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MORALITY BEFORE KNOWLEDGE

Leveraging socio-religious capital: The Islamic philosophical framework for SDG 6 achievement in Indonesia

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ABSTRACT

Background: Goal 6 of the SDGs aims to ensure the availability and sustainability of water and sanitation services for all by 2030, but its fulfilment is severely threatened in Indonesia due to resource mismanagement and weak social accountability. Although water is an important resource with clear conservation instructions in Islamic Religious Education (PAI), the gap between technical rules and ethical compliance persists. Therefore, this study aims designed to explore a convergent philosophy between PAI values and goals in 6 of SDG to develop a novel model for best-practice in water conservation **Methods:** This study uses a systematic literature review approach by collecting data using Publish or Perish software on the Scopus and Google Scholar databases, and then the findings are analyzed using PRISMA 2020 and thematic analysis with qualitative software Nvivo 12**. Findings:** The findings of ecological implementation in Indonesia are classified into 7 groups, namely ecology (traditional), eco-campus, eco-economic, eco-mosque, eco-pesantren, eco-riparian, and eco-technology. The seven groups are a form or form of environmental awareness through the values of Islamic religious education and hygiene**. Conclusion:** The research provides a new theoretical lens, the PAI K3 Model of three pillars: Kesederhanaan (Resource Efficiency), Kolaborasi (Communal Resilience), and Keadilan (Equity in Access). These values are broken down systematically with an Ontology-Epistemology-Axiology paradigm. Results demonstrate that the PAI ethos is vibrantly being institutionalized – particularly in Eco-Pesantren and universities – pioneering novel water conservation practices inclusive of technology tools**. Novelty/Originality of this article:** The novelty and contribution of this paper are the PAI K3 Model, which translates PAI's socio-religious capital into an applicable tool. This model serves as a theological–ecological hermeneutic that grounds the moral imperative of hifẓ al-nafs (Ontology) to legal obligation (Axiology) and aspires to make resource conservation efforts both successful and socially just. This structure is key to Islamic convictions for fulfilling SDG 6, not with technical prowess but through developing sustainable moral compliance in Muslim-majority countries.

KEYWORDS: framework K3; Indonesia; Islamic Philosophical; SDG 6; Socio-Religious Capital.

1. Introduction

Water is one of the public resources, and maintaining it is a shared responsibility. In European states, hydrological events have increased by 60% over the last 30 years (Furtak & Wolińska, 2023) in the form of extreme climate change (Ansori & Yusuf, 2023) and cannot be predicted by humans, it will actually worsen the impact of these events such as drought,

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floods (Kamara et al., 2024) and the extinction of biodiversity on land (Eisenhauer et al., 2024) as well as in the sea (Talukder et al., 2022). Efforts are made by humans to prevent such phenomena from occurring for a long time by applying the circular economy (Castro et al., 2022) to reduce CO2 emissions that worsen the world's climate (Tiwari et al., 2024).

In the context of Indonesia as a tropical country, it also experiences the impact of climate change, as seen in Figure 1 of the change in rainfall from the previous months. This is due to an increase in air temperature by 0.025°C per year (Nita et al., 2024) resulting in an increase in drought on the island of Java by 60% (Satriya et al., 2025) Therefore, it is necessary to carry out water conservation activities (Maheng et al., 2024) to prevent the impact of the phenomenon.

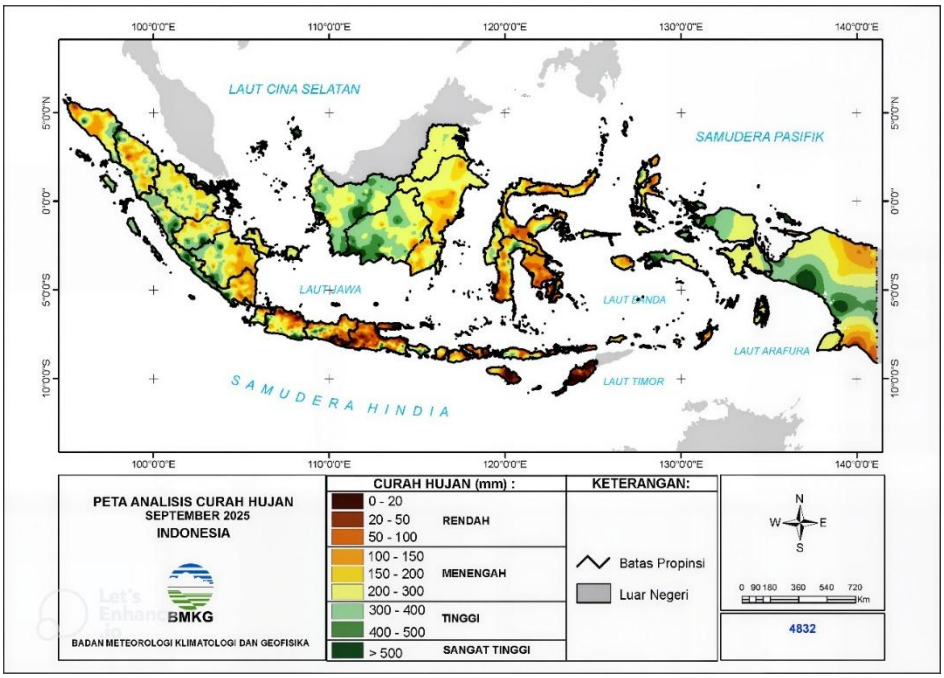

Fig. 1. September 2025 Rainfall Analysis Map Indonesia
(source: BMKG)

As a country with a majority of Muslims, water conservation activities carried out in Indonesia are automatically close to Islamic teachings that teach ecological values (Muhammad et al., 2024) to encourage the realization of SDG 6, clean and safe sanitation (Hamidi et al., 2025). There are values of Islamic religious education in its implementation, such as nature conservation, wise management of nature and justice in acting in society (Elihami & Pajarianto, 2025). The value of Islamic education will produce awareness that encourages sustainable development if it is well organized, such as one of the Muhammadiyah community organizations (Efendi et al., 2021) which has institutional potential.

