies a trilogy of relationships between God, humans, and nature. Allah created the universe and its contents for humans. Humans are given a mandate as leaders on earth who must preserve the natural environment (Helfaya et al., 2019; F. M. Khalid, 2002). The Qur'an states that humans are caliphs on earth (Qur'an 2:30). For this reason, humans must preserve the natural environment and prevent various destructive behaviors against nature (Sanjotis, 2012).

## **2. Islamic Eco-theology, the IRCE, and Environmental Education**

In the EE, there are two approaches, namely an integrative approach and monolithic education. An integrative approach is implemented by integrating environmental values and concepts in various existing fields of knowledge. Meanwhile, the monolithic approach implements Environmental Education through one field of knowledge. In this approach, Environmental Education becomes a field of science that

stands alone like other fields of science (Sukarjita et al., 2015; Wahyudin & Malik, 2019). In the realm of formal education in Indonesia, according to the 2013 curriculum, environmental education is implemented with an integrative approach (Afandi, 2013; Haris & Afdaliah, 2016; Rezkita & Wardani, 2018). Implementatively, environmental education is integrated into every existing subject. However, in general, the implementation of environmental education in learning in schools in Indonesia is currently still rarely done (Saprodi et al., 2019), including Islamic Religious and Character Education (IRCE).

IRCE has an inseparable relationship with Islamic eco-theology because Islam is very concerned about the issue of environmental sustainability which is shown by the many verses of the Qur'an and Hadith that discuss the environment (Ridhwan & Wardhana, 2019). IRCE is also very relevant to Islamic eco-theology, where it aims to produce good and true human beings in worship Allah so that they can maintain the environment following *Shari'ah* to increase faith in Allah. The purpose of IRCE is to develop all human potential as servants of God who always believe, fear, and worship God, and as vicegerents of God to manage the environment so that it remains sustainable (Muzadi & Mutholingah, 2019).

IRCE is also expected to be a way of life for producing humans who always strive to perfect faith and piety, build civilization, and actively harmonize life (Nurrahmidah, 2019). IRCE subjects need to be integrated with environmental understanding because of their existence as a basis for protecting the environment and education (Yumnah, 2020). Islam, with its *Maqashid Syariah*, emphasizes that human benefit is the basis of the implementation of Islamic teachings, and benefit will not be realized without environmental sustainability (Al-Qardhawi, 2002).

The environmental damage that is happening today is more caused by the lack of the spiritual values of the community (Beatrice, Okyere-Manu Stephen Nkansah & Nwosimiri, 2022; Bensaid, 2018; Gottlieb, 2010; Rusmadi, 2016; Thathong, 2012). Therefore, IRCE is important to be taught from an early age through the family and community environment for the realization of humans who have behavior that is inspired by faith in Allah (Atiqoh & Saputro, 2017), which includes environmental sustainability. IRCE is an effective vehicle for teaching environmental wisdom in Islam (Abdillah, 2001). It also has an inseparable relationship with Islamic eco-theology. Both have an intersection of goals, namely realizing the benefit of human life. Therefore, contending ecology into IRCE curriculum has a strategic position because IRCE is a compulsory subject taught in schools from basic education to higher education. In addition, quantitatively, 85% of Indonesia's population is Muslim (D. F. Anwar, 2011; Buehler, 2009), which also reinforces the strategic value of this integration.

## Method

This study uses the method of document study and structured interviews. Document studies are used to collect data on the IRCE curriculum, and various policy documents related to ecologies, such as scientific articles published in national and international journals, books, and Regulations of the Minister of National Education and

*Nadwa: Jurnal Pendidikan Islam*. Vo.18, No.2, 2024 | 205

Culture, Regulations of the Ministry of Religion, and literature. Interviews were conducted with five senior high school IRCE Islamic Religious Education (PAI) teachers in Semarang, Central Java Province to explore eco-theological content in PAIIRCE subjects. Five teachers are selected purposively as they are respondents who deeply understand the curriculum and its implementation of IRCE, as well as they are officers of the Association of Teachers' IRCE (MGMP) of Central Java. Moreover, they are teachers of the IRCE of Senior High School in Semarang.

