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# Eco-Theology of Water from the Perspective of Hadith: Thematic Study of *Al-Mā* ' Term

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Water is a vital natural resource for human life. The study of water has attracted the attention of scholars and scientists along with the ongoing destruction of nature. The combination of the two viewpoints of scientists and clergy on environmental issues led to a new study called eco-theology. This fact encourages researchers to conduct research on water eco-theology from a hadith perspective. The purpose of this study is to formulate the concept of the relationship between religious texts (hadith) and the environment which has become the biggest problem of mankind today. This study uses a library research, namely reading and exploring references related to the theme of the study. The results of the study show that the study of the term al-mā' in the texts of the prophet's hadith includes three main aspects, namely joint ownership of water (social function), oriented towards survival (ecological function), and water conservation (conservation function). The findings in this study are (1) attached to the social dimension of water, both regarding the basic needs of humans, and animals, including for agriculture to disaster emergencies. (2) water has an important role in the formation of ecology that encourages the emergence of human awareness to treat water well for the realization of an ideal living environment. (3) saving water from the threat of damage is also an important part of the Prophet's hadith about al-mā'. These three aspects confirm the relationship between religious texts and science.

# Kata Kunci

Eco-theologi, fungsi air, hadis tematik

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Air merupakan sumber daya alam yang vital bagi kehidupan manusia. Seiring dengan kerusakan alam yang terus terjadi, kajian tentang air telah menarik perhatian para agamawan maupun ilmuwan. Perpaduan dari dua sudut pandang ilmuwan dan agamawan terhadap persoalan



Abstract

lingkungan memunculkan satu kajian baru yang disebut eco-theologi. Penelitian ini bertujuan untuk menjelaskan relasi antara teks agama (hadis) dengan lingkungan. Penelitian ini menggunakan pendekatan library research, yaitu membaca dan mengeksplorasi referensi-referensi yang berkaitan dengan tema kajian. Hasil penelitian menunjukkan kajian term al-mā' dalam teks-teks hadis Nabi mencakup tiga aspek, yaitu kepemilikan bersama atas air (fungsi sosial), berorientasi pada kelangsungan hidup (fungsi ekologi), serta pemeliharaan air (fungsi konservasi). Hasil penelitian ini menyimpulkan bahwa (1) pada air melekat dimensi sosial baik menyangkut kebutuhan dasar manusia, hewan, termasuk untuk pertanian hingga darurat kebencanaan, (2) Kedua, air memiliki peran penting dalam pembentukan ekologi, dan (3) penyelamatan air dari ancaman kerusakan juga menjadi bagian penting dari hadis Nabi tentang al-mā'.

### Introduction

Humans can predict their future based on their current lifestyle.<sup>1</sup> The study of eco-theology is a way to design the fate of humans in the future, especially related to the carrying capacity of the environment for human life. Eco theology is also known as ecological theology. Theology is the study of God (Allah), while ecology is the study of the relationship between organisms in a living creature's habitat. Ezichi A. Ituma,<sup>2</sup> as quoted by Parid Ridwanuddin, stated that ecotheology is a study of the interrelation between religion and nature or the interrelation between religious texts and the environment.<sup>3</sup> Eco-theology studies are more specifically applied to water issues called water ecotheology. This is a study of how revelation (religious texts) gives instructions in treating water. Thus, ecotheology of water from a hadith perspective can be understood as how the Prophet's hadith positions water as a link in the environmental chain.

For living things, water functions to meet consumption needs and plays an important role

in creating a conducive environment for life. Unfortunately, humans saw that the water was from an anthropocentric point of view, placing them at the centre of everything. Water is always placed as an object, and put it functions as a tool to meet life. However, it was time for humans to place it as the subject of life. They must change the anthropocentric paradigm to eco-theocentric. Nature is a living being that must be respected and glorified. This study explored the eco-theology facts of water in the hadith of the Prophet SAW as an academic response to the lack of attention to water and the occurrence of environmental damage.

An outline of the hadiths that explain the problem of al-mā' include the issue of joint ownership of water, prohibition of commercialization of water sources, and recommendations for maintaining water. These three problems are the main problems faced by humans today. *First*, is the issue of water ownership as the livelihood of many people. Water should be shared, managed together, and enjoyed together. The state can represent all communities to manage water use so that it can be used easily, equitably, and cheaply. *The second* is the non-commercialization of water sources. Increasingly scarce water sources should ideally not be commercialized by any business

<sup>&</sup>lt;sup>1</sup>Ruhama Wazna and Hamim Ilyas, "The Logic Probability On Hadith (Counting Gender Occupants Of Heaven And Hell)," *Jurnal Ushuluddin* 27, no. 2 (2017): 145–61.

<sup>&</sup>lt;sup>2</sup>Ezichi A. Ituma, "Christocentric Ecotheology and Climate Change," *Open Journal of Philosophy* 3, no. 1A (2013): 126-130. <sup>3</sup>Parid Ridwanuddin, "Ekoteologi dalam Pemikiran Badiuzzaman Said Nursi," *Lentera* 1, no. 01 (2017).

entity. The community only needs to pay for the cost of packaging and distribution, while the form of water is provided free of charge. *Third*, regarding the maintenance of water.

Indonesia faced obstacles and challenges related to these problems. Ikhwanuddin, a researcher in hydrology and soil conservation, found that there are 16 watersheds (DAS) in Java that were experiencing a crisis, including the Bengawan Solo river. Besides, the rivers in Java experienced continuous water discharge. This finding pointedout that the condition of water in Java as the centre of the economy was very alarming. Meanwhile, Iskandar Johan's research found a decline in the water quality of the Singingi River in Kuantan Singingi Regency caused by gold mining activities in the area.<sup>4</sup> Arief Yandra and his colleagues also found the same findings on groundwater quality in Teluk Nilap village, Kubu Babussalam district, Rokan Hulu Riau.<sup>5</sup> These two findings – along with other findings in Sumatra, especially Riau - indicated that the decline in river quality and groundwater quality did not only occur in densely populated Java Island but also n other parts of the island.

