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## INTEGRATING ISLAMIC ENVIRONMENTAL ETHICS INTO BASIC EDUCATION CURRICULA IN THE GAMBIA FOR A SUSTAINABLE ENVIRONMENT

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### Abstract

This paper explores integrating Islamic environmental ethics into the curriculum of basic education in the Gambia for a sustainable environment. In this paper, we adopted a qualitative approach to collect data through interviews with ten selected participants from 6 different regions in the Gambia. Our selection of participants was done purposively as we selected individuals who are well-versed in the subject matter. Our findings show that integrating Islamic environmental ethics into the basic education curriculum in The Gambia will not only have a long-term solution to the national environmental issues but rather will also breed a generation that will care for and love their environment, hence the country will have a sustainable ecosystem. However, this paper, therefore, recommends that the Ministry of Basic and Secondary Education to work with Islamic scholars in collaboration with the Ministry of Environment to develop a curriculum that will integrate Islamic environmental ethics in schools in The Gambia.

**Keywords:** integration; Islamic environmental ethics; curriculum; basic education; Gambia

### Abstrak

Artikel ini mengeksplorasi integrasi etika lingkungan Islam ke dalam kurikulum pendidikan dasar di Gambia untuk menciptakan lingkungan yang berkelanjutan. Penelitian ini menggunakan pendekatan kualitatif dengan mengumpulkan data melalui wawancara terhadap sepuluh peserta yang dipilih dari enam wilayah berbeda di Gambia. Pemilihan peserta dilakukan secara purposif dengan memilih individu yang memiliki pengetahuan mendalam tentang topik ini. Temuan kami menunjukkan bahwa mengintegrasikan etika lingkungan Islam ke dalam kurikulum pendidikan dasar di Gambia tidak hanya akan memberikan solusi jangka panjang terhadap masalah lingkungan nasional, tetapi juga akan melahirkan generasi yang peduli dan mencintai lingkungan mereka. Sehingga, negara ini akan memiliki ekosistem yang berkelanjutan. Oleh karena itu, artikel ini merekomendasikan Kementerian Pendidikan Dasar dan Menengah untuk bekerja sama dengan para cendekiawan Islam serta berkolaborasi dengan Kementerian Lingkungan Hidup untuk mengembangkan kurikulum yang mengintegrasikan etika lingkungan Islam di sekolah-sekolah di Gambia.

**Kata kunci:** integrasi; etika lingkungan Islam; kurikulum; pendidikan dasar; Gambia

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## Introduction

Islamic environmental ethics offers a promising educational framework for addressing global environmental challenges through its holistic approach that combines spiritual values with environmental stewardship. This faith-based educational paradigm emphasizes the harmony between nature and humanity while promoting concepts such as Tawheed (the oneness of Allah), moderation, and human responsibility as environmental custodians (Majeri Mangunjaya, 2011). The integration of these principles into educational curricula presents a unique opportunity to foster environmental consciousness while leveraging existing religious and cultural frameworks.

Global environmental challenges have reached critical levels, manifesting in climate change, biodiversity loss, and ecosystem degradation (Abdelzaher & Abdelzaher, 2017) (Abdelzaher et al., 2019; Analysis, 2022). The Gambia, in particular, faces severe environmental threats, with data showing a 1.0-degree Celsius increase in average temperature over the past sixty years (IMF, 2023). The country's geographical vulnerability has led to multiple environmental challenges, including sea-level rise in the capital city, saltwater intrusion, declining rainfall patterns, and deforestation (NDC Partnership, 2022). These challenges necessitate innovative educational approaches that can effectively promote environmental awareness and action.

Conventional environmental education approaches, primarily based on scientific and technological frameworks, have shown limited success in creating lasting behavioural change. This view is in fact noted by Moyer & Scharper's (2019) studies, claiming that there is growing recognition that scientific, political, and technological mechanisms alone have proven insufficient in addressing global environmental challenges (Moyer & Scharper, 2019). This gap highlights the need for alternative approaches that can connect with people's deeper values and beliefs.

The integration of Islamic environmental ethics into education offers a particularly promising solution for The Gambia, where 95% of the population identifies as Muslim. Islamic education, despite being marginalized during colonial times, has been vital for moral and spiritual development in the country (UNESCO, 2014). This research focuses on the underexplored area of Islamic environmental ethics in The Gambia's educational context, offering a valuable contribution to both local and global discussions on environmental education.

This study put a shed on how religious and cultural frameworks can significantly impact environmental behaviour, based on Ecological Systems Theory, which focuses on the connection between individuals and their environments. As Herdiansyah et al. (2016) and Thohri (2024) argue, environmental challenges could find more sustainable solutions through the integration of Islamic environmental preservation ethics with contemporary educational approaches (Herdiansyah et al., 2016; Thohri, 2024a).

This study seeks to investigate how Islamic environmental ethics can address environmental challenges in The Gambia by incorporating it into the basic education curriculum. It focuses on two key questions: (1) How does faith-based environmental education influence children's environmental awareness? (2) What potential does Islamic environmental ethics have for addressing national environmental challenges?

Specifically, this study right onset aims to explore the potential of Islamic environmental ethics as an innovative solution to environmental challenges in The Gambia through its integration into the basic education curriculum.

The findings of this research have practical implications. As The Gambia pursues its 2050 climate vision and commitments under the Paris Agreement (IMF, 2023), the result of this study can guide education policy and practices to develop environmentally conscious citizens who see environmental stewardship as both a religious and civic responsibility, aligning with global sustainability goals (SDGs 6, 7, 13, 14, 15) while offering a culturally relevant framework for environmental education in The Gambia.