This qualitative study aims to analyze the content of Islamic eco-theology in the IRCE curriculum in Indonesia by focusing on Semarang, Central Java. It also argues that contending ecology into IRCE curriculum is urgent to reinforce Indonesia's successful education environment. Semarang was chosen as the focus because it is the capital city of Central Java with a diverse population and very varied environment. Semarang also has potential problems in the natural environment field, a city with a complete geographical area between sea, land, and mountains, with a fairly dense occupancy rate.

Senior high school (SMA) is selected to be a focus of the study because of the students who are relevant to the cognitive approach in internalizing values to individuals, including environmental values (Lickona, 2009; Rohman, 2016a, 2016b, 2017; Rohman & Muhtamiroh, 2022).

## Results

Data analysis used the descriptive-interactive-interpretive method. The collected data is narrated and described to provide a coherent understanding of the existing reality without commenting, then connected between reality and another to provide a complete and comprehensive meaning. After that, it is interpreted based on the appropriate theoretical framework. Procedurally, the way the analysis works uses downstream analysis developed by Miles & Huberman (Miles & Huberman, 1991) namely the stages of data reduction, data presentation, and conclusion drawing.

### 1. The curriculum of IRCE in Indonesia

Indonesia has implemented the 2013 curriculum, which highlights a scientific approach to learning, uses varied methods, and accesses a student-centered to provide a meaningful learning experience for students (Haizah, 2017). The Islamic Religious Education subject changed its name to Islamic Religious and Character Education (IRCE) in this curriculum because of the paradigm of the new curriculum that developed the character-based knowledge and skills of students to increase the quality of the attitude aspects of students (Ulfah et al., 2015)

IRCE is a subject matter that the school's curriculum covers from elementary school up to senior high school. In the 2013 curriculum, the IRCE is a subject matter that includes: (1) Faith that allows students to understand God as a source of universal values; (2) Experience that provides students to feel and implement the universal values of Islamic teachings in everyday life; (3) Habituation to use Islamic values as guidelines for behavior; (4) rationale that provides students can think using reason to understand

and distinguish various value systems in life; (5) Emotional that provides students can feel and understand the attitudes and behavior according to Islamic teachings and national culture; (6) Functional to present the form of all aspects of the material that benefit students' lives; (7) Exemplary to provide *uswatun hasanah* to students as a human with Muslim personalities; (8) Material integration—material development—in which ICRE contains correlations between Al-Qur'an and Hadith, morality, faith, fiqh-worship, and muamalah to produce comprehensive Muslims (*kaffah Moslem*) (Hidayati, 2014).

According to the Regulation of the Minister of Education and Culture No. 20 of 2016, the Graduate Competency Standards of students cover four aspects: (1) spiritual attitudes, (2) social attitudes, (3) knowledge, and (4) skills. In the 2013 curriculum, IRCE subjects include Al-Qur'an and Hadith, *Aqeedah*, *Fiqh*, Morals, and History of Islamic Civilization materials. It also consists of five aspects: (1) verses of the Qur'an related to the role of humans as leaders (caliphate) on earth, democracy, and the development of science and technology; (2) understanding the pillars of faith and the attributes of Allah and the names of Allah (*Asmaul Husna*); (3) understanding and implementing commendable behavior, such as always having good prejudice (*husnuzzhan*), repenting and leaving despicable behavior such as *isrof*, *tabdzir*, and slander; (4) understanding the sources of Islamic law and Allah's provisions (*taklifi* law), as well as explaining daily *amaliyah* law (*muamalah*) and family law in Islam; (5) understanding and following the history of the Prophet Muhammad in Mecca and Madina as well as the development of Islam in Indonesia and the world (Fauzan et al., 2019). These five aspects are translated into several basic competencies (KD) in the syllabus under the Regulation of Minister of Education and Culture Number 37 of 2018. Further, it can be seen in table 1.

Table 1. Basic Competence (KD) in IRCE's Curriculum

No.	Knowledge Competencies 3		
	Grade 10	Grade 11	Grade 12
1	Self-control, good prejudice, and brotherhood	Obedience to the rules, competition in goodness, and work ethic	Think critically and be democratic
2	Prohibition of promiscuity and adultery	Tolerance, harmony, and avoidance of violence	The obligation to worship and be grateful to Allah and do good to fellow human beings
3	<i>Asmaul Husna</i> ( <i>Al-Karim, Al-Mu'min, Al-Wakil, Al-Matin, Al-Jami', Al-'Adl, Al-Akhir</i> )	Faith in Allah's Books	Faith in the judgment day
4	Faith in Allah's angels	Faith in Allah's Apostles	Faith in <i>Qadha</i> and <i>Qadar</i>