Previous studies on the role of water in the environment can be mapped into four aspects. First, the damage to water quality as Jessica Martha found.<sup>6</sup> Second, the relationship between religion and the environment as written by Khairul Fuad on environmental theology in Islam and Eco-Pesantren.<sup>7</sup> Third, about the environmental crisis, such as Ridwanuddin's writings on environmental thinking Badiuzzaman Said *Nursi*.<sup>8</sup> Fourth, the study of eco-theology from a Christian perspective as written by Martibus Ngabalin.<sup>9</sup>

The global issues regarding the environment were the declining quality of water and the scarcity of water sources. Facts about water must be addressed properly because it can trigger a source of conflict in the future that threatens world security. Meanwhile, studies on water ecotheology from a religious perspective (including hadith) were expected to save human lives which are still very rare. This fact identifies that the study of water eco-theology has not attracted much attention from Muslim researchers. In fact, the study of eco-theology from the perspective of hadith in the field of water studies has not been found. There are many hadiths of the Prophet about water, including running water, water in the ground, water can grow, rain, and sea. The Prophet's hadith mentioned it should encourage new studies in the field of hadith that are environmentally oriented. Therefore, this studywas a relatively new field of study concerning the relationship between religion and the environment. Hadiths about water can be a new object of study so religious texts always develop. It becomes very important as an effort to

<sup>&</sup>lt;sup>4</sup>T. Iskandar Johan and Ediwarman Ediwarman, "Dampak Penambangan Emas Terhadap Kualitas Air Sungai Singingi di Kabupaten Kuantan Singingi Provinsi Riau," *Jurnal Ilmu Lingkungan* 5, no. 02 (2011): 168–83.

<sup>&</sup>lt;sup>5</sup>Arief Yandra Putra and Putri Ade Rahma Yulia, "Kajian Kualitas Air Tanah Ditinjau dari Parameter pH, Nilai COD dan BOD pada Desa Teluk Nilap Kecamatan Kubu Babussalam Rokan Hilir Provinsi Riau," *Jurnal Riset Kimia* 10, no. 2 (2019): 103–9.

<sup>&</sup>lt;sup>6</sup>According to him, there are four causes of damage to water quality, namely climate change, pollution, agriculture, and population growth. These four things are closely related to human attitudes towards the existence of water. Religious involvement is needed to guide humans in treating water. See, Jessica Martha, "Isu Kelangkaan air dan ancamannya terhadap keamanan global," *JIPSI-Jurnal Ilmu Politik dan Komunikasi* 7, no. 2 (2017): 147-158.

<sup>&</sup>lt;sup>7</sup>Although this study raises the issue of ecotheology, it does not specifically address water issues. This article discusses more about deforestation in Indonesia. See, Khairul Fuad, "Paradigma Teologi Lingkungan dalam Islam dan Eco-Pesantren," *Sosiologika: Jurnal Sosiologi Pembangunan Indonesia* 1, no. 1 (2020): 46–70.

<sup>&</sup>lt;sup>8</sup>This paper focuses on the environmental crisis in the form of forest destruction, the extinction of springs, and the destruction of the sea and its coast. Although this study is about ecotheology, it is more about explaining Said Nursi's views on the universe in general. A Christian researcher also wrote, Ecotheology; Theological Review of Environmental Safety. See, Ridwanuddin, "Ekoteologi dalam Pemikiran Badiuzzaman Said Nursi."

<sup>&</sup>lt;sup>9</sup>This study explains the position of God and humans towards nature and the position of nature in ecotheological studies according to the perspective of Christian theology. See, Marthinus Ngabalin, "Ekoteologi: Tinjauan Teologi Terhadap Keselamatan Lingkungan Hidup," *CARAKA: Jurnal Teologi Biblika dan Praktika* 1, no. 2 (2020): 118–34.

migrate *ulūmuddīn*-based knowledge to become *dirāsat Islamiyyah*.<sup>10</sup>

The Prophet's hadith which is the basis for the study of water ecotheology is, "lā yabūlanna ahadukum fi al-mā'i al-dāimi tsumma yaghtasilu *fīhi*".<sup>11</sup> The prohibition of disposing of biological waste contained in this hadith can be extended to the main issues surrounding water such as saving water sources, water utilization, and water quality maintenance. This paper seeks to examine the traditions of the prophet about water using the term *al-mā*'u with six steps.<sup>12</sup> First, search for all the traditions of the Prophet using the term  $al-m\bar{a}'u$  on Kutub al-Sittah (six books of hadith). Second, classify hadiths that have the same matan theme. Third, choose one hadith from each hadith that has the same theme. Fourth, determine the theme of each hadith that has been selected as a sample. Fifth, carry out the relevance of hadith to current issues by analyzing matan using a scientific perspective. Hadiths with social content are approached using a social science perspective, whereas traditions related to nature are approached from a natural science perspective. Sixth, formulating the contribution of hadith studies to recent developments.

#### Water in Hadith

There is a difference between the al-Qur'an and the hadith revealing water. The Qur'an mentions water is not only in its essential form but also majazi. Suc as, the Qur'an mentions water (|lau|) with four senses; river water, rainwater, nuthfah, al-Qur'an.<sup>13</sup> The last definition is understood as the likeness of water and the Qur'an in terms of its function. Water revives the earth while the Qur'an revives the heart. While the texts of the hadith of the Prophet SAW mention the essential meaning which includes six types of water; rainwater ( $m\bar{a}$ ' al-mathar), sea water ( $m\bar{a}$ ' al-bahr), Zam Zam water ( $m\bar{a}$ ' zamzam), well water( $m\bar{a}$ ' al-bi'r), water flow ( $m\bar{a}$ ' al-j $\bar{a}$ ri), snow water ( $m\bar{a}$ ' al-tsalji).

The Prophet's hadiths mention a lot about water. Referring to the search for Maktabah Syamila by entering the word (المساء) found the use of the wordal-mā' as many as 135 in Sahih Muslim and as many as 154 in Sahih Bukhari. Therefore, this study limited the hadiths that explained water in terms of its function and maintenance, which consists of three. First, is the position of water as a public property that cannot be controlled by either an individual or a group of people. Second, is the prohibition of commercializing water. Third, is the prohibition of dumping biological waste into the water. To see in more detail how the hadiths describe water, the following hadiths related to water are shown  $(al-m\bar{a}'u)$  accompanied by an explanation of the theme of each hadith.

Water is public property
 عَـنُ رَجُلٍ من المهاجرين مِنْ أَصْحَابِ النَّبِيِّ صلعم
 قَـالَ غَزَوَتُ مَعَ النَّبِيِّ صلعم تَلاَثًا أَسْمَعُهُ يَقُولُ:
 الْمُسْلِمُونَ شُرَحَاءُ فِى تَلاَثٍ فِى الْكَلِإِ و الْمَاءِ وَ وَالنَّارِ

"A friend of the Prophet from among the emigrants said that the Prophet said; Muslims are united in three: water, pasture and energy."