The implementation of Islamic religious education values has been carried out in one of the mosques in Australia by managing ablution water waste (Hurayra et al., 2024) and the provision of WASH services to meet sanitation needs (Win et al., 2025). In line with the phenomenon of increasing extreme temperatures, there is a need for water conservation using technology that can withstand high temperatures (Kurniawan et al., 2024). From these findings, several studies that focus on the implementation of conservation techniques or PAI values separately, there has been no research that focuses on the integration of Islamic religious education with water conservation in Indonesia using the systematic literature review method. Therefore, this research was carried out to analyze the implementation models of clean water conservation and sanitation (SDG 6) in Indonesia systematically and analyze the values of Islamic Religious Education (PAI) integrated in SDG

6 clean and sanitation to form awareness of the implementation of water conservation in various contexts in Indonesia.

2. Methods

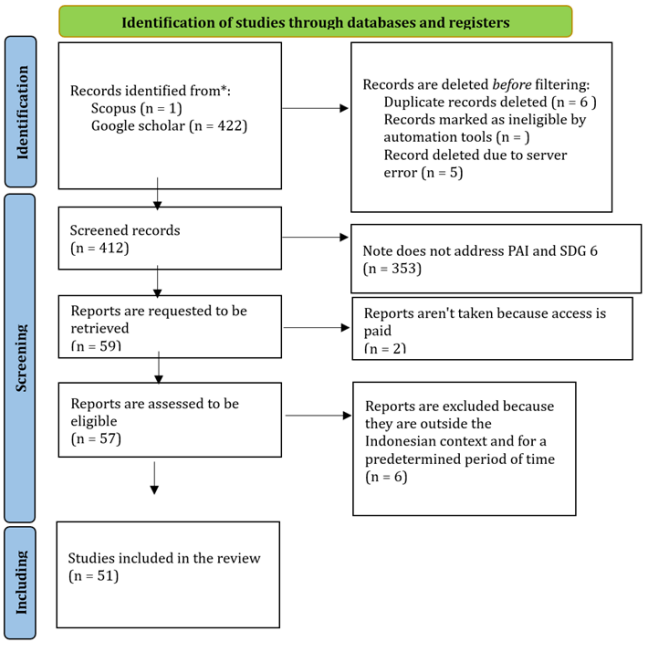

Fig. 2. Diargam flow PRISMA 2020

The design of this study uses a systematic literature review with a critical interpretation approach. Article search uses Publish or Perish 8 software to access databases from Scopus and Google Scholar. Google Scholar access is used to expand the findings so that articles that are not published internationally can be accessed. The article search was conducted twice on both databases with keywords with the format "Islamic Education" OR "PAI" OR "Thaharah" OR "Israf" OR "Mīzān" AND "Water Conservation" OR "SDG 6" OR "Clean Water" OR "Sanitation" OR "Environmental Ethics" OR Indonesia. Then the second keyword is in the format "Water Conservation" OR "SDG 6" AND "Pesantren" OR "Madrasah" AND "Indonesia". In addition, the search is carried out according to the criteria that have been formulated, as in Table 1, to make it easier for researchers to eliminate articles that have been found.

Table 1. Article criteria

Criterion	Inclusion	Exclusion
Year of publication	Articles published from 2020 to 2025	Articles are released outside of the specified time frame.
Publication categories	Articles and Conference Proceedings are exclusively from journals that are primarily in English. Published scientific works are added.	Examinations, editorial works, non-empirical studies, and not an international language
Ease of access	Full article or freely accessible.	Preview articles or articles that require payment.
Subject	Articles discussing the convergence of PAI and SDG 6 in Indonesia	Articles without research subjects or not published according to the database inclusion criteria

After the search was carried out, 423 articles were collected, then 6 articles were found that were the same, and 5 articles whose links could not be opened due to errors from the system. After that, the researcher conducted the first stage of screening, by reading the title; in this process, 353 articles were eliminated because they did not discuss PAI or SDG 6 clean water and sanitation. The second stage of screening collected 59 articles, then screening was carried out by opening articles one by one and eliminating 2 articles because they required payment to access them. The third stage of screening was conducted on 57 articles; the screening was carried out by carefully reading the content of each article using PRISMA 2020 analysis to provide guidance in article data transparency. At this stage, the researcher eliminated 6 articles because, after a thorough reading, the articles discussed outside the Indonesian context and the time period that had been formulated in the inclusion criteria. The entire screening process is recorded in Figure 1 to be more systematic. After that, to group the findings, the researcher used the NVivo 12 software for data analysis thematically and created a concept map to visualize the relationship between PAI integration, hygiene, and satiety with eight implementation mechanisms.

3. Results and Discussion

Based on the results of the analysis using PRISMA 2020, a total of 51 articles were found that were in accordance with the inclusion criteria. To make it easier to understand, the researcher provides an overview of the author, findings from the article and the location of the case study as shown in Table 1. The article that does not have a location indicates that the article discusses the issue of integrating Islamic religious education and SDG 6 clean and sanitation in the context of epistemology.

Table 2. Summary of the research identified in the literature 2020-2025

Writer	finding	Case Study Location
(Wakhidah et al., 2024)	Javanese expressions that are often used to give fear, even though the meaning is very close to protecting the environment.	Javanese
(Esaputri et al., 2025)	Water management from household waste through two ways, namely natural filtration with stones, sand and water hyacinth, then reuse for fish farming.	Bumi Langit Institute And Kedai Teh Umran In Yogyakarta, Indonesia
(Wisconsin, 2025)	Water filtration using a large cauldron with 3 stages, namely red cauldron, white cauldron and golden cauldron.	Banten
(Fauziah et al., 2025)	Educational institutions have a significant influence in a positive direction in building superior moral integrity	Bogor
(Ariesman et al., 2024)	applied, such as Backflow Prevention Devices, Traps Under Buildings, Upright Pipe Positions, and others. Kitchen wastewater management using Wastewater Treatment Plant (WWTP) and bioremediation in mosques in the campus environment	Makassar
(Suryatmojo et al., 2024)	The use of biogas has an economic effect in the community as a benefit from organic waste management in local water sources	Banjarnegara
(D. F. Putri et al., 2025)	The construction of public service malls, in addition to improving the economy in the city, also applies environmentally friendly technology	Sungai Penuh City
(Awfa et al., 2023)	The amount of water used for household consumption is 67.5%, but it is not accompanied by proper water waste management	Bandar Lampung
(Aborujilah et al., 2023)	The use of the circular economy increases water use efficiency and limits excessive pollution	