5	Dress Conditions	Dare to defend the truth	Work hard and be responsible in daily life
6	Honest Behavior	Respect and obey parents and teachers	Marriage in Islam
7	Passion for learning and applying what is learned	Funeral Service	Inheritance law
8	The position of the Qur'an, Hadith, and Ijtihad as sources of Islamic law	Sermons, tabligh, and da'wah	Da'wah strategy and the development of Islam in Indonesia
9	Hajj, Zakat, and Waqf	Principles of Islamic economic practice	History of the development of Islam in Indonesia
10	Substance, strategy, and supporters of the Prophet Muhammad's da'wah in Mecca	The development of Islamic civilization in its heyday	Factors of the progress of Islamic civilization in the world
11	Substance, strategy, and support for the da'wah of the Prophet Muhammad in Medina	The development of Islam in modern times (1800-present)	The decline factor of Islamic civilization in the world

Source: Ministry of Education and Culture (2018)

In the 2013 curriculum, the internalization of values and attitudes is carried out by integrating all aspects of learning, i.e.: planning, implementation, and evaluation. At the planning level, integration is done through the integration of Graduate Competency Standard (SKL), Core Competence (KI), Basic Competence (KD), Syllabus, and Lesson Plans. At the implementation and evaluation level, integration is carried out through the selected learning strategies, the approaches used, and the methods applied in learning. In the 2013 curriculum, IRCE also has additional hours of lessons, although there are no significant changes in the material that has been formulated in the Core Competence (KI) and Basic Competence (KD) (Hidayati, 2014). Therefore, teachers should add materials that support the learning process through innovative learning methods and approaches, including Islamic eco-theology.

## 2. Eco-theology in the IRCE in Indonesia

In the 2013 curriculum, Core Competencies (KI) consisting of (1) spiritual attitudes, (2) social attitudes, (3) knowledge, and (4) skills are broken down into Basic Competencies (KD) that must be achieved by students through a learning process. Based



on the Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 37 of 2018 concerning Core Competencies (KI) and Basic Competencies (KD), the content of environmental education (Islamic eco-theology) in IRCE of the Senior High School is still relatively minimal. Explicitly, the content of environmental education can be found in the second Core Competency (KI), namely social attitudes, and it is too general, namely:

Showing honest, disciplined, responsible, caring (cooperation, tolerance, peace) behavior, polite, responsive, and proactive as part of the solution to various problems in interacting effectively with the social and natural environment and placing oneself as a reflection of the nation in world association (Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 37 of 2018 - Permendikbud No 37 2018).

Based on the Regulation above, the values of Islamic eco-theology in the ICCE curriculum of the Senior High School are also still minimal. There are no Basic Competencies (KD) that explicitly mention environmental conservation or eco-theology. Although Wakhidah & Erman (2022) stated that environmental education is included in the IRCE curriculum in grades XI and XII, it just appears in the aspects of spiritual and social attitudes of Core Competencies (KI). However, Basic Competencies that Wakhidah & Erman considered as the environmental education content also do not explicitly mention Islamic eco-theology. They only imply implicitly environmental education, i.e.: regarding living in tolerance, harmony, and avoiding acts of violence, and being grateful to Allah, obedience to parents and teachers (Wakhidah & Erman, 2022).

Moreover, the knowledge domain of Islamic eco-theology that can strengthen the students' attitude is still minimal. In educational practice in Indonesia, the affective domain (social and spiritual attitudes) is often missed because of the difficulties and complexity in design, implementation, and evaluation. Teachers usually place more emphasis on aspects of knowledge and skills (Bolin et al., 2005; Kurniati et al., 2020). The teacher, as an informant, stated:

In implementing the 2013 curriculum, the teacher has emphasized more aspects of knowledge than attitudes and skills. The teacher focuses on aspects that are easy to measure and evaluate. Even though teachers emphasize more on knowledge in IRCE, especially regarding memorizing verses of al-Quran and hadiths, fiqh, and Islamic history, the explicit matter on eco-theology is still lacking (P3).