## Method

This research utilized a qualitative approach to explore the integration of Islamic environmental ethics into basic education curricula in The Gambia. The interpretive paradigm was used, emphasizing that reality is shaped by individuals and requires interpretation. Henning et al (2004), posits that human emotions, feelings and values cannot be measured, since they are latent, but must be understood from their expression. Hence the idea of interpretive paradigm. Creswell defines qualitative research as multi-approach, where researchers explore the perspectives of individuals and how these perspectives are dictated by the social and cultural context within which they occur. To simplify this statement, we can say that the qualitative approach is the method of enquiry that seeks to have a deeper understanding of phenomena, interprets the participant's experiences, and understands their behaviours and actions within a cultural and social context (J. W. Creswell, 2009).

The rationale for choosing a case study approach for this study is a society as a social setting can be studied through interaction. Researchers in social sciences believe that a case study is crucial for studying research participants or groups of people as a whole ((Ebneyamini & Sadeghi Moghadam, 2018). This approach was useful for the researchers to study individuals and groups of people as we sought to understand the perspectives of research participants.

The study adopted a purposive participant selection method to select research participants. Johnson (2020) describes purposive sampling as a method of selecting research participants based on specific criteria. This method allows the researcher to carefully select research participants that he feels are the most suitable for the study and can better provide answers to the research question rather than someone who knows nothing about the research subject. This is not only convenient to the researchers, but it also gives the researcher more substance as it will deal with participants with accurate information about the research subject. The researchers purposely selected research participants from the 6 regions of the Gambia to make the findings representative. The criteria for selection were based on the participant's understanding of Islamic environmental ethics, understanding of the current environmental challenges, environmental education and environmental advocates. As a social phenomenon, the selection criteria were diverse to have insights from all the sectors of the society; from education, where teachers and education policymakers are selected, to religious leaders, parents, and civil society organizations.

Furthermore, the researchers collected data for this study using semi-structured interviews with 2 teachers, 2 parents, 2 climate activists, 2 religious leaders, and 2 people from civil society organisations.

This study employed a thematic data analysis to analyse the qualitative data collected through interviews. The following stages were involved:

The first stage was the transcribing of the recorded audio from the interview. This was done to ensure accuracy in the representation of the participants' views regarding the research questions. After transcribing all the interviews, the researchers manually provided codes from the transcription to identify key themes and patterns that are related to the integration of Islamic environmental ethics into the curricula of basic education. This was followed by organizing the themes into categories to facilitate a comprehensive understanding of the stakeholder perspective

To observe the ethical considerations in this research, the researchers obtained approval from all the research participants before conducting the interview. Research participants were informed of their rights, including the voluntary nature of their participation and the confidentiality of their responses. The purpose of the research was clearly explained to the research participants and how the data obtained from the research will be used. Moreover, the research participants were informed that they were free to withdraw from the research any time they felt uncomfortable to continue.

Table 1. Descriptive statistics of principals' demographics (n =10).

Demographics	Frequency	Per cent
Gender		
Male	6	60
Female	4	40
Age		
25 – 40 years	3	30
41 – 50 years	5	50
51 – 55 years	2	20
more than 55 years	0	0
Region		
Urban	3	30
Rural	7	70
Educational Qualification		
Undergraduate	3	30
Master's	2	20
Doctorate	1	10
None	4	40

## Results and Discussion

### Brief Overview of the Education System in the Gambia.

The Gambia as a British colony, still used the colonial education system. The country's education system is divided into two: basic and secondary education, which is controlled and managed by the Ministry of Basic and Secondary Education (MoBSE) and Tertiary education, which is controlled and managed by the Ministry of Higher Education Research Science and Technology (MoHERST). Basic education in The Gambia has three stages: preschool (4 years to 7 years), primary education (7 years to 12 years), secondary education (12 years to 15 years), and senior secondary education (15 years to 18 years). As a Muslim-dominated country with about 95% of its citizens as Muslims, the Gambia have both secular and Islamic education. The citizens can choose which education to acquire, be it secular or Islamic education. Moreover, the education system of the Gambia of recent has seen the integration of Madrassas education into the national education system in which, AMANA, a secretariat responsible for Islamic education, is being given the responsibility to steer the affairs of Islamic education. However, this

integration came with policy guidelines where all the Madrassas would have to change their curriculum to meet the global standard. This integration aims to transform the national education landscape to allow the students in the Madrassas to equally benefit from the national cake, hence it is a constitutional obligation for all the Gambians to be schooled, regardless of their religion.

The significance of this study lies not only in its potential to enhance environmental education in the Gambia but also in its broader implications for educational activities in similar contexts worldwide. By identifying ways for integrating faith-based environmental ethics into the educational curriculum of basic education, this study could serve as a model for many neighbouring West African countries that are predominantly Muslim countries seeking to align their educational curriculum with the target laid down by sustainable development goals. In addition, the findings from this study may contribute to the global discussion on environmental education and highlight the role of religious teaching as a potential solution for environmental protection and sustainability.

### **Overview of Environmental Ethics in Islamic teachings.**

According to (Gulzar et al., 2021), Environmental ethics in Islam are not a mere principle but a commandment from our creator. He argues that as Muslims, we know that God (Allah) is the creator of the universe and has given mankind guidelines on how to interact with the environment. Scholars used different verses from the Qur'an to explain environmental ethics. Gulzar et al (2021), used verse (41:53) of the Qur'an, where Allah says that man is created from the earth's and water's components. This verse emphasises the connection between man and the environment. In addition, the Hadith of the prophet (SWT) was quoted saying "The earth was created by God for worship for me and my ummahs" This Hadith can be used as a point of reference for the Islamic view of the environment and therefore every Muslim holds a moral obligation to preserve and protect the environment.

Rizk (2014) conducted research to elaborate on the Islamic environmental ethic and discuss the key Islamic principles that are relevant to environmental ethics in Islam. This study concludes that the approaches of Islam to the environment are holistic and unequivocal, highlighting that the Qur'anic verses that talked about nature and natural phenomena outnumbered the commandments. Therefore, man's activities on the environment should be moderate and not to be extravagant. Moreover, this study further concluded that the destruction of the environment by man is a result of unawareness of the "Shari'ah".