This Hadis is *takhrij* by Abu Daud in *Sunan Abu Daud* no. 3016<sup>14</sup> using two paths of narration. First, Ali bin Ja'di bin Ubaid (w.230 H) a *tabi' tabi'in* that *tsiqah*; Harīz bin 'Utsman bin Jabar (w. 163 H) a *tabi'in* that *tsiqah*; Hibban bin Zaid

<sup>&</sup>lt;sup>10</sup>M. Amin Abdullah, *Multidisiplin, Interdisiplin, & Transdisiplin; Metode Studi Agama & Studi Islam di Era Kontemporer*, 1st edition, ed. by Azaki Khoiruddin (Yogyakarta: IB Pustaka, 2020).
<sup>11</sup>Muslim bin Hajjaj bin Muslim al-Qusairy al-Naisabūrī, *Shahīh Muslim*, no. 424 (Riyad: Dār al-Thayyibah, 2006).

<sup>&</sup>lt;sup>12</sup>In contrast to the study of ma'anil hadith which usually uses the theory offered by Musahadi HAM, Abdul Mustaqim, Hasan Hanafi or others, the study is more inclined to thematic hadith research. So, the steps needed are thematic hadith research procedures. See, Asrul, *Hadis Tematik: Seri Bahan Ajar* (Yogyakarta: SUKA Press, 2022).

<sup>&</sup>lt;sup>13</sup>Jamaluddin Abul Faraj Abdurrahman Ibn al-Jauzi, *Nuzhah al-A'yun al-Nawādhir fi 'Ilm al-Wujūh wa al-Nadhā'ir* (Beirut: Mu'assasah al-Risālah, 1987).

<sup>&</sup>lt;sup>14</sup>Sulaiman bin Asy'ab bin Ishāq bin Basyīr al-Azdī Al-Sijistānī, Sunan Abī Dāud (Beirut: Dār al-Risālah al-'Ālamiyah, 2009).

a tabi'in that tsigah; and a friend of the Prophet. Second, Musaddad bin Musarhad bin Musarbal (w.228) a *tabi* ' *al-atba* ' that *tsiqah*; Isa bin Yunus bin Abi Ishaq (w.187), tabi 'al-atba' with tsiqah; Harīz bin 'Utsman bin Jabar (w. 163) a tabi'in with tsiqah; Hibban bin Zaid a tabi'in withs tsigah; and a friend of the Prophet. Looking at the quality of the narrators and the continuity of the chain, this hadith is declared authentic. Besides Abu Daud, Ahmad also narrated this hadith in the book Musnad Ahmad at no 22004,15 with different editorial composition; "Al-Muslimūna syurakā'u fī tsalāsin fi al-mā'i, wa al-kala'i, wa al-nāri. "Ibn Majah did *takhrij* this hadith no 2463,<sup>16</sup> with additional editorial; wa tsamanuhu harām and no 2464 with additional editorial; *lā yumna 'na*.

The issue of water ownership is formulated from the Prophet's instructions regarding the position of water in the social system of Islamic society (Abu Daud, 3016). Water cannot become private property because it moves freely in the soil. Water that appears on the surface of an area is water that travels from one place to another through soil cavities. The study of movement of water below can be studied through geohydrology.<sup>17</sup>. This knowledge can complement the study of thematic traditions regarding common ownership of water.

- 2. Non commercialization of water
  - عن جَابِرَ بْنَ عَبْدِ اللهِ يَقُول نَهَى رَسُول اللهِ صلعم عَنْ بَيْع ضِرَابِ الْجَمَلِ وَعَنْ بَيْع الْمَاءِ وَالأَرْضِ لِتُحْرَثَ.

"Jabir bin Abdullah said, The Prophet forbade selling the sperm (camel) of males, selling water, and selling land for cultivation." This hadith was narrated by Muslim in his book, *Shahih Muslim* chapter *tahrīmi bai'i fadhl al-mā'i* (It is forbidden to sell excess water than needed) no 2926.<sup>18.</sup> Besides, Nasa'i also did *takhrij* at no 4591,<sup>19</sup> with additional editorial, *yabī' al-rajulu ardhahu wa mā'ahu*. This history is authentic.

According to al-Nawawi, the prohibition on selling water in Muslim history no. 2926 is meant by the Prophet's prohibition on the owner of spring (which appears naturally) to sell excess water than he needs. Especially if the water is used to water the grass.<sup>20</sup> Meanwhile, according to Ibn Jauzi, this prohibition is closely related to the Prophet's statement, that humans associate with water.<sup>21</sup> The views of the two figures lead to a conclusion that the signs in the words of the Prophet are related to the ecological function inherent in water. The ecological function of water is strengthened by several functions of water recorded in the traditions of the Prophet, including the functions of thahārah (Bukhari no. 274), a function of syarāb (Ahmad no. 18598), a function of zara'ah (Bukhari no. 4219), and function of *al-ghusl* (Tirmidzi no. 96).

Water conservation
 عَنْ أَبِى هُرَيْرَةَ عَنِ النَّبِيِّ صلعم قَالَ: لاَ يَبُولَنَّ أَحَدُكُمْ
 فِى الْمَاءِ الدَّائِم ثُمَّ يَغْتَسِلُ مِنْهُ

"From Abu Hurairah, the Prophet SAW said: Do not let a person urinate in stagnant water and then he bathes from it."

This hadis was *takhrij* by Muslim in *Shahīh Muslim* nomor 424.<sup>22</sup> The same history is again

<sup>&</sup>lt;sup>15</sup>Ahmad bin Muhammad bin Hanbal, *Musnad Imām Ahmad bin Hanbal* (Beirut: al-Mu'assasah al-Risālah, 2009).

<sup>&</sup>lt;sup>16</sup>Muhammad bin Yazid al-Raba'ī al-Qazwainī, *Sunan Ibn Mājah* (Qāhirah: Dār al-Ihyā al-Kutub al-'Arabiyah, 2009).

<sup>&</sup>lt;sup>17</sup>Mardi Wibowo, "Model Penentuan Kawasan Resapan Air untuk Perencanaan Tata Ruang Berwawasan Lingkungan," *Jurnal Hidrosfir Indonesia* 1, no. 1 (2019).

<sup>&</sup>lt;sup>18</sup>Al-Naisabūrī, Shahīh Muslim.

<sup>&</sup>lt;sup>19</sup>Ahmad bin Ali bin Syu'aib bin Ali bin Sinān bin Bahar bin Dinār, *Sunan Al-Nasā'i* (Riyadh: Dār al-Hadhārah lil Tauzī', 2015).