Therefore, it is necessary to enrich the content of IRCE on Basic Competencies in the knowledge dimension of environmental education. It automatically indicates the limitation of Wakhidah & Erman's study, which found loading environmental education at Grade I, II, III, IV, VI, VII, IX, XI, XII in school curriculum of IRCE in Indonesia (Wakhidah & Erman, 2022) which cover in affective domain, and still lack in cognitive domain. In spite of she did not interview teachers to find out the implementation of the curriculum in the field. Allen & Friedman (2010) also argued that the most difficult and complex

matter in learning is how to integrate aspects of knowledge, attitudes, and skills simultaneously. Teachers still have difficulty making assessments of the affective (attitude) domain. Teachers often ignore the assessment of attitude aspects (Aziz et al., 2012; Baartman & De Bruijn, 2011).

IRCE teachers' understanding of environmental education in Islam is obtained through the concept of *fiqh al-bi'ah*. Planting for environmental conservation is often partially done and less associated with Islamic teachings. The value of environmental education is taught through the insertion of other materials or basic competencies derived from Core Competency (KI) 2 related to social attitudes, in which there is a caring character for the environment, which must be inserted in every subject.

Substantively, I still imprint and insert the content related to environmental conservation in my learning. This is because it is the teacher's job to instill in students the character of caring for the environment. For example, I insert it into the material or basic competence about obeying the rules, not acting violently, or responsible behavior (P1).

Substantively I already understand the concept of Islamic eco-theology, so I still teach it to students. However, it was not with specific terminology that led to the concept of Islamic eco-theology. For example, I insert material on environmental conservation in the Basic Competence of responsible behavior in grade 12" (P3).

Based on the syllabus (the Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 37 of 2018) from all Basic Competence of grades 10 to 12, no material discusses environmental education. None of the five aspects of IRCE material (the Quran and Hadith, Aqeedah Akhlak, Fiqh, to Islamic History) discusses environmental education in the curriculum. At the same time, environmental education materials should be internalized into these five aspects. In the interview, the second informant stated that in the 2013 curriculum of IRCE, the moral aspect, which is the most relevant aspect of environmental conservation, does not discuss the materials. The moral aspect discusses more religious moderation, which teaches to respect each other and behave well with fellow Muslim and non-Muslim human beings.

"In the 2013 curriculum of the Islamic Religious Education syllabus, there is nothing specifically about environmental conservation. The material related to the moral aspect is more about morals towards fellow humans and about religious moderation" (P2).

In interviews, the first, third, and fifth informants also revealed that before the 2013 curriculum --the 2006 curriculum-- IRCE still contained material related to environmental conservation, such as discussing *Al-Quran Surah Ar-Ruum* verse 41

related to environmental damage on land and at sea. However, in the 2013 curriculum, materials related to environmental damage do not exist.

"Before the 2013 curriculum, there were materials related to environmental conservation in the *Al-Quran Surah Ar-Ruum* verse 41. However, in the 2013 curriculum, environmental materials were not included in the syllabus. This happened because of the various interests that exist on the part of curriculum developers at the central level. The teacher only follows the given syllabus. If it turns out that curriculum developers prioritize the issue of multiculturalism and religious moderation, we as teachers will follow it" (P3)

The content of Islamic eco-theology can be included in several Basic Competence either in grade 10, grade 11, or grade 12. This step can be applied by preparing environment-based learning. Several teachers stated that they instilled environmental care character values through contextual learning. Then, the fourth informant stated that the teacher did not emphasize environmental conservation material.

"We instill environmental care in our learning. It is usually inserted through contextual learning. However, this is only done at a glance, so the learning is not deep. For example, using the latest environmental issues such as disasters and forest fires in the apperception stage or providing examples in the middle of learning" (P4).

Another obstacle for IRCE teachers in implementing environmental education programs is students' abilities. Many students do not understand IRCE material and ethics at school. IRCE is considered as unimportant subject because it does not affect their graduation and their future in the academic world.

Students' understanding of the basic material of IRCE is still lacking. Students considered IRCE as a less important subject because it does not affect graduation, and it is uncorrelated with disciplines they will take at the next level in higher education. In addition, the Covid-19 pandemic also has an impact on IRCE learning because teachers find it difficult to instill moral aspects, and it is difficult to observe students' morals and behavior in learning and in the school environment. However, one of the positive points that support IRCE is in the 2013 curriculum where IRCE have gets a portion more than in the previous curriculum, namely three hours of lessons per week so as to provide opportunities for teachers to be more flexible in delivering various learning materials (P1).