Seyyed Hossein Nasr, a distinguished Islamic scholar has discussed the source of environmental ethics in Islam to link it to the current phenomenon the world is faced with. He was believed to be the leader of the Islamic environmental movement. In his famous book "Man and Nature: The Spiritual Crisis of Modern Man (1967), He argues that Islam has a solution to the world crisis. He believes that had the world not neglected Islamic knowledge, it would have avoided some of the current crises. For the world to have a solution to the global environmental problems, we focus on rediscovery and reconnection with super natural beings and religious teachings in the manner we handle the limited natural world that has been lost with the emergence of the world free from values and morality(Thohri, 2024).

The relationship between religious teaching and environmental protection is a growing concern for many management scholars in environment and climate change. This has led to a shift of focus to seek answers to environmental protection since modern science has failed to provide a suitable answer to what the world is faced with concerning environmental problems. While the use of religious teaching on

Islamic environmental ethics is very essential, scholars in the field of environment believe that it will be important to consider countries that are Muslim-dominated before trying to examine the applicability of the teaching.

The source of the idea of the concept of Islamic environmental ethics is the (Tawheed), the belief in the unity of one God (Gada, 2014; Gulzar et al., 2021; R. Rizk, 2014). The principles of tawheed create a link between the infinite and perfect being and the finite and imperfect world and reflect on humankind's relationship with their God and his creation. The philosophy behind the idea of Islamic environmental ethics has its source in the Qurnic verse: "Allah is the heritage of the heaven and the earth" (35:1) and verse (4:126). In Islam, God is believed to be the source and owner of all the earthy creations and all creations are interconnected through an individual's submission to his lord (Allah), fulfilling their worship.

Other studies conducted by researchers including (Fua et al., 2018; Haywood, 1980), argued that one of the most powerful strengths of Islam lies in its rooted belief in the spiritual being and his guidance while seeking his support in building a harmonious society which can be a sanctuary for all living things. By believing in Allah (God in Islam), man will be obliged to take care of his environment as it is believed to be a creation of Allah and thus taking care of the creation of Allah is an act of ibada (worship).

The Shari'ah, which is the source of Islamic ethics, has four main sources: the Qur'an, which communicates the words of Allah (the lord), the Sunnah, the deed and practice of the Muhammed (PBUH), Islamic law, which explains the rules and regulations guiding the Muslim ummah, and an individual's conscience when the rulings have not been clarified by the first three sources mentioned above (Lubis, 2000). Moreover, the interpretations of jurisprudence (ijtihad) and deduction by analogy (qiyas) are other mechanisms that are recommended to offer the necessary flexibility to address the dynamic needs of the changing societies Williams and Zinkin, 2010).

Furthermore, another essential concept in Islam that emphasises Islamic environmental ethics is the concept of "balance-equilibrium". Hofman (2008), explained the concept of balance-equilibrium to relate it to environmental preservation. The concept of equilibrium, which stems from Tawheed, underscored the need for balance in nature, with all the creation of Allah to be in balance, since it is created in a measured way. This is evidence from the Qur'anic verse (54:49) *Verily, all things have We created in proportion and measure*. This interpretation further elaborates that human interaction with the environment requires the maintenance of a balance, meaning whatever Is created by Allah and is measured therefore man has to make a limit in balance in terms of consumption (Hobson, 1998, p. 41 as cited in Lubis, 2000). Beekun & Badawi (2005), argued that the concept of balance-equilibrium concerning environmental protection and preservation would mean every Muslim to accept the commandments of Allah and exercise the balance in the consumption pattern of the natural resources.

To further discuss the view of Islam on the environmental preservation and protection of sustainable eco-forests, we discuss the concept of "Trust and Responsibility" which stems from the recognition that accompanies self-consciousness. This concept describes man as a responsible being for taking care of the earth as the delegated power on the behaviour of Allah. This simply means that the earth is in the custody of man, who has the sovereign power to protect the creation of Allah, which includes the environment. This is the baseline from which all Muslims are expected to take reference in terms of respecting and protecting the ecosystem from all forms of exploitation. In all situations, it is the responsibility of all Muslims to act within the limit of their understanding (ijtihad).

The guardianship of the planet was explained in the Qur'an in verse (33:72, 5:120, 2:107, and 24:42), to shed more light on how and why the custodian of the earth is, which includes the environment." The Qur'an tells of an offer of global trusteeship that was presented by God to the Heavens, the Earth, and the Mountains (Quran 33:72), who refused to shoulder the responsibility out of fear. Humankind seized the opportunity and bore the "Amana" (trust), but were "unjust and very ignorant" but were guided by God through mercy in bearing the responsibility of the Amana. The Qur'an, however, is clear that Allah is the ultimate holder of dominion over creation (e.g., 2:107, 5:120), and that all things return to Him (24:42) and are thus accountable to each in their ways". (Hofman 2008). In Islam, it is believed that Adam, the first human to have descended on this earth, and as a prophet was appointed as the "Kalipha or a guardian of the planet Earth. A "Kalipha in Islam, means a person who inherits a trust, making it responsibly bidding and in harmony with the giver of the trust.

Therefore, all the children of Adam inherit this responsibility of guardianship of the planet Earth and the trust must not be violated. Meaning man must make a conscious and balanced use of all-natural resources to avoid the trust given to them by Allah. This was depicted in the Qur'anic verse (2:30), "And lo! Your Sustainer said to the angels: Behold, I am about to establish upon earth a khalifa. They said: Will you place on it such as will spread corruption and shed blood whereas it is we who extol your limitless glory, and praise you, and hallow thy name? Allah answered: Verily, I know that which you do not know". Verse (17:70) of the Qur'an states: "We have honoured the children of Adam and carried them on land and sea, and provided them with good things, and preferred them greatly over many of those we created"

Naqvi, (1981) cited in Hofman (2008), posited that "Truth is to be found in growing into an understanding of the teachings and practice of Islam, and the power of al Aql (the intellect) via the application of reason is the path prescribed for that growth. The rational, knowing part of the soul links man to Allah; the truth of this link is what forms the being of humans".