Writer	finding	Case Study Location
(Efendi et al., 2025)	A transformative approach offered through the implementation of eco-mosques encourages the realization of SDG 6	Minangkabau
(Al-Kahfi & Qonitah, 2025)	Through the Kuttbah program in the mosque, it is hoped that it can form a new paradigm about the environment in the community	Yogyakarta
(Nurfansyah et al., 2021)	Ablution Water Waste Management Using Infiltration Wells	Banjarbaru
(Irmawaty et al., 2024)	Ablution water waste management by using it for fish cultivation and plant irrigation	Makassar
(L. D. Putri et al., 2023)	Educational institutions such as Islamic boarding schools can build an independent and impactful water management system	Banten
(Kejora et al., 2025)	Students at Islamic boarding schools not only study the *fiqh* of worship, but also study environmental *fiqh*	Bogor
(Nurkhin & Martono, 2021)	The policy of educational institutions in Islamic boarding schools with a participatory system provides practical experience to students to minimize natural damage	Palu, Sulawesi
(S. S. Maulida et al., 2025)	Educational institutions have great potential and opportunity to implement eco-pesantren	Banda Aceh
(Nufida et al., 2022)	Training on the use of water management equipment with low-pressure filtration prototypes gives the impression of ease of development	West Lombok
(S. Maulida & Ali, 2023)	The study of the issue of Islamic boarding schools with the SDGs reached its peak in 2023	-
(Widiastuti & Ernawati, 2024)	The construction of Islamic boarding schools in the city center uses an architectural approach to the ablution water management system	Surabaya & Sidoarjo
(Abidin & Noorhidayati, 2025)	Many things need to be prepared to realize sanitation in Islamic boarding schools that are in accordance with the Health Strandart	Blitar
(Maghfiroh et al., 2024)	Through the teachings conveyed by Kiyai, it has increased in awareness and concern for the environment have increased based on faith	-
(Nasriyanti, 2020)	Water management using lamtoro seed and turi seed extracts through the coagulation-flocculation method	São Paulo
(Eddy et al., 2025)	Ablution of river empowerment by creating dams, irrigation and strict policies	North Sumatra
(Perdana, 2024)	wastewater and drainage management in accordance with the design criteria of eco-reparian implementation	Rocky, poor
(Fahmi & Abtokhi, 2020)	Conservation of the riverside area by planting trees	Rocky, poor
(H. D. Nugroho et al., 2023)	Water conservation is carried out by fertilizing infiltration wells	Kediri
(Jakti et al., 2025)	Centralized rainwater storage is carried out to prevent water crises	Central Java
(Hidayat et al., 2023)	A fast-paced water infiltration model will be more representative when matched with field data	West Java & Banten
(Ridha & Hutagalung, 2025)	IoT-based membrane filtration technology can increase access to clean water	-

(Pambuko et al., 2025)	Poor concern of office holders in improving water quality	Magelang Regency, Temanggung Regency, And Magelang City
(Wibowo et al., 2025)	boarding house owners have a high awareness of restoring and maintaining water	East Jakarta
(Joseph, 2024)	As many as 56% of students have awareness of water as a resource and pollution	Bajarmasin
(Sato et al., 2023)	Lack of knowledge related to hygiene limits the development of their abilities, both physically and mentally	Bandung
(Yasin, 2025)	Teachers play an important role in accelerating the SDGs in schools	Surakarta
(Jawad, 2024)	Al-Qur'an provides teachings related to the water system efficiently and fairly	-
(Dahlan & Asrul, 2022)	Islamic teachings provide an understanding of water as public property, a central role and responsibility	-
(Fanani & Pohl, 2024)	Islamic teachings provide a framework that has five shari'a bases	Squirrel
(Hamdi et al., 2025)	The understanding of responsibility taught by Islam is a breakdown of the concept of trust as a caliph	-
(Basri et al., 2024)	The framework offered by Islam is so comprehensive and in line with the SDG strategy	-
(Priantina & Saleem, 2021)	Islamic emphasis on water management is not just about conservation but also related to the issue of justice	-
(Najemi & Rapik, 2024)	There is a gap between the MUI fatwa and environmental law	-
(Amin et al., 2025)	The paradigm of water management is sourced from the Qur'an	-
(Nur et al., 2025)	The Qur'an contains noble values related to a better environment	-
(Supandi, 2025)	Islamic education is an actor in realizing the SDGs	-
(Pratisti, 2024)	The experience of Muslims as individuals greatly determines the contribution that will be made to society in protecting the environment	-
(T. T. Nugroho et al., 2025)	one of the community organizations in Indonesia has carried out a clean water and sanitation program in a private school environment	-
(Husna & Adrian, 2025)	Islamic education is not only moral and spiritual, but also talks about the environment	-
(Wahyudi & Aziz, 2025)	Water saving is done using infrared sensor technology	São Paulo
(Umar et al., 2025)	The existence of the River Clean Up program encourages environmental care in the community	-
(Sofyan, 2023)	The use of landscape irrigation promotes water efficiency	Hapless

3.1 Classification of the Seven Implementations

Based on the results of the analysis in Table 1, the researcher grouped the research results of each article using the help of NVivo 12 software. It is grouped into eight implementations related to water conservation. First, the implementation of water conservation in the form of ecology that already exists in traditional cultures in Indonesia, found three articles that discuss it and can be seen in Figure 3. For example, in Javanese customs, there is a name called gugoh tuhon to advise young children and grandchildren not

to take actions that cause danger in the future, such as spitting in wells, sweeping unclean floors and cutting large trees (Wakhidah et al., 2024). In addition, people in rural Yogyakarta use a natural filtration system to manage household waste by collecting water, using stones, sand and water hyacinth plants as indicators of water cleanliness (Esaputri et al., 2025). Almost the same as what is done by the sultanate of Banten in managing water using three-stage filtration to produce clean water that is suitable for reuse (Wisconsin, 2025).