### 3. The Urgency of Islamic Eco-theology in the IRCE's Curriculum

IRCE aims to form human beings, develop all human physical and spiritual potential, and articulate the relationship between humans and Allah, fellow humans, and the natural environment. The IRCE curriculum is oriented toward three goals, namely managing the relationship between humans and God (*hablun min Allah*), relationships between humans (*hablun minannas*), and human relationships with nature (*hablun minal 'alam*) (Daulay & Tobroni, 2017). IRCE goals must be following the Islamic mission, namely *rahmatan lil 'alamin* (Sanaky, 2003). IRCE should not only focus on developing children's thinking and knowledge but also must pay attention to the moral aspect (Nuryana, 2017). Morals are the soul of IRCE (M. R. Anwar et al., 2005). IRCE subjects should be able to direct the students to become human beings with morals, including interactions with humans and the natural environment (Muchtarom, 2013; Abitolkha & Ismail, 2020)

“The main goal of all lessons taught in IRCE is the formation of students who have good morals and are religious. By studying monotheism, the Qur'an, *fiqh*, and Islamic history, students are expected to achieve the ultimate goal of Islamic Religious Education learning, which is to form the noble character in them” (P4).

In the context of character education, environmental awareness is an important aspect of IRCE. IRCE has to form students who have the character of caring for the environment in the frame of Islamic values.

IRCE has a good function and role in building student character. With an emotional and rational approach to learning, and methods of habituation and cognitive formation in the learning process, IRCE is an effective subject entity in character building, including the formation of environmental awareness (P5).

The implementation of a religion-based environmental ethic is a strategic step to change people's attitudes (Akhter et al., 2010). Several studies state that environmental education implemented with a religious approach is effective in shaping people who have environmental concerns (Kurniawan & Syifauddin, 2021; Emari, Vazifehdoust, & Nikoomaram, 2017; Hope & Jones, 2014; Ayten & Hussain, 2017). The spiritual approach can shape students' ecological character. The integration of *Tawhid* elements in environmental education is an important effort to change paradigms, ethics, spirituality, attitudes, and behavior toward environmental conservation (Abd Rahman et al., 2020).

After hearing about Islamic eco-theology, I think it is important to integrate it into the curriculum of IRCE because IRCE aims to form students who are pious and have a character that is not only becoming good relations with God and fellow human beings but also maintaining good relations with nature. The learning of IRCE must be contextualized into raising issues related to environmental conservation (P2).

The IRCE is an ideal form of education to support environmental education and religious values to significantly contribute to increasing knowledge capacity and understanding and environmental care behavior in students (Jumardin La Fua et al.,

2018; Meer, 2016). For this reason, integrating environmental education into the IRCE curriculum is crucial to realizing religious students' spirit, having good morals, and caring about the environment.

#### 4. Integrating Islamic Eco-theology into IRCE's Curriculum

It is essential to include the teachings of Islamic eco-theology in the IRCE curriculum in Indonesia, due to its lack of environmental education content. Various studies have stated the great potential of Islamic eco-theology in developing the character of caring for the environment in society. Based on interviews with several IRCE teachers in Semarang, they also really hope that in the future, Islamic eco-theology can be included in the IRCE curriculum in Indonesia.

"Currently, environmental issues are very important to be taught to students. Humans are the *khalifah fil ardh*. Therefore, students must be taught how to be responsible for preserving the natural environment. Students must be part of the solution in solving various environmental degradation problems" (P2).

"Islamic eco-theology is very important to be taught to students because Islam is a religion that is *Rahmatan lil 'Alamiin*. It is not only interpreted as love for a fellow human but also affection for the natural environment (P4)."

"Islamic eco-theology must be taught because Islam is not only obligated to maintain human relations with Allah (*Hablun Min Allah*) and human relations (*Hablun Min An Naas*) but is also obliged to organize human relations with nature (*Hablun Min Al 'Alam*) (P5)."

Due to the lack of cognitive domain in the IRCE syllabus in the 2013 curriculum, the teachers hope that Islamic eco-theology can be included in the future curriculum. However, if it cannot be realized, they hope that the contents of Islamic eco-theology can collaborate with IRCE materials arranged in the 2013 curriculum syllabus. Materials related to moral aspects can be an alternative to collaborating with Islamic eco-theology, for example, materials on obeying the rules, being responsible, avoiding acts of violence, and others.