Moving on, the Islamic teaching on free will is to guide the Muslims on their roles and responsibilities on the earth as enshrined in the shari'ah. This explained that:

"The Islamic understanding of free will concerns the power to act. Such a conception of free will is conditioned by the recognition that each person has a limit, so a person's power to act is limited by that person's capacity. The personal limitations of each human being are that person's manifest destiny. The individual human task is to seek to achieve this upper limit. The doctrine of human responsibility is formulated in terms of power, not of freedom; it is the capability to do, not freedom to choose; it is of capacity to do what is required, not the freedom to decide for oneself what is desirable or right, as that is already known in the Qur'an and conventional understandings of Shar'iah law. Individual responsibility is determined according to how far one can move along a predestined path."

This guiding principle in Islam, emphasises the core Islamic model upon which all Muslims are obliged to follow and has many implications for the corporate behaviour of all Muslims. It is, therefore, imperative for all Muslims to act within the limits of these principles and harmonise their existence with all the creations on the earth. However, the Qur'an also emphasise moderation in whatever Man does on the earth. Verse (25:63) reads:

“For, the true servants of the Most Gracious are they who ... whenever they spend are neither wasteful nor niggardly, but remember that there is always a just mean between these two extremes” (25:63). “And We have willed you to be a community of the middle path”

In the saying and practice of the prophet Muhammed (PBUH) on the issues of moderation in the hadith:” *Practice moderation, and if you can't practice it perfectly, then strive towards it as far as possible*”. This means that all Muslims should act in accordance with the spirit of moderation, from the consumption and production, and the way we use natural resources. It is without a doubt that the principles of moderation should be the baseline of all the behaviours of Humans as a framework for obtaining spiritual guidance and understanding if there can be any sustainable development because without moderation, there will be no limit to wasteful, and extravagance conducts of man on this earth(Ahmad, 2015).

Schools are environment, which offers spiritual teaching and are seen as potential institutions that can produce students or children who govern the relationship between humans and the environment as well as being the agents for the protection and preservation of the natural ecosystem, which has faced a catastrophic extinction over the past century(Fua, Umi, et al., 2018). The introduction of Islamic environmental ethics in the school curriculum will provide an empirical learning experience that enhances the knowledge and awareness of the learners on how to manage their environment(Fua, Umi, et al., 2018; Mangunjaya, 2011). Scholars like Al Nasr believe that this will build harmony between man and nature since religious education is seen as the potential tool to mitigate environmental destruction, hence, it has guiding principles that govern all Muslims on how an environment should be managed.

Environmental education (EE) is useful and beneficial at an early age for children (Walsh-Daneshmandi & MacLachlan, 2006). This will create more spiritual awareness in the children on how to protect and preserve their environment. Therefore, this study focuses on the basic education of the Gambia, which schools the age limit of children from 7 to 12 years. The conceptual learning of environmental awareness will be very essential and unique for the teenage level from the philosophical perspective and based on psychological theories of human development, which argue that children learn and acquire knowledge faster at a teenage(Walsh-Daneshmandi & MacLachlan, 2006).

It is argued that ideas, including religious ones, are more likely to spread if they are intuitive and supported by evolved human intuitions (Nakissa, 2021). Hence this article suggests the idea of integrating Islamic environmental ethics into the school curriculum in countries that are Muslim-dominated will go a long way towards mitigating the global environmental crisis. Moreover, the question of what the Muslim ummah could do to solve the global environmental problems has prompted many Islamic scholars in the Gambia to add their voices to the call for environmental protection from a man because the environment as creation was entrusted in the hand of man by Allah, thus it is the responsibility of man to respect the trust and avoid breaching the trust. According to Mangunjaya, (2011), most of the Muslim countries that are described as the least developed by the United Nations (UN), are very rich in mineral resources. Therefore, there is a need for Muslims to be aware of their responsibilities on how to consume and preserve the environment.

The Gambia is a Muslim-dominated country with a population of about 2.3 million out of a total population of 2.5 million. It will be very useful if the school curriculum contains the environmental ethics of Islam because it will create an understanding of environmental awareness in the students, which could catalyze providing a solution to the environmental problems in the Gambia (Mangunjaya, 2011).



Internationally, the importance of religious education on environmental protection is seen as very critical, because religious teaching can uplift an individual's spiritual alignment with the environment.

Research conducted by Thohri (2024), expressed that education as a transformative tool can be used to solve many predicaments man faces on this earth. He argued that introducing Islamic environmental ethics in the curriculum of elementary schools will provide a sustainable solution to the current environmental problems. Islamic education will not only hone the understanding of the younger generation on environmental protection, but it will also prepare them to be change agents who will care for the future of our planet(Thohri, 2024).

Sonbul & Celick, 2023, researched how to develop a curriculum for building a religious-conscious approach to environmental protection in the school curriculum in Pasantrans in Indonesia. The research discusses the systematic approaches needed to develop a curriculum that will integrate the environmental ethics of Islam. The following processes were proposed: the first to identify the educational objective of the curriculum, the second is to design the curriculum based on the individual needs and developmental stages of students from different educational levels, and the third is to establish how the environmental ethics be integrated into the school curriculum in the basic education in the Gambia, the fourth is to identify the methods for teaching this curriculum, the fifth is the social and cultural context, sixth is the assessment and measurement methods, and the seventh is the stakeholder involvement.

### **Micro and Macro Approaches to Environmental Education**

The current environmental problem has necessitated urgent environmental education. many scholars in education and also experts in the field of environment believe that faith-based environmental education has the power to change the narratives on environmental management. This paper surely uses Islamic environmental ethics in the school curriculum. It will be important to understand the micro and macro approaches in education for one to have a better understanding of how it could be integrated into the curriculum. however, based on the limitation of this paper, the study will focus only on the micro approaches in environmental education. the micro approach to environmental education focuses on how to seek solutions to environmental problems within the social actors (both individuals and community level) with the view that a change can start from within the societal level(Phillips, 2008). In the micro-environmental approach to education, the aim is to change how the social actors relate to the environment. This is done from within the culture and social structures that they inhabit as people. Hence, it is environmental education in the spirit of societal cultures and norms.