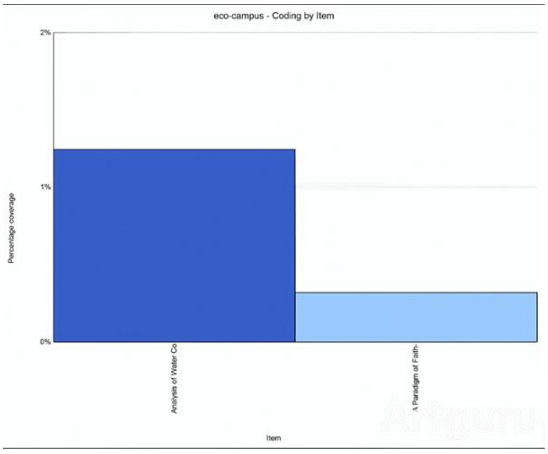

Fig. 3. Chart Node Coding Ecology

Second, water conservation initiatives carried out by institutions of higher education were found in two articles that discuss these conditions and can be seen in Figure 4. At the UNIDA educational institution in Bogor, the results of the study show that it can produce 95% of graduates who have superior morals and can implement environmental management, with claims of 87% effectiveness from the implementation of the 21 tawheed system of character values (Fauziah et al., 2025). In contrast to STIBA in Makassar, which emphasizes more on infrastructure buildings that encourage water management efficiency using WWTP (wastewater treatment plant) and using Indonesia's national seaside plumbing system (Ariesman et al., 2024).

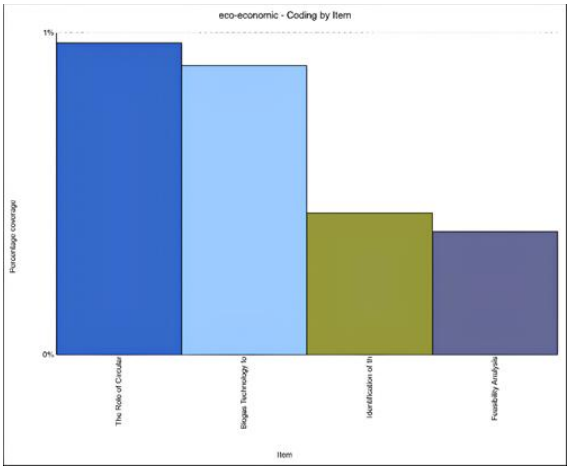

Fig. 4. Chart Node Coding Eco-Campus

Third, the implementation of water conservation that has economic value for the community is only found in four articles that discuss these conditions and can be seen in Figure 5. Organic waste management in local water sources uses biogas technology and is successfully used by residents to show a 75% reduction in gas costs for cooking (Suryatmojo et al., 2024). If this is redeveloped throughout Indonesia, it will definitely have a good welfare impact, such as the construction of MPP (public service mall) that is to be built in a river city, full of applications of solar power plants (solar power plants) and PAH (rainwater harvesting) systems for the energy efficiency needed (D. F. Putri et al., 2025). In addition,

the use of a circular economy system also contributes to water efficiency in places that have high water consumption levels (Aborujilah et al., 2023), such as in Bandar Lampung which consumes 195.08 liters/person a day, but is not accompanied by a good water management system (Awfa et al., 2023).

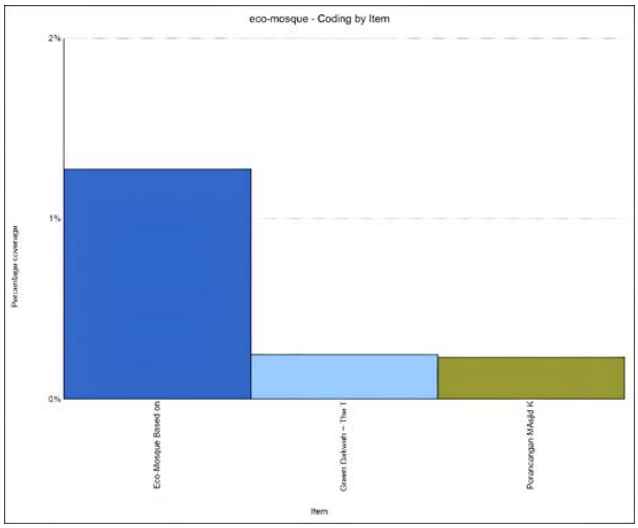

Fig. 5. Chart Node Coding Eco-economic

Fourth, the implementation of water management through eco-mosques based on Islam as a spirit in protecting the environment is only found in three articles that can be seen in Figure 6. Mosques have an important role in Islam to educate Muslims to have awareness in preserving nature. This has been done in one of the mosques in Yogyakarta by creating a kuttbah program that discusses environmental issues in the hope of being able to build a new paradigm in the community (Al-Kahfi & Qonitah, 2025). This approach is a transformative approach that is also implemented in Minangkabau so as to encourage change for sustainable development with strong ties to the community through an eco-mosque model based on local wisdom (Efendi et al., 2025). In addition, with an architectural approach, mosque construction can be efficient in the irrigation of the landscape so that it can reduce water use (Sofyan, 2023).