<sup>&</sup>lt;sup>20</sup>Abu Zakarya Yahya bin Syaraf bin Husain al-Nawawi, *Al-Minhāj Syarh Shahīh Muslim bin Hajjāj*, second edition (Beirut: Dār al-Ihyā' al-Turāts al-'Arabī, 1392).

<sup>&</sup>lt;sup>21</sup>Abul Faraj Abdurrahman ibn Jauzī, Kasyf al-Musykil min Hadīs al-Shahīhain (Riyadh: Dār al-Wathan, 1997).
<sup>22</sup>al-Naisabūrī, Shahīh Muslim.

included in Muslim number 425 with a slightly different editorial; "*Lā tabul fil mā'i al-dā'imi alladzī lā yajrī*...; Don't pee in calm water that doesn't flow". The chain of sanad are Zuhair bin Harb, Jarir, Hisyam, Ibn Sirin, dan Abu Hurairah. Besides, this hadis was also takhrij by Bukhari no. 232 with the editor, "... *lā yajrī (not al-dā'im)*...".<sup>23</sup> Looking at the quality of the narrators in this series of hadith chains, all of which are tsiqah and meet the requirements for chain connection, this hadith is considered authentic.<sup>24</sup>

The Prophet's instructions in treating water sources as stated in Muslim number 424 are prophetic signs about maintaining water and water sources. Judging from the source, water can be classified into five, seawater, river water, dug well water, bore well water, and rainwater.<sup>25</sup> The stool is a form of biological waste that can pollute water and the environment. The Prophet's prohibition on disposing of faeces in water (which is used for bathing) can be used as a basis for pursuing waste bioremediation, an effort to detoxify pollutants using microbes and biocatalysts. The biotransformation process in bioremediation will result in biodegradation so that the structure of toxic pollutants can be degraded to eventually become harmless metabolites.<sup>26</sup> This is an effort so that wastes that are harmful to the environment (including water sources) can be changed and eliminated. Determine water quality, it can be done by measuring the physical parameters and chemical parameters in each water.<sup>27</sup> Japanese researcher Masaru Emoto in his work The Message from Water, as quoted by Armansyah Putra, said that water that is treated positively will

produce beautiful crystal forms.<sup>28</sup> These scientific facts indicate the ability of water to respond according to the conditions given to it.

# The function of Water According to Hadith

The study of the traditions regarding water through the term  $al-m\bar{a}$ ' made an important contribution to the emergence of the concept of the function and use of water.

### 1. Social function

The Prophet's hadiths explain implicitly the social functions of water. For instance, the hadith about the Prophet's command to Zubair to share water with garden owners around him, "*ya Zubair isqi tsumma arsil* (Bukhari, 2188). The scholars of hadith in classical times such as Badruddin al-"Aini author of the book '*Umdat al-Qâri Syarh Shahîh al-Bukhari* seem to have missed this hadith. In the contemporary era emerged Wahbah al-Zuhaili author of the book, *al-Fiqh al-Islam wa Adillatuhu* by referring to the narration provides an explanation that.<sup>29</sup>

ماءاألهنار العامة كالنيللكلواحداالنتفاعبو لنفسوودوابو وأرضيوبشر طعدماإلضر اربالغري

"The flow of river water (such as the Nile) can be used by anyone, whether it is for household purposes, pets, or for watering plants as long as it does not harm others."

This shows that water is attached to common rights, even though the water source is within one's territory. The land owner has the right to have as much water as he needs, the rest may be used by others. In the modern case, those who live in the upper reaches of the river have the right to take advantage of the flow of river water. At the same time, they must also be responsible

<sup>&</sup>lt;sup>23</sup>Muhammad bin Isma'il bin Ibrahim bin Mughirah al-Bukharī, *Shahīh al-Bukhāri* (Beirut: Dār Ibn Katsīr, 2002).

<sup>&</sup>lt;sup>24</sup>Ibn Hajar al-Asqalānī, *Tahdzīb al-Tahdzīb* (Qāhirah: Dār al-Kutub al-Islāmī, 2017).

<sup>&</sup>lt;sup>25</sup>Vivia Anggraini, "Identifikasi Kualitas Jenis Air di Kota Langsa," *Jurnal Hadron* 1, no. 2 (2019): 5–7.

<sup>&</sup>lt;sup>26</sup>Lud Waluyo, *Bioremediasi Limbah* (Malang: UMM Press, 2018).

<sup>&</sup>lt;sup>27</sup>Simon I. Patty, Fione Yukita Yalindua, and Putri Sapira Ibrahim, "Analisis Kualitas Perairan Bolaang Mongondow, Sulawesi Utara Berdasarkan Parameter Fisika-Kimia Air Laut," *Jurnal Kelautan Tropis* 24, no. 1 (2021): 113–22.

<sup>&</sup>lt;sup>28</sup>Armansyah Putra and Tomi Hidayat, "Isu Metafisika dalam Sains:(Kemampuan Air dalam Mentransmisi Emosi Manusia)," *Titian Ilmu: Jurnal Ilmiah Multi Sciences* 9, no. 1 (2017): 1–6.

<sup>&</sup>lt;sup>29</sup>Wahbah al-Zuhaily, *al-Fiqh al-Islām wa Adillatuhu*, vol. V (Kairo: Dar al-Fikr, 1985), 4556.

for preserving the clarity of the water for use by people living downstream of the river. Hadith Bukhari 2188 gives a signal that water has a social function as a source of life for living things. Water is a public right whose ownership cannot be dominated by individuals or certain institutions.<sup>30</sup>

The concept of shared ownership of water was also found in other narrations such as when the Prophet brought up the kindness of Hajar (Ummu Ismail) who had given Zamzam water to anyone who came to the valley of Mecca at that time (Bukhari, 2195). Sharing water as Hajar did - amid reduced water supply - is a modern human need. This concept can be a joint movement to realize harmonious social relations. Water sharing programs such as those carried out by the community in Pasarean Village, Bogor Regency can increase community participation in creating food security, health, and improving the quality of life.<sup>31</sup>. Humans live from water and they live together from it.