### **Curriculum Development Guidelines**

The aim is this study is to explore the potential benefits of integrating Islamic environmental ethics into the curriculum of basic education in the Gambia. Based on that, the study aims to contribute to the development of a new curriculum which will include Islamic environmental ethics from the elementary level to the secondary level. This integration will not only enhance the understanding of the children on the importance of environmental protection but will also prepare them to be ambassadors of environmental conservation since Islamic education deals with the spiritual development of the children. By integrating Islamic ethics into the curriculum, the researcher believes that it will set a foundation for a comprehensive understanding of our rules and responsibilities as Muslims towards our environment (Rastogi et al,2021, cited in Thohri, 2024).

The development of a curriculum which will include Islamic environmental ethics will be a monumental achievement for the Ministry of Basic and Secondary Education of the Gambia for the fact that it will prepare the generation of the Gambian children to champion environmental protection. However, to develop a curriculum we need to carefully consider many factors before developing a curriculum. Ralph Tyler, one of the pioneers of the idea of curriculum believes that curriculum should be prepared to address the needs and aspirations of the people who would use that curriculum. therefore, the curriculum should be carefully designed to fulfil the various educational needs of the students from elementary to secondary school in the Gambia and consider the crucial role of religion in developing individual character, values, and ethics(Thohri, 2024b). This paper will suggest the following stages to be followed in developing a curriculum:

The first stage is explicitly identifying the educational objective: at this stage, it should begin with identifying the objectives of teaching the students at the different levels of education. that is to say, whether the curriculum aims to develop the environmental consciousness of children about Islamic ecological ethics (Alnaim et al., 2023, cited in Thohri, 2024).

The second stage is to identify the needs of the students should be considered. When developing a curriculum for basic education in the Gambia, the developmental needs of children at different stages of human development should be critically put into consideration. This would mean the characteristics of the children must be the baseline on which the curriculum must be tailored.

In the third stage, the environmental awareness integration: stage will look at how can the concept of environmental ethics in Islam be integrated into the curriculum to achieve the intended objective of the curriculum (Dei & Kempf, 2023).

The fourth stage is to what teaching methods will be effective in teaching this curriculum at the basic education level. This will involve a critical examination of whether the teaching method is suitable for all levels, from elementary to secondary (Wardana, 2020, cited in Thohri, 2024). The fifth stage will look into the cultural and social context to examine how the values and cultural elements of the society can fit into this new curriculum to reflect on the needs and aspirations of the people (P.Go. Carm, 1989). The sixth stage of the process will look at the assessment and measurement system that will be employed to assess the learning goals of the curriculum. this stage will identify the assessment methods the teachers in basic education in the Gambia will assess the students at different levels of their education.

The seventh stage, which is the final stage of this curriculum development process will involve stakeholder engagement. These stakeholders will include parents, teachers, religious leaders, and civil society organisations. This stage is very essential because it will create a holistic idea of how and what the curriculum should address. Therefore, having the stakeholders involved in the process will go a long way in providing a curriculum that will be inclusive(Viennet & Pont, 2017).

## **Challenges and Opportunities of Incorporating Environmental Ethics in Education Systems.**

### **Challenges**

The development of a curriculum which will integrate Islamic environmental ethics in the Gambia will face some challenges in its implementation. The Gambia as a middle-income country will struggle to implement a new curriculum because of the resource limitation at both national and regional levels. The school improvement grants for the schools are not sufficient to buy textbooks and teaching materials

for the teachers. At the central level, the government will be constrained in developing the teacher capacity on the new curriculum (Wardana, 2020). Moreover, as a country with different religions, the Gambian education sector will find it difficult to implement a curriculum that has Islamic ethics into the national curriculum because of the differences in the opinions of people within the country. The changes in the curriculum might affect the student understanding and the measurement and evaluation tools might make it difficult to measure the understanding and the consciousness of the student on Islamic environmental ethics because the teachers themselves have insufficient understanding of the curriculum.

### **Opportunities**

The opportunities for integrating Islamic environmental ethics in the curriculum of basic education in the Gambia will have the following benefits

Firstly, it will provide a comprehensive understanding in the students about how Islam has prescribed for them how to use their environment. This religious teaching will prepare them to be environmentally conscious thereby preparing a generation of youths that will be aware of their environmental responsibility.

Secondly, it will have a societal benefit in terms of environmental awareness. Society will be prepared to take responsibility as agents of change and make wise decisions on how to maintain their environment.

While several studies have been conducted to explore the potential impacts of integrating Islamic environmental ethics into education for a sustainable environment, there is no research conducted within the context of the Gambia, where environmental protection has been a long-standing issue. This research will therefore be the first study to be conducted within the Gambian context and will contribute to the body of literature on environmental protection for sustainable ecosystems.

### **Theoretical Framework used to Answer the Research Questions.**

#### **Ecological Systems Theory (Bronfenbrenner)**

Ecological system theory was propounded by one of the greatest human development psychologists in 1779. This theory explains the interconnectedness between individuals and their environment (Härkönen, 2007). According to Professor Anna M. Gade, 2019, Muslim expectations for social and religious ethics that integrate environmental theory and practice are connected to religious teachings about universal causes, ultimate effects, and human responsibility. These expectations are also organized within social frameworks such as adab, which are consistently supported across various aspects of tradition. Environmental ethics, whether expressed through fiqh or adab or another traditional ethical concept (akhlaq), or modern concepts such as deep ecology, environmental justice, and rights of nature, encompass universal religious ideals, both moral and environmental, in terms of reasons for cause and effect. From the perspective of the Qur'an, this points towards the future conditions and ultimate end of this world, as well as the expected state of a world to come as determined by Allah (hablun min Allah) (Gade, 2019).