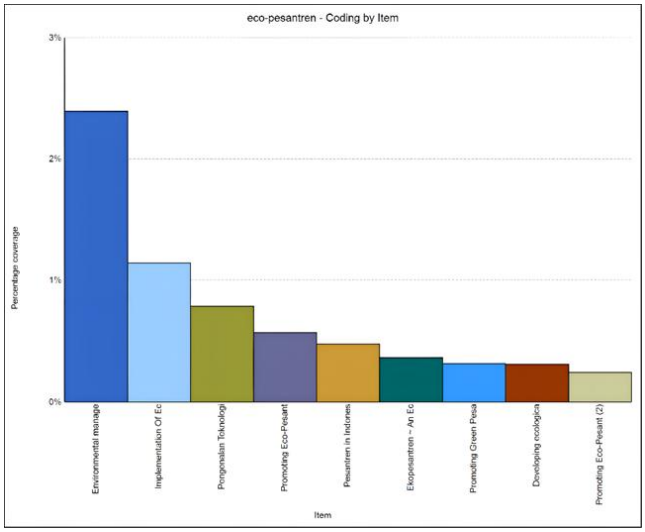

Fig. 6. Chart Node Coding Eco-mosque

Even one of the mosques in Banjarbaru has carried out ablution water conservation using infiltration wells and can maintain the quantity of pump well water so that it can prevent flood disasters (Nurfansyah et al., 2021). The management of ablution water waste

is also carried out with non-consumptive uses, such as ablution water waste for fish cultivation and plant irrigation (Irmawaty et al., 2024).

Fifth, the implementation of water conservation using the concept of eco-pesantren that supports sustainable development was found in nine articles, which can be seen in Figure 7. Islamic boarding schools have strong potential in improving ecological wisdom based on fiqh al-bi'ah through collaborative training and policy programs (L. D. Putri et al., 2023). This opportunity makes students not only learn religious fiqh lessons, but also learn environmental fiqh such as worship activities with environmental mutualism, preserving spring water because in performing ablution, they must use clean and holy water, this kind of knowledge will be useful for the future (Kejora et al., 2025). There is even an Islamic boarding school in Palu, Sulawesi that carries out artificial forests carried out based on agrosilvopasteur, agroforestry, and agrofisheries approaches to strengthen food security and preserve the environment (Nurkhin & Martono, 2021). Strengthening must also be carried out in the formulation of strategies to build buildings that have rainwater storage, are environmentally friendly, and have wastewater management (S. S. Maulida et al., 2025).

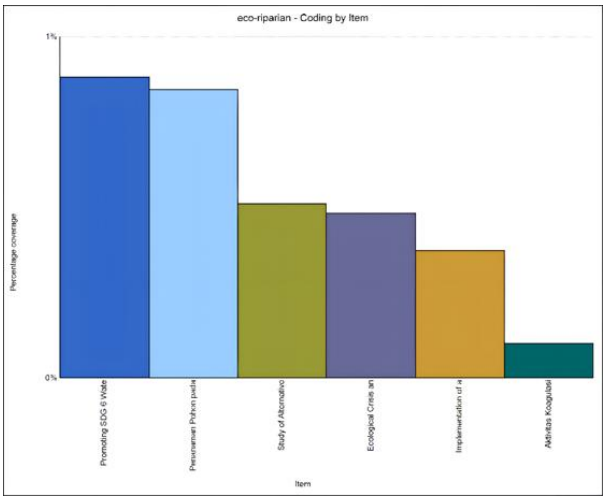

Fig. 7. Chart Node Coding Eco-pesantren

Islamic boarding schools also support water management by conducting ultra-low pressure membrane filtration equipment training for downstream lecturer innovations to the community, and it is proven that 73.33% of participants stated that the prototype of the tool is easy to operate (Nufida et al., 2022). It is also supported by the construction of pesantren using an architectural approach to design an ablution water recycling system at the location of pesantren in urban areas that are relatively minimalist (Widiastuti & Ernawati, 2024). This is closely related to basic sanitation and environmental sanitation, that one of the Islamic boarding schools in Blitar wants to achieve (Abidin & Noorhidayati, 2025). Eco-pesantren in its implementation, will certainly be inseparable from Islamic values and traditions that are rooted in the prophetic era (Maghfiroh et al., 2024). The trend of pesantren research in sustainable development reached its peak in 2023, but it still receives less attention in the academic world (S. Maulida & Ali, 2023).

Sixth, the implementation of water conservation through eco-riparian with a focus on riverside locations was found in six articles, which can be seen in Figure 8. Eco-riapian itself is a water management that is suitable for the wetland environment by reconstructing land cover, wastewater management, water body vegetation and making cliff retaining walls (Premiere, 2024). For example, on the riverside which was carried out in Mataran using the coagulation-flocculation method, coupled with the help of natural kpgulan from NaCl lamtoro seeds and turi seeds (Nasriyanti, 2020). Then on the Brantas river by planting trees around the stream to prevent flooding, conserve water resources and erosion (Hamdi et al., 2025). In addition, there is a need for river empowerment to build dams, irrigation canals, tourist destinations and strict action against individuals who pollute the ecosystem, one of

which is in Suji, Sei Ular, North Sumatra (Eddy et al., 2025). Empowerment can also be done by adapting the river cleanup program that has been carried out by SISPALA to develop sustainable key competencies in students with a self-awareness and thinking system (Umar et al., 2025). To support the preservation of water resources, it can also be done by making infiltration wells around the river for rainwater harvesting because it can decompose water discharge up to 90.91% on land, while in canals reduces the amount of discharge by 90.40% (H. D. Nugroho et al., 2023).

