

CHAPTER I

INTRODUCTION

A. Research Background

Water is essential for human life, even for all living things. Humans, animals, and plants cannot survive without water. The Qur'an mentions that water is the source of life, as written in Q.S. al-Anbiyâ`/21: 30.

أَوَلَمْ يَرَ الَّذِينَ كَفَرُوا أَنَّ السَّمَوَاتِ وَالْأَرْضَ كَانَتَا رَتْقًا فَفَتَقْنَاهُمَا^١ وَجَعَلْنَا مِنَ الْمَاءِ كُلَّ شَيْءٍ حَيٍّ أَفَلَا

يُؤْمِنُونَ

“Do not the unbelievers see that the heavens and the earth were joined together (as one unit of creation), before We clove them asunder? We made from water every living thing. Will they not then believe?”¹

Allah often mentions some great benefits of water through the Qur'anic verses, such as fertilizing the soil and growing plants, which could lead to the fulfillment of food for the needs of human life. One of the Qur'anic verses that mentioned about water benefits for humans and animals is Q.S. al-Nahl/16: 10.

هُوَ الَّذِي أَنْزَلَ مِنَ السَّمَاءِ مَاءً^٢ لَكُمْ مِنْهُ شَرَابٌ وَمِنْهُ شَجَرٌ فِيهِ تُسِيمُونَ

“It is He who sends down rain from the sky from it ye drink, and out of it (grows) the vegetation on which ye feed your cattle.”²

Sustainable Development Goals (SDGs) or Global Goals, which is a global action plan adopted by the United Nations (UN), has set clean water and

¹Abdullah Yûsuf 'Alî, *The Holy Qur'an* (King Fahd Holy Qur'an Printing Complex, n.d.), 923–24.

²Yûsuf 'Alî, 733.

sanitation as one of the targets that are expected to be achieved by 2030.³ The right to water and sanitation has now received wide international recognition, as in the 2010 Human Rights Council (HRC) resolution, which was also supported by the United Nations Children's Fund (UNICEF).⁴ The General Assembly of the United Nations, in its resolution A/RES/64/292, has declared clean drinking water and proper sanitation as fundamental human rights.⁵

Not in line with the high water demand, the water crisis still occurs today. In 2020, The World Economic Forum (WEF) noted in its annual report that the water crisis was in the fifth position in the top global risks based on its impact on society.⁶ In 2010, 1.2 billion people, or nearly one-fifth of the world's population, lived in areas where water was scarce (physical water scarcity). Furthermore, by 2025, it is estimated that 800 million people will live in countries or regions with absolute water scarcity, and two-thirds of the world's population will be under severe water scarcity conditions.⁷

The water crisis occurs not only in countries with a barren climate but also in relatively fertile areas such as Indonesia. Climate change has significantly impacted the water crisis and has caused clean water sources for the community, such as rivers, lakes, and wells to dry up. In 2019, ten regions experienced a long drought. Water availability is entering the crisis level in most areas of Java and

³Hyun Jung Park, "SDG 6 (Water and Sanitation)" (Executive Training Course for Policymakers on the 2030 Agenda and the Sustainable Development Goals (SDGs), Incheon, April 23, 2018), 4.

⁴Team of Writer, "The Right to Safe Water and to Sanitation," *UNICEF Current Issues*, no. 3 (2014): 1.

⁵Team of Writer, "The Human Right to Water and Sanitation," *Media Brief*, 2010, 1.

⁶Team of Writer, *The Global Risks Report 2020*, 15th ed. (World Economic Forum, 2020), 2.

⁷Team of Writer, "Water Scarcity: Key Emerging Trends and Challenges," *OCHA Occasional Policy Briefing Series*, no. 4 (2010): 4.

Bali. It is also expected to occur in South Sumatra, West Nusa Tenggara, and South Sulawesi in 2045.⁸

The water crisis does not always mean water scarcity but could also mean excessive water. For instance, in natural disasters such as floods, the quantity of water is excessive, but the floodwater is not suitable for drinking and sanitation.