It can be applied to understand how integrating Islamic environmental ethics into school curricula at the basic education system in the Gambia can influence students' environmental awareness at various levels of their ecological systems from the microsystem (individual level) to the macrosystem (cultural

beliefs and values). The system structure of the theory uses four layers to explain the interrelation between children and their environment. According to Bronfenbrenner's ecological theory, development and socialization are influenced by the variation with rounds or circles of active interrelationships between humans and the environment (Härkönen, 2007). The explanation of this interrelationship includes three assumptions: the first assumption is a person plays an active role in exercising her or her influence on the environment, the second assumption is that the environment has the potential to compel an individual to adapt to its conditions and restrictions and the final assumption believes that an environment has different entities and that they are placed one inside another.

To make a comprehensive explanation of the interrelationship between children and their environment in the context of education within the school setting this paper will use the four structure layers to strengthen its argument: the micro, meso, exo, and macrosystem (Bronfenbrenner 1979; Saarinen et.al., 1994, cited in Härkönen, 2007).

We will first start to discuss the microsystem, which is the first layer. Berk (2000), cited in Härkönen (2007) argued that the microsystem is the closest environment for a child. This layer includes structures that the children have direct contact with in their everyday lives. These structures could be schools, religious places, peers and the family. From the perspective of education, we can say that schools are a better place to develop a child's character on environmental awareness because it is the first structure which a child has direct contact with and has a great potential to influence the beliefs of children.

The mesosystem is the connection of the microsystem. Saarinen et.al. (1994) explain this layer as the connection of a child between his or her school and their parents. As seen in Figure 1, this layer involves the interaction process between individuals at the micro level. All these layers explain how social and cultural values play a critical role in the education of children. Schools alone cannot develop the awareness of children unless they influence society.

Moreover, at the exosystem, the interaction is widened and involves more parties within a society. In this layer, a child's awareness can be influenced by many parties which could include neighbours, national policies and social services. We can assume at this stage; the child has already developed an awareness of Islamic environmental ethics.

The final stage is the macrosystem, which deals with the larger cultural and social context in the development of awareness. This layer might not be the best layer for child development based on the educational perspective. Children are said to learn more when they are young. From this illustration, we can see the best layer for developing the environmental awareness of children is at the microsystem, see Figure 1.

The data for this research was collected mainly through interviews via WhatsApp, which lasted for 30- 40 minutes, depending on the answers from the respondents. The results from this study will add weight to the existing literature in the field of Islamic environmental ethics in education. There are two research questions the researcher seeks to answer in this study. They are (1) How does faith-based environmental education change children's awareness about environmental protection? (2) what potential does Islamic environmental ethics have for solving the national environmental challenges?

These questions serve as a guide for researchers while conducting interviews. The respondents were interpreted and answered using the research questions as a guide. The first research question is to have

the respondent's perception of the integration of Islamic environmental ethics in the curricula. The second research question is its potential for solving the current environmental challenges in the Gambia.

After generating codes from the transcribed interviews, many themes emerged from the codes and these themes were grouped into categories. For this analysis, the researcher has three four themes to discuss, two themes for question 1 and two themes for question 2.

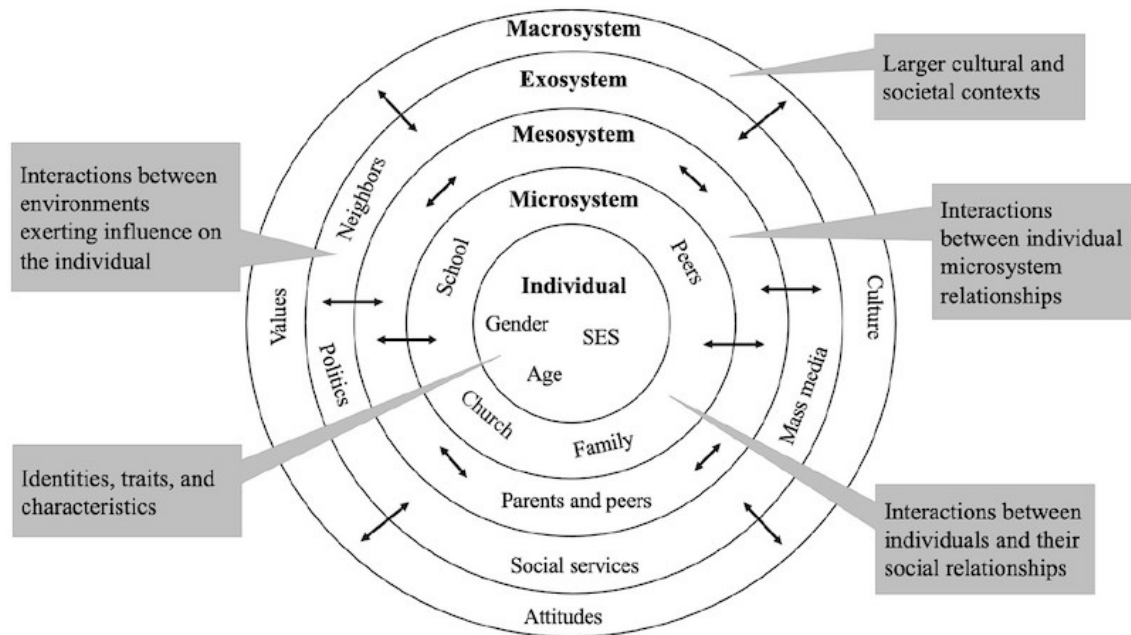


Figure 1. The diagram is an ecological approach that is used to explain the layers that influence the theory on the development of young children source of the diagram(Härkönen, 2007).

### Research question 1: How does faith-based environmental education change children's awareness about environmental protection?

This question aimed to explore the participants' perception of integrating Islamic environmental ethics into the curriculum of basic education in the Gambia. To have their perception based on their understanding of environmental ethics, researchers asked the interviewees questions such as What is your understanding of Islamic environmental ethics and how do you perceive it?