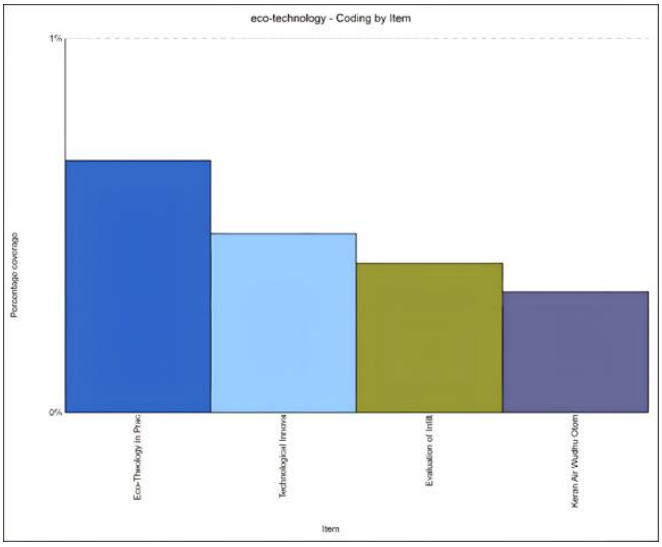

Fig. 8. Chart Node Coding Eco-riparian

Seventh, the implementation of water conservation also uses the concept of eco-technology in facilitating all processes to achieve the goals of SDG 6, clean and sanitation. The findings of four articles can be seen in Figure 9. In the central Java area, water resources have been conserved with centralized rainwater storage technology to make water distribution smoother (Jakti et al., 2025). In addition to water storage, infiltration model technology for the Cisade watershed can also increase the rate of water infiltration (Hidayat et al., 2023). There is also technology with IoT-based membrane filtration to monitor clean water quality in wastewater management (Ridha & Hutagalung, 2025). Even Arduino-based infra-red technology on ablution water taps can reduce water use so that it is not excessive (Wahyudi & Aziz, 2025).

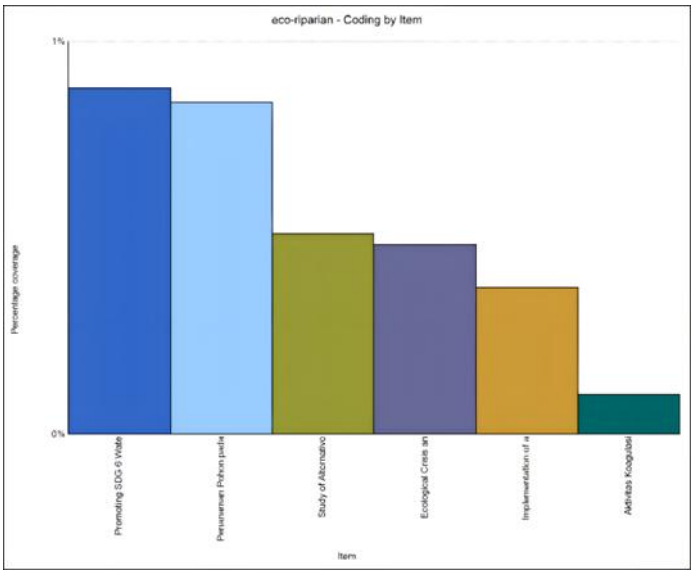

Fig. 9. Chart Node Coding Eco-tecnology

3.2 Integration of PAI values in Water conservation

The integration of Islamic religious education (PAI) values based on the Qur'an as a reference in water conservation (Jawad, 2024). The values of Islamic religious education are simplicity, helpfulness, and justice (Wahyuni, 2024). Figure 10 shows that the value of Islamic religious education provides awareness in students and students of the perkals who protect the environment.

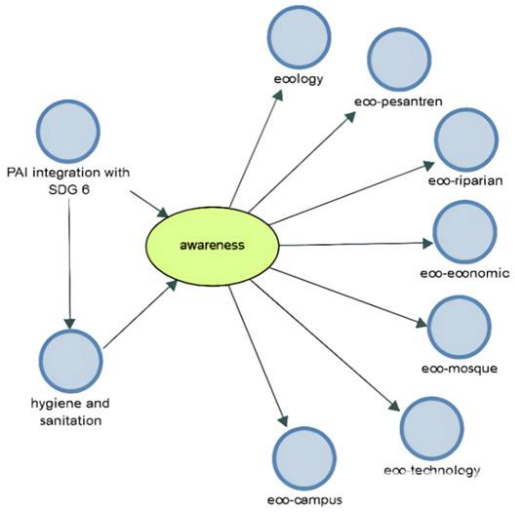

Fig. 10. Concept Map Integrasi PAI

First, the value of simplicity related to water conservation, namely, not using water excessively. Water is a blessing of Allah that must be thankful for because without it, life will die. Water as a source of life in Islam receives special attention, such as the recommendation to save water when performing ablution. If we go deeper, ablution does not use a large quantity of water, but in Islam, it actually encourages this behavior so that Muslims appreciate water and are wise in its use. This recommendation is a manifestation of the prohibition of excessive behavior (israf) and waste without a clear purpose (tabzir) in all aspects of life, including the use of water resources (Hermanto, 2021).

Ontologically, water is a common property and a blessing that must be accounted for to the general public, not just for a certain group. This concept is in line with the teachings of monotheism in Islam, which sees nature as an interconnected creation of Allah, in the modern world, called natural law (Sukarsono, 2016). Therefore, excessive behavior in using water is not only detrimental to oneself as a human being, but it can also be interpreted as violating the rights of other creatures, damaging the balance of nature (Hermanto, 2021). This intuitive approach encourages Muslims to recognize that if there is a water crisis, both in terms of quality and quantity, it is a consequence of human failure to carry out their mandate as a caliph. The function of a caliph is to maintain, not to destroy, but to maintain one of the water resources that has a hydrological cycle; there is a limit to availability, therefore it is necessary to practice simple behavior.

Epistemologically, the recommendation to use water sparingly forms knowledge that is the basis for philosophical development to develop eco-technology, such as worship innovation technology and effective sanitation management practices. These innovations have been implemented, such as using ablution water faucets with infrared technology, but there are still not many mosques that have adopted this technology. Apart from the fact that the cost of purchasing water faucets with this technology is not cheap, it is not a priority for mosques in learning their annual budget. This condition does not seem to reflect the face of Islamic epistemology, not because of Islamic teachings, but the interpretation of Muslims in understanding the epistemology. Pragmatic interpretations that tend to ignore the sustainable aspects carried out by individuals in Muslim communities make the problem that must be underlined and handled seriously through regulations from the ruling party.