"I hope Islamic eco-theology has included in the IRCE curriculum. at least there should be Basic Competence (KD), sub-materials, or materials that discuss Islamic eco-theology on the aspek of cognitive" (P2).

"I think that Islamic eco-theology can collaborate with IRCE material. It is also possible that IRCE can collaborate with other subject matter through a thematic learning approach so that IRCE discussions can be more contextual on environmental issues" (P4).

Based on the results of the syllabus analysis in the Regulation of Minister of Education and Culture Number 37 of 2018 and theoretical studies on Islamic eco-

theology, as well as discussions with informants who deeply understand IRCE learning practices in schools, several basic competencies can be selected, developed, and integrated with Islamic eco-theology content. These basic competencies can be seen in table 2.

Table 2. Basic Competencies (KD) that can be integrated with Islamic eco-theology

Basic Competencies	Material	Islamic Eco-theology Aspects
Grade 10		
3.3	Analyzing the meaning of <i>al-Asma'u al-Husna: al-Karim, al-Mu'min, al-Wakil, al-Matin, al-Jami', al-'Adl, and al-Akhir</i>	<p>The Principles of <i>Tawhid, Khalq (Fitrah)</i>, and <i>Mizan</i></p> <p>The universe and everything in it is God's creation and is proof of God's greatness.</p> <p>The universe created by Allah has the potential for goodness and benefits.</p> <p>Allah created the universe in a balanced condition, and Allah is the most guarded, secure, preserved, and perfect power.</p> <p>These materials can be linked to environmental education</p>
3.7	Analyzing the passion of studying, applying, and conveying it to others.	<p>Seeking knowledge can be associated with the principle of <i>Khalaq (Fitrah)</i></p> <p>The sign of a knowledgeable person can explore the knowledge behind the creation of the universe. And those who understand the creation of the universe will be wise in protecting the environment</p> <p>Analyzing the passion of studying, applying, and conveying it to others.</p>
Grade 11		
3.1	Analyzing the meaning of Q.S. al-Maidah/5: 48; Q.S. an-Nisa/4:59, and Q.S. at-Taubah/9: 105, as well as Hadith about obeying the	Rule-abiding and responsible behavior can be linked to the <i>Khalifa-Amanah</i> principle.

	rules, competition in goodness, and work ethic	<p>Humans are leaders on earth who are responsible for protecting the natural environment.</p> <p>One form of obeying the rules is Islamic law, including the prohibition against destroying nature.</p> <p>Because it is a sin and has been discussed in the <i>Maqashid Syar'iyah</i>.</p>
Grade 12		
3.2	Analyzing and evaluating the meaning of Q.S. Luqman/31:13-14 and Q.S. al-Baqarah/2: 83, as well as Hadith about the obligation to worship and be grateful to Allah and do good to fellow human beings	<p>One form of gratitude to God is preserving the environment because it is a source of fortune and life for humans. This is relevant to the principle of <i>Khalaq (Fitrah)</i> in eco-theology.</p> <p>Humans are also required to worship God and do good to humans and have to do good to the natural environment. This is still missing to be discussed. At the same time, there should be <i>hablun minallah, hablun minannas, and hablun minal 'alam</i>.</p>
3.3	Analyzing and evaluating hard-working and responsible behavior in everyday life that develops in Society	<p>Being responsible is one form of practice of the <i>Khalifah-Amanah</i> ecotheological principle.</p> <p>This means that one form of human responsibility is to preserve the natural environment because humans are caliphs on earth.</p>

Integrating the content of Islamic eco-theology into the Basic Competency aspect of knowledge is important so that teachers can more easily implement it in the learning process to ensure the formation of students' social and spiritual attitudes. Bulkeley emphasized that knowledge and conceptions about the environment will have an impact on someone's environmental concerns. Also, the integration of rational and emotional aspects will impact increasing self-awareness, social awareness, and environmental awareness to stimulate environmental care behavior at the individual, social, and political levels (Bulkeley, 2000). The construction of knowledge is very important to know the consequences, and be more aware and will care more about his

behavior. The starting point for caring for the environment is environmental sensitivity and knowledge of ecology (Jeronen et al., 2009).