Of the 10 research participants interviewed, six of them perceive Islamic environmental ethics as a religious obligation to Muslims and integration of these principles into the basic curriculum will further create awareness in the younger generation that can be future agents of change. They have the opinion that the Islamic rulings on how people should handle the environment are very clear. In other words, they believe that the negative or extravagant behaviour of man in the environment is a result of one's ignorance of Islamic knowledge. Some of the respondents have this to say:

"In my opinion, there is no ambiguity in the Islamic ruling on how man should handle the environment. To me, this destruction of the environment by people is a lack of Islamic knowledge about how we should treat our environment therefore integrating Islamic environmental ethics into

our basic curriculum will prepare our children to be environmentally conscious” (Mustapha 19<sup>th</sup>/2/2024. Islamic scholar).

“The actions of man on the environment ought to be moderate, therefore any action that threatens the ecosystem is against religious ruling and teaching our younger generation on their religious knowledge has a great potential to solve our current environmental challenges” (Omar 22<sup>nd</sup>/2/24. Islamic scholar).

“I have the opinion that integrating Islamic environmental ethics into our curriculum will not only prepare our children about their religious knowledge on environmental protection, but it will have a long-term environmental conservation in the Gambia if the younger generation know their religious responsibility towards their environment” (Philip 22<sup>nd</sup>/2/24. Teacher).

Four of the research participants perceive Islamic environmental ethics to be both religious and social responsibility. They believe that Islam emphasises the need for social harmony therefore, taking care of the environment is not only a religious obligation, even though Muslims must respect and practice the religious commandments. These are some of their arguments:

“I think the integration of Islamic environmental ethics is not only a religious issue, but it is also a social need since the religion is practised by people who are living in a society. Every citizen of the Gambia should protect their environment” (Zainab 24<sup>th</sup>/2/24. environmental activity).

“The Qur’an, on many occasions, have prescribed to man how he should treat the environment, therefore teaching our children their religion in my opinion is not only religion but social responsibility” (Pater 24<sup>th</sup>/2/2024. Civil Society Organization member).

While the participants hold some diverging views about the integration of environmental ethics into the curriculum of basic education, there are common words that appear in their responses. All the respondents have the view that integrating environmental ethics into the curriculum, especially in Muslim-dominated countries like the Gambia, will not only preserve the environment in the long run but also breed a generation that will be environment-friendly. Some of the frequent words are religious responsibility, environmentally conscious generation, sustainable environment, social responsibility, and religious ruling.

Table 2. Participants’ Responses Related to the Frequency of Islamic Environmental Ethics

Name	Transcript	Concept
Mustapha	“In my opinion, there is no ambiguity in the Islamic ruling on how man should handle the environment. To me, this destruction of the environment by people is a lack of Islamic knowledge about how we should treat our environment therefore integrating Islamic environmental ethics into our basic curriculum will prepare our children to be <b>environmentally conscious</b> ” (Mustapha 19 <sup>th</sup> /2/2024. Islamic scholar).	<b>Environmentally Conscious</b>
Omar	“The actions of man on the environment ought to be moderate, therefore any action that threatens the ecosystem is against religious ruling and teaching our younger generation on their <b>religious obligation</b> has a great potential to solve our current environmental challenges” (Omar 22 <sup>nd</sup> /2/24. Islamic scholar).	<b>Religious Obligation</b>
Philip	“I have the opinion that integrating Islamic environmental ethics into our curriculum will not only prepare our children about their religious knowledge on environmental protection, but it will have a long-term environmental conservation in the Gambia if the younger generation know their <b>religious responsibility</b> towards their environment” (Philip 22 <sup>nd</sup> /2/24. Teacher).	<b>Religious Responsibility</b>

Name	Transcript	Concept
Pater	“The Qur’an, on many occasions, have prescribed to man how he should treat the environment, therefore teaching our children their religion in my opinion is not only religion but <b>social responsibility</b> ” (Pater 24 <sup>th</sup> /2/2024. Civil Society Organization member).	<b>Social Responsibility</b>

**Research question 2. What potential does Islamic environmental ethics have for solving the national environmental challenges?**

The second research question explored the participants’ perception of the potential of Islamic environmental ethics on environmental protection for environmental sustainability. This question was answered using interviews to garner the perceptions of the research respondents. An example of the questions administered for this interview was: what is the potential of integrating Islamic environmental ethics into the basic education curriculum? some of the respondents have high hopes that this initiative will go a long way to solve the long-term environmental challenges. The opinions of some of the respondents will be discussed:

“I think the best way to change a society is to educate the children. Is my opinion that when Islamic environmental ethics are integrated into basic education it will breed a generation that will adhere to the religious rulings on the environment and serve as a custodian of the environment as the god mentioned in the Qur’an” (Yusupha, 19<sup>th</sup>/2/24. Teacher).

“When we were young, our parents used to tell us that certain trees are not to be cut and this has stuck in our minds until today that is why during our time the forest was very good because we valued and respected that advice. I, therefore, believe if our children at this early age learn the Islamic environmental ethics at the primary level, they will grow with it and they will be a change agent for environmental protection” (Sariba 26<sup>th</sup>/2/24. Parent).

“Teaching children at an early age about environmental ethics in Islam is the best our education system could do because there is no doubt that it will change the mindset of the younger generation about the environment. They will love the environment and protect it according to their religious principles” (Katim 18<sup>th</sup>/2/24. Parent).

The respondents have the view that integrating Islamic environmental ethics has great potential to change the narrative of environmental protection and preservation. To them, educating the younger generation is one of the greatest tools the world could use to change the mindset of people about environmental awareness. The respondent's answers based on their perceptions of the prospect of integrating Islamic environmental ethics into the basic education curriculum, see table 3.

Table 3. Participants’ Responses on the Prospects of Integrating Islamic Environmental Ethics into Basic Curriculum for Environmental Sustainability.