Axiologically, it is necessary to build knowledge first before thinking much about effective sanitation management. Building awareness of saving can start from the family environment and then the community environment to the community environment. Through daily practices supported by policies in the context of using water wisely, it will yield good results in the future. This wise use of water will have an impact on water needs in the future, for future generations. The current generation must ensure that the availability of spring water sources is maintained and available by using the support of an eco-economic model to maximize minimal water resources. The highest value that will be achieved from the implementation of this value is the fulfillment of primary needs (maslahah darruriyah), namely hifz al-nafs (protection of life), which depends on the condition of the availability of clean water resources.

Second, the value of helping related to the context of water conservation is a responsible attitude in maintaining the mandate given by Allah for the maintenance of the earth. Ontologically, the concept of trust reaffirms that humans are aware and remember that humans have a divine duty or mandate as the manager and maintainer of the earth as a consequence and responsibility of a caliph fil ardh. It is a moral responsibility of the value of helping to ensure the sustainability of the good business that is being fought for is not only limited to humans, but also encompasses the ecosystem (Wahyuni, 2024). As explained in the previous value, environmental damage occurs due to the failure of humans to carry out their mission as a collective, not an individual, so it requires water conservation as a joint and collaborative human effort.

Epistrophically, the attitude of responsibility is implemented in the form of helping through social interaction, community practices and local wisdom. Water conservation knowledge is not only from reading books related to ecology, but also from the tradition of practice in daily life and has more impact on the environment. This knowledge is often internalized in local wisdom that has been tested by time, such as traditional filtering systems or indelineation, which is an implementation of the value of helping itself (Agustina, 2023). The practice of helping encourages cooperation in water management. As an effective forum, it can use the eco-mosque model to support this role. Mosques are the center of communal action in water conservation, not only as a place to mobilize worshippers for worship and prayer, but also for environmental activities such as biopore development or water-saving campaigns.

In addition, using the eco-riparian model in protecting rivers in collaboration with communities and local communities is also a form of value of helping in the context of water conservation. The Eco-mosque and eco-riparian models encourage participatory learning and practical knowledge transfer, not just theory as in classrooms. For example, carrying out the practice of making biopores, river restoration and mutual cooperation in the community. This behavior reinforces the social dimension of SDG 6 and encourages the realization of a healthy communal sanitation system that runs in tandem with the Islamic organizations of the community. Educational institutions such as madrasas in Surakarta are experiencing an acceleration phase to teach students material about SDGs with a participatory approach to students to form active and critical thinking (Yasin, 2025). There are private educational institutions, namely Muhammadiyah, which have already carried out clean water and sanitation programs by involving the community (T. T. Nugroho et al., 2025). These two institutions emphasized that Islamic religious education not only develops moral and spiritual aspects and also prioritizes environmental awareness (Husna & Adrian, 2025).

Axiologically, the value of helping yields benefits in the form of communal resilience to climate change that is in line with the goal of environmental adaptation. This axiology emphasizes that water conservation, if carried out collectively, will have a beneficial impact on the sustainability of water resources more evenly and reduce the potential for people to be exposed to the risk of floods and droughts in the future.

Third, the value of justice in the context of water conservation teaches fair behavior in the form of balance (mizan) in using water resources. Ontologically, water as a public good must be distributed fairly and equitably to the public regardless of social status. Justice in

water also includes the dimension of intra-generational and intergenerational justice, meaning that it is related to water rights for today's humans living today and also water rights for humans in the future. Meanwhile, the balance can be seen from the damage to the surrounding natural environment that occurs due to human injustice or tyranny towards nature and others. Prevention of damage is a clear axiological form in protecting water rights for those in need. It should be noted that the protection of justice in water is part of the protection of the soul itself (hifz al-nafs).

Epistemologically, knowledge about water conservation must be based on the principle of justice in the form of strong regulations that encourage green legislation so as to ensure the protection of water resources. This knowledge is not only based on the teachings of fiqh al-biah, which focuses on ecological rights and prohibitions, but also on modern legal science, which guarantees responsible and transparent governance. Studies on the reconstruction of water resources conservation policies support that the principle of justice must be realized through responsible governance and green legislation (Akhmaddhian, 2023). Justice in this epistemological approach clarifies the need for institutions to have a transparent accountability system in managing and using water.

In this study, it can be seen in the use of the eco-campus model and also the eco-pesantren because both have a part of the residents of each group that must be guaranteed water rights. Guaranteeing clean water to all campus residents and Islamic boarding schools based on Islamic teachings is a must-do. This behavior encourages the formation of an understanding of fiqh al-biah that focuses on ecological rights. Prevention of damage is an axiological form in protecting the water right, which is the protection of the soul itself towards the highest goal, namely, maqasid al-shariah. Axiologically, Islamic institutions have strength, ability and show accountability in managing water by utilizing the eco-economic model in distributing it fairly.

Ensuring that expensive technological innovations can not only be enjoyed by certain people but can be accessed by any circle, this is in accordance with the principle of al-asl fi-ashya' al-ibahah, which is that anything is basically allowed for the public. This principle only emphasizes that the water resources that are the focus of this article are basically public rights which are the antithesis of the water management model that tends to be capitalistic and exclusive. If in the mosque environment with the eco-mosque model and in the pesantren environment with the eco-pesantren model succeed in developing their own water conservation technology, then this also requires people in urban areas to have technological innovations that are disseminated and easily accessible to the general public, especially in densely populated cities (Noriko, 2020).

Axiological justice does not only stop at ensuring access to faucet technology with infra-red, but rather on public access to the use of this sustainable technology to create access justice. If the opposite happens, then it shows a failure to distribute technology fairly so that there is a digital inequality, which is contrary to the spirit of justice taught in Islam.

Environment-based regulation is also one of the axiological requirements of the value of justice, where Islamic institutions must proactively encourage the creation of fair policies. As emphasized, the optimization of the role of the government and legislature in producing environment-based regulations is an absolute thing to accelerate the implementation of fair and prosperous governance based on Pancasila (Akhmaddhian, 2023). On the other hand, if there is an inappropriate government and legislation, the potential for misuse and pollution of the industry will cause great losses to the public.