In addition to the public interest that can be used by humans, the concept of shared ownership of water also applies to animals (Bukhari, 2199). In this narration, the Prophet ordered that one should not block an animal (camel) from searching for water. For animals, water is not only a necessity for life but also a living habitat. In the current era, there are many arrangements for drinking water in the form of combination solutions (microminerals, vitamin A, fruit juices) to increase animal productivity, such as SD Kurnia's research on quail farming. Water quality in addition to affecting the productivity of livestock is also related to the quality of the animals themselves. Made Santiari conducted a study on the content of rainwater that is consumed

by cattle in the village of Teba Timur, Central Timor Regency. The study found that there was fairly high iron content in the meat of livestock that drank from puddles of rain. Water with such conditions is not recommended for consumption by livestock.<sup>32</sup>

Even in critical conditions, water is a means to provide help. An Ansar woman (Umm Sulaim) along with several other Ansar women accompanied the Prophet in war, apart from being medical personnel they also served as suppliers of drinking water (Muslim, 3375). Itindicated availability of water is a basic need in emergency conditions, both during disasters and emergencies caused by war. Victims of disasters such as floods, fires, and earthquakes always have difficulty in accessing clean water as experienced by the people of Lombok when an earthquake measuring 6.8 on the Richter scale occurred in 2018. Damage to the water pipe network infrastructure causes the community to find it difficult to obtain clean water. Meanwhile, the rupture of the septic tank resulted in many groundwater sources such as wells being polluted by biological waste.33

The four narrations above are sufficient to illustrate how the social function of water is not only related to human life, but also plants and animals. If the basic concepts contained in the hadith are developed for modern life, the use of water includes agriculture, plantations, fisheries, animal husbandry, including various other human needs. Recent history has placed water as an important point in the rescue process. Conditions that are closely related to emergencies such as war, disaster, or epidemic, are conditions where the availability of water is the most urgent social need. In fact, it is important to understand that

<sup>&</sup>lt;sup>30</sup>Agus Fakhrina, "Pengelolaan Sumber Daya Air di Dukuh Kaliurang: Perspektif Ekonomi Islam," *Jurnal Penelitian* 9, no. 1 (2013).

<sup>&</sup>lt;sup>31</sup>Irpan Ripa'i Sutowo and Ratu Nadya Wahyuningratna, "Komunikasi Pembangunan, Partisipasi Masyarakat dan Media Online Pada Program Berbagi Air di Desa Pasarean Kabupaten Bogor," *Journal of Digital Education, Communication, and Arts* (*DECA*) 3, no. 02 (2020): 87–103.

<sup>&</sup>lt;sup>32</sup>Made Santiari and Maria Angelina Tuas, "Analisis Kualitas Air pada Genangan Air Hujan sebagai Konsumsi Hewan Ternak di Desa Teba Timur Kabupaten Timor Tengah Utara," *Bioscientist: Jurnal Ilmiah Biologi* 9, no. 2 (2021): 599–604.

<sup>&</sup>lt;sup>33</sup>Ari Ramadhan Hidayat et al., "Penyuluhan Pemanfaatan Air Tanah Sebagai Alternatif Sumber Air Bersih dalam Keadaan Darurat Bencana," *Sinergi: Jurnal Pengabdian* 2, no. 2 (2020): 60–4.

the existence of water is closely related to social life. The Prophet told the story of a farmer who wastiqamah in giving one-third of the produce of his garden every harvest. The social spirit of the farmer causes rain to fall on the farmer's garden (Muslim, 5299).

Besides, the relationship between water and social life has also been stated in the Act. According to the Water Resources Law, Number 17 of 1997 Chapter V Article 21, water has social, environmental, and economic functions that are organized and realized in harmony. Although the hadith does not recognize the economic function of water, the state through the Water Resources Law Chapter 1 Article 9 Point (2) opens space (in the form of Cultivation Rights) for individuals and business entities to manage water. The state as mandated by the 1945 Constitution is delegated the power to regulate the use of water. According to Muhjidin, the two functions can be combined into a socio-economic function.<sup>34</sup> It can be concluded that the two functions have their characteristics, so they must be separated. The social function of water will gradually shift completely into an economic function and a business object. This issue has raised concerns from many parties.35

The shift in the function of water from social to economic causes other problems, such as the breakdown of social relations between community members. The level of unity and togetherness of a community can be measured by their attitude towards water. In a society with good social relations, water is treated as a public facility that must be treated together for the common good. On the other hand, in a society with a low level of solidarity, water is treated solely as an economic object. Examples that we can see in the community are the reduction in the togetherness system, local institutions, and a sense of ownership of common property. It makes the value of water also shift from the social dimension to the economic dimension.<sup>36</sup>

### 2. Ecological function

The concept of the existence of an ecological function in water comes from the hadith of the Prophet narrated by Muslim, 2926. The explicit meaning in the hadith originally was in the form of a prohibition on selling water, even though the water came out of someone's land. Especially if the water is used for watering the grass and drinking water for livestock. Here is al-Nawawi's view in *Syarh al-Nawawi 'Ala Muslim.*<sup>37</sup>

أما النهى عن بيع فضل الماء ليمنع بها الكلأ فمعناه أن تكون لانسان بئر مملوكة له بالفلاة وفيها ماء فاضل عـن حاجته ويكون هناك كلأ ليس عنده ماء الا هذه فلا يمكن أصحاب المواشـى رعيه الا اذا حصل لهم السقى من هذه البئر فيحرم عليه منع فضل هذا الماء للماشـية وبجب بذله لها بلا عوض

"The prohibition on selling the remaining water is intended so that the grass can benefit from the water. That is if a person has a well (spring) in his area, where the water exceeds his daily needs, and there is grass (plants) that depend on the presence of the water, the shepherd who needs the water to drink his livestock, the owner springs must provide the water without asking for compensation (payment)."

Grass and livestock have a big role in maintaining ecological sustainability. Animals in the concept of ecology, including livestock, need habitat in the form of oxygen, food, place, and water.<sup>38</sup> Allah provided the needs of these animals as a living facility for the sake of their mission on

<sup>&</sup>lt;sup>34</sup>Muhjidin Mawardi, "Air dan masa depan kehidupan," *Tarjih: Jurnal Tarjih dan Pengembangan Pemikiran Islam* 12, no. 1 (2014): 131–42.

<sup>&</sup>lt;sup>35</sup>Arlinta Prasetian Dewi and Okky Iskandar, "Jual Beli Air Bersih di Desa Banaran Kecamatan Pulung Kabupaten Ponorogo Perspektif Hukum Positif dan Hukum Islam," *Iqtishodia: Jurnal Ekonomi Syariah* 5, no. 1 (2020): 24–31.

<sup>&</sup>lt;sup>36</sup>Deny Hidayati, "Memudarnya Nilai Kearifan Lokal Masyarakat dalam Pengelolaan Sumber Daya Air," *Jurnal Kependudukan Indonesia* 11, no. 1 (2017): 39–48.