The water crisis is not always in terms of quantity but can also be water quality. Based on a report from the United Nations University, 112 million people were affected by floods from 2005 to 2015, while 1.8 billion people used drinking water sources contaminated with feces.⁹ The availability of clean water is an urgent need for every human being, especially for city dwellers who face the threat of clean water scarcity due to development imbalances.¹⁰

The water crisis is not only related to social and health problems but also other areas of life, such as the economy. According to the World Water Assessment Program report, the total economic loss in South Africa in 2006 due to the difficulty of accessing clean water and sanitation was 28.4 billion dollars, or about 5% of Gross Domestic Product (GDP).¹¹ Lloyds's business company also justifies the role and urgency of water in the business field. All goods require water in production, so all companies, primarily agricultural and beverage companies, experience difficulties when the water crisis occurs.¹²

⁸Sri Nurhayati Qodriyatun, "Water Security in Climate Change," *Info Singkat: A Brief Study of Actual and Strategic Issues* XII, no. 6 (2020): 13–14.

⁹Team of Writer, *Global Water Crisis: The Facts* (Canada: UNU-INWEH, 2017), 2.

¹⁰Rohani Budi Prihatin, "Problem Air Bersih di Perkotaan," *Jurnal Info Singkat* V, no. 7 (2013): 11.

¹¹Team of Writer, "Water in a Changing World," *World Water Development Report* 3, n.d., 1.

¹²Team of Writer, "Global Water Scarcity: Risks and Challenges for Business," *Llyod's 360° Risk Insight*, n.d., 4.

Allah hinted at the water crisis issue as a rhetorical question to humans, as stated in Q.S. al-Mulk/67: 30.

قُلْ أَرَأَيْتُمْ إِنْ أَصْبَحَ مَاؤُكُمْ غَوْرًا فَمَنْ يَأْتِيكُمْ بِمَاءٍ مَّعِينٍ

“Say, “See ye?—If your stream be some morning lost (in the underground earth), who then can supply you with clear-flowing water?”¹³

The water crisis issue needs to be taken seriously, both through individual awareness and government policies. There have been many attempts to solve this problem, but very few studies have looked at it from a religious point of view. In this case, Islam as a religion that *rahmatan li al-'âlamîn* has a significant influence on humanity. Through the Islamic teachings in general or the Qur’anic verses in particular, humankind is commanded to preserve nature so that humans can live comfortably and peacefully in it. However, understanding of Muslims and all humans tend to regard religion as only a normative ritual and worship. The Qur’an came down as a way of life for humankind.

Throughout history, the Qur’an has been interpreted with various methods and styles, one of which is through the thematic approach (*tafsîr maudhû’î*). Comparing to other interpretation methods, the advantages of thematic interpretation are providing a complete understanding of a particular topic, making interpretation dynamic, and responding to the challenges of the times.¹⁴ Thematic interpretation is also easier to understand by people who do not study the Qur’anic studies specifically. It makes the author interested to use the thematic method (*maudhû’î*) in this research.

¹³Yûsuf ‘Alî, *The Holy Qur’an*, 1790.

¹⁴Sja’roni, “Studi Tafsir Tematik,” *Jurnal Study Islam Panca Wahana* 12 (2014): 10–12.

One of the topics that focus on thematic interpretation is the theme of the miracles in the Qur'an, which is correlated with modern science or scientific interpretation. Islamic scholars who agree on scientific interpretation have tried to extract knowledge from the Qur'an and continue to argue that the postulates of the Qur'an include all knowledge that can be achieved by contemplating the verses correlated with various sciences. Likewise, some Islamic scholars are also trying to prove that the Qur'an is in harmony with the development of science by drawing scientific theories correlated with the Qur'anic verses.¹⁵

Amid the debate on the validity of scientific interpretation, Islamic scholars have become more selective in seeing the types of valid interpretations. The Qur'an has provided precise answers to problems arising from the development of science, and the existence of scientific interpretation has positively contributed to the understanding and increasing faith in the Qur'an as a guide for human life. On the other hand, this scientific interpretation has led the mufassir to be trapped in *tafsîr bi al-ra'yi* (pure opinion), which can make the word of God lose its revelation value.¹⁶

Interpreting the Qur'an through contextual understanding beyond the literal meaning of the verse is necessary in modern times because the development of civilization develops more diverse and complex problems. In the Qur'an, one of the verses hints at the importance of water management and distribution that could be used as a solution in dealing with the water crisis is Q.S. al-Mu`minûn/23:18, as written in the following.