Name	Transcript	Concept
Yusupha	“I think the best way to change a society is to educate the children. Is my opinion that when Islamic environmental ethics are integrated into basic education it will breed a generation that will adhere to the religious rulings on the environment and serve as a custodian of the environment as the god mentioned in the Qur’an” (Yusupha, 19 <sup>th</sup> /2/24. Teacher).	<b>Custodian of the environment.</b>
Sariba	When we were young, our parents used to tell us that certain trees are not to be cut and this has stuck in our minds until today that is why during our time	<b>Agents for environmental protection.</b>

Name	Transcript	Concept
	the forest was very good because we valued and respected that advice. I, therefore, believe if our children at this early age learn the Islamic environmental ethics at the primary level, they will grow with it and they will be a change agent for environmental protection” (Sariba 26 <sup>th</sup> /2/24. Parent).	
Katim	“Teaching children at an early age about environmental ethics in Islam is the best our education system could do because there is no doubt that it will change the mindset of the younger generation about the environment. They will love the environment and protect it according to their religious principles” (Katim 18 <sup>th</sup> /2/24. Parent).	<b>Change the mindset of the younger generation about environmental protection.</b>

## Discussion

The findings resonate with what some scholars like Samira, who argued that Islam can offer practical and complete solutions to humankind’s many recent environmental issues (Bsoul et al., 2022). Mangunjaya & McKay (2012), also argued that integrating the teaching of environmental ethics in elementary schools will create more awareness in children about environmental protection. Le Duc (2023) also argue that mankind is obligated to take care of the environment.

Moreover, The Islamic traditions from the Quran and prophetic teachings have shed light on the Muslim world and the rest of the world in promoting sustainable development in which, environmental protection is a cornerstone. Many chapters and verses in the Qur’an refer to the concept of the environment and the principles that are necessary for preserving our environment, as it sets general rules that determine the extent to which humans benefit from various natural resources. Allah has commanded humankind to avoid abuse of natural resources and abstain from any action that would destroy and degrade the environment. Allah has made humanity the guardian over natural resources; this falls under the guarantee of the right to use resources, provided they are not abused or destroyed (Bsoul et al., 2022b).

Gada (2014) & Thohri (2024) that integrating Islamic environmental ethics in education will help inculcate Islamic values in the younger generation and thereby change their perception of the environment. In addition, Fua, Nurlila, et al (2018), concluded that Islamic education is the most ideal form of education and is seen as very powerful in building awareness in the younger generation through instilling the values of Islam thereby building their spiritual connection with their maker (Allah). Environmental protection is central to Islamic tradition, emphasizing present-day choices and their consequences as divine tests with implications for justice and environmental action. While the Anthropocene concept provides perspectives on geological impacts, it lacks frameworks for understanding apocalyptic scenarios. The Qur’anic worldview places all creation within a moral universe connected to God, offering an alternative perspective that includes ethical considerations and a comprehensive moral framework (Gade, 2023). The Quran frequently references natural phenomena and encourages scientific observation, mentioning celestial bodies, water bodies, geological features, and living creatures as subjects worthy of study. Verses 88:17-20 exemplify this, prompting reflection on camels’ creation, the sky’s elevation, mountains’ stability, and Earth’s expanse (Muhamad et al., 2020). On the other hand, The Quran teaches that the universe’s creation and biodiversity stem from Allah’s will, not random occurrence. As Kamal Hassan notes, Allah is the singular creator and sustainer of existence. Quran 7:54 illustrates this, describing how Allah created the heavens and earth in six days, established divine



authority, and governs natural cycles including day/night, celestial bodies, and universal laws (Muhamad et al., 2020);

“Your Guardian-Lord is Allah, who created the heavens and the earth in six Days, then He established Himself on the Throne (of authority): He draweth the night as a veil over the day, each seeking the other in rapid succession. He created the sun, the moon, and the stars, (all) governed by laws under His command. Is it not His to create and to govern? Blessed be Allah, the cherisher and sustainer of the Worlds”!

According to Sayyid Qutb's interpretation of the verse mentioned above, God's (Allah's) absolute ownership and control over His creation is paramount. Qutb argues that when humankind observes and protects nature's laws, they recognize God's management of the universe. This recognition should inspire individuals to accept divine authority and implement Islamic principles in their lives (Muhamad et al., 2020).

## Conclusion

The findings of this study confirm that integrating Islamic environmental ethics into the curriculum of basic education in the Gambia is a societal need and has the potential to change the mindset of the younger generation. What is more interesting from the findings is that the Gambia as a Muslim-dominated country has all it takes to breed a generation that will be environmentally friendly, if they use Islamic education at the elementary level. Therefore, this study concludes that there is a need to integrate Islamic environmental ethics into the basic curriculum for a sustainable environment. The research therefore recommends that The Ministry of Basic and Secondary Education in the Gambia integrates the teaching of Islamic environmental ethics as it will breed a generation that will be environmentally aware and will serve as the custodian of their own environment as dictated by their religion, hence a sustainable future.

This research explores the integration of Islamic environmental ethics in basic education in the Gambia, a country with about 2.7 million people, this research acknowledges the potential limitations, which include the small sample size, and the subjective nature of qualitative research. The findings may not be generalized to all Gambian contexts but the main aim of the study is to provide valuable insights into the dynamics of integrating Islamic environmental ethics into basic education. This study aims to explore the potential benefits of integrating Islamic environmental ethics into the Basic Education Curriculum. With the small sample size, it might not be enough for the whole Gambian context. However, the research does not provide a detailed curriculum delivery framework for use in schools; it only focuses on how the curriculum can be developed. Therefore, future researchers could provide systematic guidelines on how this curriculum can be taught in elementary and secondary schools. It's important to note that children's learning is based on stages according to psychological learning theories, so the curriculum must align with these principles. Implementing this proposed curriculum has the potential to significantly impact children's environmental awareness and provide a sustainable mechanism for environmental protection and preservation.

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