The strength of Islamic religious education values that are integrated in water conservation is strengthened by Islamic teachings that teach three functions of water, namely ecological function, social function, and conservation function so that Muslims realize that maintaining survival must have a basis to stand on before taking action, one of which is the hadith of the Prophet (Dahlan & Asrul, 2022). The ecological function of water is related to the value of simplicity, where water must be maintained in quality and quantity for the sustainability of ecosystems and living things. Then on the social function of water related to helping and the value of justice, where water must be easily accessible and be a means to prosper the community. Furthermore, on the function of water conservation,

diaman binds both ecological functions and social functions in an interdependent and sustainable framework.

Islam provides strict teachings that water management must be fair, provide welfare, and maintenance (Priantina & Saleem, 2021). In addition, Islam also provides a framework with the concept of maqasid with the purpose of religion, intelligence, heredity, life and wealth (Fanani & Pohl, 2024). This must indeed be pursued by integrating Islamic principles in fostering behavior and environmental awareness (Basri et al., 2024). Maintaining the availability of water sources depends on the cleanliness of clean water in the current generation and this is in line with the concept of trust in the preservation of the earth as a caliph (Hamdi et al., 2025).

The government itself still has an incompatibility between the MUI fatwa and environmental law (Najemi & Rapik, 2024). In forest conservation, which has Islamic educational values, there is an awareness that protecting the environment is not an obligation but a sense of empirical responsibility (Nur et al., 2025). Islamic religious education is an important actor in sustainable development in realizing SDG 6, clean and safe sanitation (Supandi, 2025). However, in reality, in the field, the implementation of Islamic teachings depends on the knowledge that every Muslim has as an individual (Pratisti, 2024). It is the same thing that happened in Magelang, that the office holders did not play an active role in improving water quality, for example, by building a sewage disposal site (Pambuko et al., 2025).

In addition, the lack of knowledge about hygiene in menstruation in the underprivileged community will have a much greater impact, not only physically but also mentally (Sato et al., 2023). As important as the science of cleanliness is to instill awareness of protecting the environment, there is research that shows high school students in Banjarmasin know of water resources as much as 56% (Yusup, 2024). Just like what the boarding house mother did in one of the boarding houses in East Jakarta, with high environmental awareness, seeing the occurrence of cloudy and dirty water, the boarding house mother drained and repaired the water because the water was not as usual (Wibowo et al., 2025).

3.3 The contribution of the three-dimensional philosophical model of the PAI K3 to SDG 6

The three-dimensional model of PAI philosophy K3 stands for simplicity, collaboration, and justice. These three dimensions are based on the value of PAI integration in water conservation, which has been explained through an ontological, epistemological, and axiological approach to each value in the discussion. This model offers a new functional framework for achieving SDG 6 in Muslim-majority countries. This model is not only descriptive, but provides the following check and balance mechanism:

First, this model diagnoses that the water crisis is an ontological failure in carrying out the mandate. The solution to this starts from theological awareness, not just fines. Awareness of the concept of israf is not exaggerated; in this case, of course, there is no exaggeration in the use of water. This concept demands to use of water efficiently based on needs, not wants. This is a strong foundation compared to giving a fine, because there is a distance between knowing and being conscious. Awareness makes people act in the right way without feeling forced and burdened by their external conditions, including interventions from others.

Second, this framework positions fiqh al-biah and local wisdom on par with technological advances today as a source of water conservation. This model facilitates the integration of modern knowledge with Islamic knowledge. By using the concept of ta'awun, namely helping others, which makes collaboration with many people easier, we to create this integrated technology. Collaboration can be expanded to form cross-sector expertise in water management.

Third, this model explicitly demands institutional accountability and equity of access because it ensures the eco-economics of clean water are enjoyed not only by a few, but also by the wider community. This is an implementation of the concept of 'adl, which is fair in

placing something according to its respective portions and proportions. If this happens, the equal distribution of access to clean water and sanitation in Indonesia will be very guaranteed and maintained. Progressive institutional and eco-economic support are two pillars of support in the realization of this situation in Indonesia. This K3 model can serve as a theological-ecological evaluation instrument for initiatives such as eco-pesantren to ensure that their programs not only carry out the imperatives of water conservation but also internalize the values of simplicity, collaboration, and justice.

4. Conclusions

The integration of Islamic religious education values effectively impacts awareness on ecological behavior in Indonesia. Strengthened with the support of higher education institutions and boarding education institutions such as Islamic boarding schools, it further encourages the realization of sustainable development in the aspect of water conservation (SDG 6). The awareness formed is in line with the concept of the mandate given by Allah to humans to take care of nature as a form of worship to Him. The main contribution of this research is the formulation of the three-dimensional PAI (K3) philosophical model, which stands for simplicity, collaboration and justice, which is examined through ontology, epistemology and axiology approaches. The model serves as a new functional theoretical framework for diagnosing the root of the water crisis, facilitating the synergy of fiqh al-biah and modern conservation technologies and ensuring equitable access to water.

The K3 model provides a strong guide for the implementation of findings in the field, such as those in this study such as eco-mosques and eco-riparians that have received less attention from academics, with this model emphasizing the importance of collaboration and fairness aspects in managing these two assets. So with the spirit of ecology through the K3 model, it is hoped that it will be able to be a bridge between Islamic law and state law, which is sometimes not in line, sometimes even opposite. Recommendations for future research to look at and research with in-depth empirical studies to test the effectiveness and implementation of this K3 model in the domestic area, namely households with all forms of waste management that they produce. The expansion of the methodology is highly recommended not only limited to literature reviews like this study, so that the data obtained is richer.

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Conflicts of Interest

The authors declare no conflict of interest.

Declaration of Generative AI Use

During the preparation of this work, the author used Gemini AI to assist in making connections and brainstorming, then used Grammarly to assist in improving the grammar, clarity, and academic tone of the manuscript. After using this tool, the author reviewed and edited the content as needed and took full responsibility for the content of the publication.

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