¹⁵Udi Yulianto, "Al-Tafsir al'Ilmi antara Pengakuan dan Penolakan," *Jurnal Khatulistiwa* 1, no. 1 (2011): 35–39.

¹⁶Yulianto, 40.

وَأَنْزَلْنَا مِنَ السَّمَاءِ مَاءً بِقَدَرٍ فَأَسْكَنَتْهُ فِي الْأَرْضِ وَإِنَّا عَلَىٰ ذَهَابٍ بِهِ لَقَادِرُونَ

“And We send down water from the sky according to (due) measure, and We cause it to soak in the soil; And We certainly are able to drain it off (with ease).”¹⁷

The background shows that all people should take the water crisis seriously to create a better and more prosperous world. The author believes the water crisis needs to be investigated from a scientific point of view and the Qur’anic perspective. The lack of specific studies on water conservation sourced from the Qur’an and integrated with scientific theories prompted the author to conduct research entitled **“Water Crisis Solutions in the Qur’anic and Scientific Perspective (Thematic Study).”**

B. Problem Statement

1. How are the solutions in the Qur’anic and scientific perspective to solve the problem of water quantity crisis?
2. How are the solutions in the Qur’anic and scientific perspective to solve the problem of water quality crisis?

C. Research Purpose

1. To find out the solutions in the Qur’anic and scientific perspective to solve the problem of water quantity crisis
2. To find out the solutions in the Qur’anic and scientific perspective to solve the problem of water quality crisis.

¹⁷Yûsuf ‘Alî, *The Holy Qur’an*, 980.

D. Research Significance

1. Theoretically, this research is expected to contribute knowledge and insight and become a reference for academics regarding water conservation, especially in overcoming the water crisis through the Qur'anic and scientific perspective.
2. Practically, this research can provide awareness about the water crisis issue and insight into water conservation efforts that every level of society can do to overcome.

E. Operational Definition

1. Solution

The term “solution” in Oxford Learner’s Dictionaries means a way of solving a problem or dealing with a difficult situation.¹⁸ This research includes solutions in preventing and overcoming the water crisis from the Qur'anic and scientific perspective, both in terms of quantity and quality aspects of the water crisis.

2. Water Crisis

The term “crisis” in Oxford Learner’s Dictionaries means (1) a time of great danger, difficulty, or confusion when problems must be solved, or important decisions must be made; or (2) a time when a problem, a bad situation, or an illness is at its worst point.¹⁹ The water crisis divides into the level of quantity and quality. The water crisis in quantity is often

¹⁸“Solution,” in *Oxford Advanced Learner’s Dictionary*, July 11, 2021, <https://www.oxfordlearnersdictionaries.com/definition/english/solution?q=solution>.

¹⁹“Crisis,” in *Oxford Advanced Learner’s Dictionary*, July 11, 2021, https://www.oxfordlearnersdictionaries.com/definition/english/crisis_1?q=crisis.

referred to as water scarcity. The water crisis in this study is not limited to water shortages or water scarcity but also includes water crisis in terms of quality.

3. Thematic Interpretation

Thematic interpretation is an interpretation method by collecting Qur'anic verses that have the same purpose or are related to the same topic and are arranged based on the period of the verse revelation by paying attention to *asbâb al-nuzûl, munâsabah*, then given comments and descriptions.²⁰

F. Previous Research

Research concerning the water crisis from the Qur'anic perspective is rarely studied. However, research about water, both in the Qur'anic and scientific perspective, has been reviewed quite a lot. The author summarizes as follows:

1. A book entitled "*Air dalam Perspektif Al-Qur'an dan Sains (Tafsir Ilmi)*" by Lajnah Pentashihan Mushaf Al-Qur'an. This book contains thematic studies on the water in the Qur'an and science, including the existence of water, distribution of water, the role and benefits of water, disasters caused by water, and the water crisis. This book elaborates interpretation of the Qur'anic verses about water with relevant scientific theories.²¹
2. An article entitled "*Kajian Tematik Air pada Siklus Air Menurut Perspektif Sains dan Al-Qur'an*" is compiled by Muhammad Maslan, Ahmad Muzakki, and Maharani Retna Duhita. This article examines specifically

²⁰Sja'roni, "Studi Tafsir Tematik," 2–3.