In fact, eco-theology can be integrated into the ICRE curriculum from elementary school to junior high school, but at this level, it is more effective to focus on the affective domain. Whereas at senior high school, it is necessary to strengthen eco-theology through the cognitive domain. Jeronen, Jeronen, & Rausita stated that environmental education at the basic education level prioritized affective aspects, and at the senior secondary education level prioritized knowledge and critical thinking (Jeronen et al., 2009). Elementary School as the foundation of formal education must develop the three competencies of students (knowledge, attitudes, and skills), however, the emphasis is on developing attitudinal or character competencies that are integrated into every subject learned. Environmental education at a young age better emphasizes affective aspects to increase children's bonds with nature at the emotional level (Gurevitz, 2010; Jeronen et al., 2010).

## Discussions

Environmental education that undergoing so far is still not successful which is indicated by environmental degradation (Parker & Prabawa-Sear, 2020), deforestation (Hadi et al., 2018; Syahza et al., 2021), greenhouse gases (World Bank, 2020), plastic pollutants (Wright, 2017). The unfortunate environmental education is partly caused by ideological and paradigm factors. The basis of thinking and values of Indonesian society in carrying out environmental education is currently more influenced by anthropocentric ideology and capitalist materialism (Efendi et al., 2017b, 2017a). It needs enforcement to harmonize environmental education with teo-antropocentric ideology and religious-spiritualism to make balanced and equal individuals (Bensaid, 2018; Rusmadi, 2016; Thathong, 2012).

In case of Indonesian school in which IRCE curriculum has loaded environmental education that focused on spiritual and social dimension and minimal in cognitive dimension (Wakhidah & Erman, 2022), eco-theology also has been minimally understood by school communities (Cholil & Parker, 2021), and realities show that environment damages occur in the Indonesia (Hadi et al., 2018; Parker & Prabawa-Sear, 2020; Syahza et al., 2021; World Bank, 2020; Wright, 2017), it indicates that environmental education has not been succeeded yet in Indonesia. In light with this paradigmatic, it is time to realize the existence of Islamic Religious and Character Education (IRCE) through the integration Islamic eco-theology into IRCE.

Islamic eco-theology is very important to be included in the IRCE curriculum as a material formulated in Basic Competence (KD) explicitly as in the 2006 curriculum or in collaboration with other relevant materials on the cognitive domain, in spit of



formulation in the Core Competence (KI) (Wakhidah & Erman, 2022). Various approaches such as infusion or insertion, thematic, and others are very crucial to be developed in environmental education as an assertion in the integrative approach (Afandi, 2013; Haris & Afdaliah, 2016; Rezkita & Wardani, 2018), so that students have an appropriate understanding on the environment in light of religion to strengthen their attitude (Lickona, 2009; Trafimow et al., 2004), care about environment, and have actual actions to protect it (Omoogun et al., 2016). Environmental sensitivity and knowledge of ecology is basis for caring the environment (Jeronen et al., 2009).

Integrating Islamic eco-theology into the IRCE curriculum is a very important step to instill environmental values. Hancock (Hancock, 2020) argues that the integration of religious values, such as *Tawhid*, *Khalifah*, and *Mizan* with science, will effectively increase real action and participation of Muslim communities in environmental education. It is also a concrete step to revitalizing Islamic religious values in environmental education, and developing ecological and spiritual practices that prevent the occurrence of the environment (Asmanto, 2015). There are five crucial principles in the implementation of IRCE: (1) the principle of integration (balancing between life in this world and the hereafter), (2) the principle of balance (balance between physical and spiritual, between pure and applied science, theory and practice, and between *Aqeedah*, *shari'a*, and morals), (3) the principle of equality and liberation (human equality before God because everything was created by God so that humans must be free from ignorance, poverty, and lust), (4) the principle of sustainability (education must last throughout life to form human awareness about himself, his environment, and God), and (5) the principle of benefit (the value of monotheism can only be felt if it has been manifested in every activity of human life to achieve the benefits and advantages of nature).

The integration of Islamic-based environmental education in the IRCE curriculum is also in line with Haddad's framework of Islamic environmental education (Haddad, 2006). In his framework, Haddad described Islamic environmental education as a balanced tripod structure where the head (essentially) is God. Then, below it is three tripod legs: knowledge or understanding, manifestation, and faith or belief. The tripod's three legs have attributes consisting of advice or guidance, healing and recovery, and guidance and mercy. This is relevant to IRCE which aims to improve students' knowledge through theory, develop student attitudes through religious advice and orders, and strengthen student behavior through direct practice in real life (Rohman, 2012).