<sup>&</sup>lt;sup>37</sup>al-Nawawi, Al-Minhāj Syarh Shahīh Muslim bin Hajjāj.

<sup>&</sup>lt;sup>38</sup>Saroyo Sumarto and Roni Koneri, *Ekologi Hewan* (Bandung: CV. Patra Media Gravindo, 2016).

earth. Those who block water access to crops and livestock, unconsciously become a barrier to the ecological chain. This is among the wisdom of the Prophet forbidding to sell water (troublesome). Therefore, Islamic ecology researchers state that ecological conservation by caring for nature and its contents is part of tauhid to Allah SWT.<sup>39</sup>

Today, the discussion about ecology has become the centre of attention of scientists. New terms such as soil ecology, water, air, plant, animal, and insect ecology are evidence of ecology attracting researchers' attention. The Hadith of the Prophet narrated by Muslim (2926) discusses three sets of theories about ecology, namely animal ecology (*dhirāb al-jamal*), water ecology (bai'y al-mā'i), and soil ecology (al-ardh li tuhrats). Animals, water, and soil are one unit of habitat for living things. Allah sends down rainwater and stored ingroundwater, but eventually interflows, some are stored in the earth's basins, and some directly flow into rivers. The water on earth will evaporate into the atmosphere and then fall back into the rain. Such a water cycle is known as the hydrologic cycle (*daurah al-mā 'iyah*).<sup>40</sup> Water that appears either in the form of springs or in the form of dug wells is part of the water cycle process called outflow.

Implicitly the term outflow used in the study of water ecology by the Prophet is called *fadh al-mā'i*, Prophetic Hadith.<sup>41</sup>

"From Abu Hurairah, the Prophet SAW said; it is forbidden to hold excess water to prevent the growth of grass."

#### 3. Conservation Function

The Prophet SAW is a figure of saving natural resources, including water. The Prophet's instructions in treating nature are the theological basis for efforts to save nature and resources. Long before, the Prophet (Muslim, 2426) had signaled about the potential damage to water quality caused by melting lead (dzaub alrashās) and salt solution (dzaub al-milh). The prophet's instructions in the hadith are under the development of the situation. The words dzaub al-rashās and dzaub al-milh also evolved their meaning from a solution of tin and salt to a chemical substance that harms water.<sup>42</sup> Currently, the issue of saving water is a trending topic. The main problem is the problem of clean water quality. Why do we lack clean water when 70% of the earth is water? 97% of the water on earth is in the form of seawater. This means that only about 3% is freshwater, 2/3 of the 3% is in the form of glaciers and giant icebergs at the poles.<sup>43</sup> Data shows that 1 billion people on earth have difficulty accessing clean water and 1.5 billion experience water scarcity during the dry season. It seems that modern humans have to increase their attention to seawater so that the problem of water stress finds a solution. This is a universal human need considering that the availability and quality of water affect the level of health and nutrition.

Referring to the problem of saving water, two steps can be taken simultaneously. First, save fresh water that has been polluted or potentially damaged by various pollutants. Second, carry out the process of desalinating seawater to become fresh. Third, do water conservation. Referring to the Law of the Republic of Indonesia Number 7 of 2004 concerning Water Resources Chapter I Article 1 number (18), water resource conservation is an effort to maintain the existence

<sup>&</sup>lt;sup>39</sup>Ulya Fikriyati, "Orientasi Konservasi Lingkungan dalam Ekologi Islam," *Jurnal Bimas Islam* 10, no. 2 (2017): 197–222. <sup>40</sup>Ija Suntana, "Keabadian Air: Telaah Teologi Energi dalam Islam dan Hukum Termodinamika," *Afkaruna: Indonesian Interdisciplinary Journal of Islamic Studies* 14, no. 2 (2018): 242–61.

<sup>41</sup>al-Naisabūrī, 2006/ no. 2927.

<sup>&</sup>lt;sup>42</sup>Syarifa Wahidah al-Idrus, "Analisis pencemaran air menggunakan metode sederhana pada Sungai Jangkuk, Kekalik dan Sekarbela Kota Mataram," *Paedagoria: Jurnal Kajian, Penelitian dan Pengembangan Kependidikan* 5, no. 2 (2018): 8–14.

<sup>&</sup>lt;sup>43</sup>Mawardi, "Air dan masa depan kehidupan."

and sustainability of the condition, nature, and function of water resources so that they are always available in adequate quantity and quality. for the needs of living things now and in the future. The three efforts to save water need to be the attention of water practitioners and policymakers regarding the quality of life. In 2000, the Second World Water Forum held in The Hague stated that in 2025 many countries will experience a water crisis.<sup>44</sup>

Water conservation aims to support the continuity of carrying capacity, capacity, and water resources management. According to Law No. 7 of 2004 concerning Water Resources chapter III article 20 points (1) and (2), the form of water conservation consists of protection, preservation, preservation, management of water quality, and control of water pollution. Water conservation can be realized if the community has awareness of the function of water, and treats water from an exploitation paradigm to an exploration. That is, water is treated as a life partner. Water conservation techniques such as biopore, rainwater harvesting, physical water, ergonomics, wastewater treatment plant, use of sanitary equipment for green building council and making infiltration wells.45

Furthermore, it is clear that the Prophet's prohibition on disposing of biological waste in stagnant water (Muslim no. 424), experienced a shift in meaning due to the involvement of social and scientific sciences in the study of hadith. The results of the study of these traditions produce social and ecological functions attached to water, even though there are other functions of water, such as biological, economic, aesthetic, energy, and spiritual functions.<sup>46</sup> Through the concept of

water conservancy offered in this paper, efforts to treat waste by eliminating waste bioremediation are an ideal step amid high water pollution. In addition, massive water harvesting is necessary. This is important to be on the state agenda to save water quality and resources. Water conservation is directed by three models, bioremediation to restore water quality after being contaminated with toxic substances, desalinization to turn seawater into freshwater, and ground building council to save water use. No less important in terms of saving water is conducting the widest possible campaign on the issue of water conservation in various media. It is an effective and efficient means of disseminating information, ideas and ideas.47

# Conclusion

The study of the term *al-mx*' in the hadith, answers the purpose of research on how the interrelation between hadith and nature concerns water. The interrelation is seen in hadith concepts such as shared ownership of water, non-commercialization of water, and water conservation. The three hadith concepts are relevant to the development of the water function paradigm. In previous studies, water was described as having socio-economic functions. Meanwhile, in this study, water functions are being developed and specifications include social, ecological, and conservation functions. The findings of the study indicate that the history of Abu Daud number 3016 and other similar hadiths convey the concept of social functions inherent in water, namely the concept of shared ownership of water for agriculture, health, animal husbandry, and resquee from all emergency conditions. Hadith narrated by Muslim number 2926 hints at the function of water as the backbone of ecology.