²¹Team of Writer, *Air dalam Perspektif Al-Qur'an dan Sains (Tafsir Ilmi)* (Jakarta: Lajnah Pentashihan Mushaf Al-Qur'an, 2011).

the water cycle implied in the Qur'anic verses. This article divides the types of water into seawater, rainwater, and river. Then the water cycle is analyzed using relevant verses, including Q.S. al-Baqarah verse 22 and Q.S. al-A'râf verse 57.²²

3. An article entitled "*Optimalisasi Manajemen Air dalam Al-Qur'an (Studi Surat Al-Ra'd Ayat 17)*" compiled by Ainiyatul Latifah. This study explores the views of the Qur'an Surah al-Ra'd verse 17 regarding water management as the duty of the caliph on earth. This research concludes that scientific progress can increase the spiritual value of humans and overcome the water crisis issue in the world, such as the concept of optimized water management through the application of renewable technologies, namely micro-hydro and underground water extraction.²³
4. An article entitled "The Urgency of Water for Human life in Science and Al Qur'an Perceptive" was written by Karana Yankumara. This study discusses the urgency and benefits of water in human life, both in human biological and social needs and religious rituals.²⁴
5. An article entitled "*Manfaat Air bagi Tumbuhan: Perspektif Al-Qur'an dan Sains*" by Ahlam Suskha, Rusydi AM, and Urwatul Wusqa. The article discusses the benefits of water for living things, predominantly plants, based on the instructions of the Qur'an and scientific theories. The

²²Muhammad Maslan, Ahmad Muzakki, and Maharani Retna Duhita, "Kajian Tematik Air pada Siklus Air menurut Perspektif Sains dan Al-Qur'an," *Teknosains* 15, no. 2 (2021).

²³Ainiyatul Latifah, "Optimalisasi Manajemen Air dalam Al-Qur'an (Studi Surat Al-Ra'd Ayat 17)," *Jurnal Prosiding Konferensi Integrasi Interkoneksi Islam dan Sains* 2 (2020): 4.

²⁴Karana Yankumara, "The Urgency of Water for Human Life in Science and Al Qur'an Perceptive," *Journal Intellectual Sufism Research (JISR)* 3, no. 1 (2020): 9–15.

study results include the function of water as a solvent for nutrients and a means of transport to move nutrients in plants.²⁵

6. An undergraduate thesis entitled “*Air Menurut Al-Qur’an (Kajian Tematik Tentang Isyarat Pelestarian Air dalam al-Qur’an)*” compiled by Hikmat. This paper discusses the nature of water from the Qur’anic perspective and the concept of water conservation in the Qur’an.²⁶
7. An undergraduate thesis entitled “*Konsep Pemanfaatan Air dalam Al-Qur’an (Studi Atas Pemikiran Tafsir Ibnu Kathir)*” written by Nila Nudiya Amburika. This paper discusses the meaning and benefits of water, focusing on Ibn Kathir’s interpretation. The result of this research which departs from Ibn Kathir’s interpretation is the division of the meaning of water into three, namely sustenance, enjoyment, and punishment. In contrast, the water usages are divided into four, namely water as an economical material, a means of worship, a means of transportation, and a source of energy.²⁷
8. An undergraduate thesis entitled “*Manfaat Air dalam Al-Qur’an Perspektif Sains Modern*” written by Himawan Abdullah. This paper focuses on the benefits of water through the interpretation of the Qur’anic verses accompanied by scientific theory. As written in the results of this study, some of the benefits of water include a stabilizer of the earth’s

²⁵Ahlam Suskha, Rusydi AM, and Urwatul Wusqa, “Manfaat Air bagi Tumbuhan: Perspektif Al-Qur’an dan Sains,” *Al-Quds: Jurnal Studi AlQur’an dan Hadis* 4, no. 2 (2020).