Furthermore, several studies discuss the efforts to integrate monotheism or other aspects of Islam into environmental education, such as science and geography subjects (Abd Rahman et al., 2020; Suasti et al., 2018). Some studies discuss the integration of environmental education in Islamic education in Islamic boarding schools (Albab, 2018; Aulia et al., 2017; Bahri, 2018; Efendi et al., 2017b; Herdiansyah et al., 2016; Kurniawan & Syifauddin, 2021; Jumarddin La Fua, 2013; Jumardin La Fua et al., 2018; Mardhiah et al., 2017; Nisa & Islamiyah, 2019). However, few still discuss the integration of environmental education components in IRCE subjects in schools, for instance, IRCE teachers instill the character of caring for the environment through giving good

examples (*uswah hasanah*) and good speech (*mauidzoh hasanah*) in Islamic activities such as showing videos and recitations of the Qur'an. But IRCE teachers have not integrated environmental education into the Islamic religious learning curriculum in the classroom (Abd Rahman et al., 2020).

Although Zabidi, Rahman, & Halim (Zabidi et al., 2021) argue that science is more closely related to the environmental field than IRCE, but they also show that textbooks on science and Islamic religion in Malaysia have included integrating Islamic values into environmental education. Further, the Islamic religious education textbooks in Malaysia also do not contain a particular chapter that discusses the concept of environmental education. This is in line with the lack of discussion of environmental education in Indonesia's IRCE curriculum. For this reason, the integration of Islamic values in the IRCE curriculum is a very strategic way to realize through preparing textbooks.

In addition, the collaboration between Islamic education, science, and environmental education will facilitate the integration of elements of monotheism in realizing environmental education that focuses on combining moral values and skills to solve various environmental problems (Djainudin & Sirait, 2016). The collaboration between environmental values in IRCE addresses the complexity of environmental issues that require involvement in various fields of study (Haris & Afdaliah, 2016; Wakhidah & Erman, 2022). Producing human resources who love and care about the environment is not adequate only an emphasis on the cognitive aspect, but also focuses on developing the *ruh*, the *aql*, the *qalb*, the *nafs*, and the *jasad* (Rahman et al., 2019). Science teachers must collaborate with IRCE teachers in planning environment-based learning so that students can internalize Islamic values related to environmental conservation.

## Conclusion

This study only analyzed the content of Islamic eco-theology in the IRCE curriculum with a literature study approach. Case studies in the field were also limited to interviews with five teachers in Semarang. Therefore, the portrait of the research result has not shown implementation yet on a broad regional scale. The study was also only carried out in the urban area of Semarang City, so it did not describe the research topic in rural areas or remote areas. In light of this, further research is expected to analyze Islamic eco-theology more deeply and involve more research subjects, including teachers, government, and students at a broader regional level. Further research is also expected to develop learning tools that can support the integration of Islamic eco-theology into the Islamic Religious and Character Education (IRCE) curriculum.

Environmental education (EE) has become a crucial topic amidst the environmental degradation. The lack of EE implementation is partly caused by ideological and paradigm factors. The basis of thinking and values of society in carrying out EE is currently more influenced by anthropocentric ideology and capitalist materialism, so it needs enforcement to harmonize EE with teo-antropocentric ideology

and religious-spiritualism in order to make a balanced paradigm and ideology. Therefore, it is time to realize the existence of religious eco-theology to be integrated into the subject matter in the school, accordingly Islamic Religious and Character Education (IRCE) in Indonesia.

However, the integration of EE in the IRCE curriculum is more dominated on affective dimension (spiritual and social) and minimal in the cognitive dimension. It implies to the implementation of EE in the teaching and learning process. It needs providing the cognitive dimension appropriately to make the learning process easier and enhance awareness and caring attitude about environment or ecology. Integrating Islamic eco-theology proportionally in affective, cognitive and psychomotor into the IRCE curriculum is account to strengthen the attitude, caring, sensitivity and knowledge of ecology. The study offers several relevant materials of Islamic eco-theology to be integrated into IRCE curriculum. The study also recommends that the curriculum developers at the national level should include materials on Islamic eco-theology in the IRCE curriculum in the future to support the integration, teaching material, learning media, and other relevant learning tools needed for successful implementation.

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