<sup>&</sup>lt;sup>44</sup>Bagus Baidhowie, "Peran Pemerintah Desa dalam Menyediakan Kebutuhan Air Bersih di Desa Long Tesak Kecamatan Muara Ancalong Kabupaten Kutai Timur," *eJournal Ilmu Pemerintahan* 8, no.1 (2020): 27-40.

<sup>&</sup>lt;sup>45</sup>Vine Valenia David, Kancitra Pharmawati, and Djoni Kusmulyana Usman, "Implementasi konsep konservasi air di Gedung Apartemen X," *Jurnal Serambi Engineering* 4, no. 2 (2019).

<sup>&</sup>lt;sup>46</sup>Mawardi, "Air dan masa depan kehidupan."

<sup>&</sup>lt;sup>47</sup>Ria Candra Widayaningsih and Muhammad Irfan Helmy, "The Fiqh Al-Hadith Of Digital Media: The Method Of Hadith Understanding Of The Website Bincangsyariah. com And Its Contribution To The Moderate Islam Discourse," *Jurnal Ushuluddin* 29, no. 2 (2021): 163–75.

Water is the main link in environmental resilience, especially grass, trees, livestock and various types of insects. The Hadith of Muslim history number 424 concerning the prohibition of throwing feces in stagnant water has given birth to the concept of water conservation from all objects and activities that can damage its quality.

Based on the results of the research, it is hoped that the next researchers, especially those related to water eco-theology, can continue on more specific aspects. The study that is still lacking in this research lies in the freshwater culture aspect. Hadiths about water conservation need to be reviewed and developed in the direction of freshwater culture. The research is considered important considering the sources of clean water that continue to decrease. The freshwater concept developed from the background of hadith studies is expected to strengthen the relationship between religious texts and the expanse of the universe. Thank you to all those who have contributed to this research. The researcher does not forget to say that this research is free from any interest, except solely for the development of a more enlightening study of hadith.

#### References

- al-Asqalānī, Ibn Hajar. *Tahdzīb al-Tahdzīb*. Qāhirah: Dār al-Kutub al-Islāmī, 2017.
- al-Bukharī, Muhammad bin Isma'il bin Ibrahim bin Mughirah. *Shahīh al-Bukhāri*. Beirut: Dār Ibn Katsīr, 2002.
- al-Idrus, Syarifa Wahidah. "Analisis pencemaran air menggunakan metode sederhana pada Sungai Jangkuk, Kekalik dan Sekarbela Kota Mataram." *Paedagoria: Jurnal Kajian, Penelitian dan Pengembangan Kependidikan* 5, no. 2 (2018): 8–14.
- al-Jauzi, Jamaluddin Abul Faraj Abdurrahman Ibn. Nuzhah al-A'yun al-Nawādhir fi 'Ilm al-Wujūh wa al-Nadhā'ir. Beirut: Mu'assasah al-Risālah, 1987.

- al-Naisabūrī, Muslim bin Hajjaj bin Muslim al-Qusairy. *Shahīh Muslim*. Riyad: Dār al-Thayyibah, 2006.
- al-Nawawi, Abu Zakarya Yahya bin Syaraf bin Husain. Al-Minhāj Syarh Shahīh Muslim bin Hajjāj. second edition, Beirut: Dār al-Ihyā' al-Turāts al-'Arabī, 1392.
- al-Qazwainī, Muhammad bin Yazid al-Raba'ī. Sunan Ibn Mājah. Qāhirah: Dār al-Ihyā al-Kutub al-'Arabiyah, 2009.
- al-Sijistānī, Sulaiman bin Asy'ab bin Ishāq bin Basyīr al-Azdī. *Sunan Abī Dāud*. Beirut: Dār al-Risālah al-'Ālamiyah, 2009.
- al-Zuhaily, Wahbah. *al-Fiqh al-Islām wa Adillatuhu*. Kairo: Dar al-Fikr, 1985.
- Abdullah, M. Amin. Multidisiplin, Interdisiplin, & Transdisiplin; Metode Studi Agama & Studi Islam di Era Kontemporer.
  1st edition, ed. by Azaki Khoiruddin, Yogyakarta: IB Pustaka, 2020.
- Anggraini, Vivia. "Identifikasi Kualitas Jenis Air di Kota Langsa." *Jurnal Hadron* 1, no. 2 (2019): 5–7.
- Asrul, *Hadis Tematik: Seri Bahan Ajar*. Yogyakarta: SUKA Press, 2022.
- Baidhowie, Bagus. "Peran Pemerintah Desa dalam Menyediakan Kebutuhan Air Bersih di Desa Long Tesak Kecamatan Muara Ancalong Kabupaten Kutai Timur." *eJournal Ilmu Pemerintahan* 8, no.1 (2020): 27-40.
- David, Vine Valenia, Kancitra Pharmawati, and Djoni Kusmulyana Usman. "Implementasi konsep konservasi air di Gedung Apartemen X." *Jurnal Serambi Engineering* 4, no. 2 (2019).
- Dewi, Arlinta Prasetian and Okky Iskandar. "Jual Beli Air Bersih di Desa Banaran Kecamatan Pulung Kabupaten Ponorogo Perspektif Hukum Positif dan Hukum Islam." *Iqtishodia: Jurnal Ekonomi Syariah* 5, no. 1 (2020): 24–31.
- Dinār, Ahmad bin Ali bin Syu'aib bin Ali bin Sinān bin Bahar bin. Sunan al-Nasā'i.

Riyadh: Dār al-Hadhārah lil Tauzī', 2015.

- Fakhrina, Agus. "Pengelolaan Sumber Daya Air di Dukuh Kaliurang: Perspektif Ekonomi Islam." Jurnal Penelitian 9, no. 1 (2013).
- Fikriyati, Ulya. "Orientasi Konservasi Lingkungan dalam Ekologi Islam." *Jurnal Bimas Islam* 10, no. 2 (2017): 197–222.
- Fuad, Khairul. "Paradigma Teologi Lingkungan dalam Islam dan Eco-Pesantren." Sosiologika: Jurnal Sosiologi Pembangunan Indonesia 1, no. 1 (2020): 46–70.
- Hanbal, Ahmad bin Muhammad bin. *Musnad Imām Ahmad bin Hanbal*. Beirut: al-Mu'assasah al-Risālah, 2009.
- Handriatni, Ari. "Peran Islam dalam Penyelamatan Lingkungan." *Millah: Jurnal Studi Agama* 6, no. 2 (2016): 33–54.
- Hanum, Chairani. *Ekologi Tanaman*. Medan: USU Press, 2009.
- Hidayat, Ari Ramadhan et al. "Penyuluhan Pemanfaatan Air Tanah Sebagai Alternatif Sumber Air Bersih dalam Keadaan Darurat Bencana." *Sinergi: Jurnal Pengabdian* 2, no. 2 (2020): 60–4.
- Hidayati, Deny. "Memudarnya nilai kearifan lokal masyarakat dalam pengelolaan sumber daya air." *Jurnal Kependudukan Indonesia* 11, no. 1 (2017): 39–48.
- Ituma, Ezichi A. "Christocentric Ecotheology and Climate Change." *Open Journal of Philosophy* 3, no. 1A (2013): 126-130.
- Jauzī, Abul Faraj Abdurrahman ibn. *Kasyf al-Musykil min Hadīs al-Shahīhain*. Riyadh: Dār al-Wathan, 1997.
- Johan, T. Iskandar and Ediwarman Ediwarman. "Dampak Penambangan Emas Terhadap Kualitas Air Sungai Singingi di Kabupaten Kuantan Singingi Provinsi Riau." *Jurnal Ilmu Lingkungan* 5, no. 02 (2011): 168–83.
- Kurnia, Shinta Dwi, Tyas Rini Saraswati, and Sri Isdadiyanto. "Pengaruh Pemberian Mikromineral (Fe, Co, Cu, Zn), Vitamin (a,

B1, B12, C) dan Jus Mengkudu (morinda citrifolia l.) Terhadap Konsumsi Pakan, Bobot Lemak Abdominal dan Jumlah Folikel Ovarium yang Berkembang Pada Puyuh (coturnix coturnix japonica l)." *Buletin Anatomi dan Fisiologi dh Sellula* 23, no. 2 (2015): 43–7.

- Maggang, Elia. "Menampakkan Corak Biru Kekristenan Indonesia: Sebuah Perspektif Ekoteologi." *Indonesian Journal of Theology* 7, no. 2 (2019): 162–88.
- Martha, Jessica. "Isu Kelangkaan air dan ancamannya terhadap keamanan global," *JIPSI-Jurnal Ilmu Politik dan Komunikasi* 7, no. 2 (2017): 147-158.
- Mawardi, Ikhwanuddin. "Kerusakan Daerah Aliran Sungai dan Penurunan Daya Dukung Sumberdaya Air di Pulau Jawa Serta Upaya Penanganannya." *Jurnal Hidrosfir Indonesia* 5, no. 2 (2019).
- Mawardi, Muhjidin. "Air dan Masa Depan Kehidupan." *Tarjih: Jurnal Tarjih dan Pengembangan Pemikiran Islam* 12, no. 1 (2014): 131–42.
- Ngabalin, Marthinus. "Ekoteologi: Tinjauan Teologi Terhadap Keselamatan Lingkungan Hidup." *CARAKA: Jurnal Teologi Biblika dan Praktika* 1, no. 2 (2020): 118–34.
- Patty, Simon I., Fione Yukita Yalindua, and Putri Sapira Ibrahim. "Analisis Kualitas Perairan Bolaang Mongondow, Sulawesi Utara Berdasarkan Parameter Fisika-Kimia Air Laut." *Jurnal Kelautan Tropis* 24, no. 1 (2021): 113–22.
- Putra, Arief Yandra and Putri Ade Rahma Yulia. "Kajian Kualitas Air Tanah Ditinjau Dari Parameter pH, nilai COD dan BOD Pada Desa Teluk Nilap Kecamatan Kubu Babussalam Rokan Hilir Provinsi Riau." *Jurnal Riset Kimia* 10, no. 2 (2019): 103–9.
- Putra, Armansyah and Tomi Hidayat. "Isu Metafisika dalam Sains (Kemampuan Air

dalam Mentransmisi Emosi Manusia)." *Titian Ilmu: Jurnal Ilmiah Multi Sciences* 9, no. 1 (2017): 1–6.

- Ridwanuddin, Parid. "Ekoteologi dalam Pemikiran Badiuzzaman Said Nursi." *Lentera* 1, no. 01 (2017).
- Santiari, Made and Maria Angelina Tuas. "Analisis Kualitas Air pada Genangan Air Hujan Sebagai Konsumsi Hewan Ternak di Desa Teba Timur Kabupaten Timor Tengah Utara." *Bioscientist: Jurnal Ilmiah Biologi* 9, no. 2 (2021): 599–604.
- Sumarto, Saroyo and Roni Koneri. *Ekologi Hewan*. Bandung: CV. Patra Media Gravindo, 2016.
- Suntana, Ija. "Keabadian Air: Telaah Teologi Energi dalam Islam dan Hukum Termodinamika." *Afkaruna: Indonesian Interdisciplinary Journal of Islamic Studies* 14, no. 2 (2018): 242–61.
- Sutowo, Irpan Ripa'i and Ratu Nadya Wahyuningratna. "Komunikasi Pembangunan, Partisipasi

Masyarakat dan Media Online Pada Program Berbagi Air di Desa Pasarean Kabupaten Bogor." *Journal Of Digital Education, Communication, and Arts (DECA)* 3, no. 02 (2020): 87–103.

- Waluyo, Lud. *Bioremediasi Limbah*. Malang: UMM Press, 2018.
- Wazna, Ruhama and Hamim Ilyas. "The Logic Probability On Hadith (Counting Gender Occupants Of Heaven And Hell)." *Jurnal Ushuluddin* 27, no. 2 (2017): 145–61.
- Wibowo, Mardi. "Model Penetuan Kawasan Resapan Air untuk Perencanaan Tata Ruang Berwawasan Lingkungan." *Jurnal Hidrosfir Indonesia* 1, no. 1 (2019).
- Widayaningsih, Ria Candra and Muhammad Irfan Helmy. "The Fiqh Al-Hadith Of Digital Media: The Method Of Hadith Understanding Of The Website Bincangsyariah. com And Its Contribution To The Moderate Islam Discourse." *Jurnal Ushuluddin* 29, no. 2 (2021): 163–75.