²⁶Hikmat, “Air Menurut Al-Qur’an (Kajian Tematik tentang Isyarat Pelestarian Air dalam al-Qur’an)” (Bandung, Universitas Islam Negeri Sunan Gunung Djati, 2021).

²⁷Nila Nudiya Amburika, “Konsep Pemanfaatan Air dalam Al-Qur’an (Studi atas Pemikiran Tafsir Ibnu Kathir)” (Ponorogo, IAIN Ponorogo, 2021).

temperature, fertilizer, means of transportation, and energy generation.²⁸

9. An undergraduate thesis entitled “*Al-Mâ’u dalam Al-Qur’an (Perspektif Sains)*” written by Ajhar Asy’ari. This study covers the nature of water from a scientific perspective, verses containing the term *Al-Mâ’u* in the Qur’an, and the role of water in human life through the Qur’anic and scientific view.²⁹

From several previous studies, no research has discussed the water crisis from the Qur’anic perspective. Several studies examine water from the Qur’anic and scientific perspective. However, the discussions only cover the nature of water, the water cycle, the role, benefits, and urgency of water in life, and does not cover the realm of water conservation. Meanwhile, other research on water conservation in the Qur’an does not include theoretical support from the realm of science. The author attempts to complement previous studies by examining Qur’anic verses related to water, particularly regarding the water crisis solution, by elaborating the Qur’anic interpretation and relevant scientific theories.

G. Research Methodology

1. Type and Method of Research

This research is library research that uses written materials, such as books, magazines, articles, manuscripts, and other documents. This study uses a qualitative approach, namely research procedures that produce descriptive data

²⁸Himawan Abdullah, “Manfaat Air dalam Al-Qur’an Perspektif Sains Modern” (Semarang, UIN Walisongo, 2019).

²⁹Ajhar Asy’ari, “*Al-Mâ’u dalam Al-Qur’an (Perspektif Sains)*” (Yogyakarta, UIN Sunan Kalijaga, 2017).

in written words.³⁰ This research was conducted by tracing reference sources from books, scientific articles, and other written documents related to the water crisis issues.

2. Data and Data Sources

a. Data

Data are facts and figures that can be used as material for compiling information.³¹ The data in this study are all information related to water and the water crisis issues, both in the Qur'anic verses and the interpretations, and scientific theories.

b. Data Sources

The data sources in this study are divided into two, namely primary and secondary data sources. The primary data sources in this study were Qur'anic verses related to water. The secondary data sources are from interpretation books (*tafsîr*), books, articles, or journals related to the water crisis and water conservation, both through the Qur'anic and scientific perspective.

3. Data Collection Techniques

Regarding the data collection techniques in this study, the author collects verses related to water and other similar terms, such as sea, river, and spring. Data collection techniques in this study used the help of the book *al-Mu'jam al-Mufahras li Alfâzh al-Qur`ân al Karîm* by Muḥammad Fu`âd 'Abd al-Bâqî.

³⁰Rahmadi, *Pengantar Metodologi Penelitian* (Banjarmasin: Antasari Press, 2011), 14–15.

³¹Rahmadi, 70.

4. Data Analysis Techniques

Data analysis in this study uses several stages. The author collects water-related verses, performs data reduction by taking relevant verses, and then classifies the verses based on the theme. The collected verses are then described and analyzed with references to authoritative commentaries and supported with scientific theories.

H. Writing Structure

The writing systematic of this research is divided into five chapters with the following details:

CHAPTER I is the introduction, includes the research background, problem statement, research purpose, research significance, operational definition, previous research, research methodology, and writing structure.

CHAPTER II contains the theoretical basis for the study of water in the Qur'anic verses and scientific theory, namely the definition, characteristics, types of water, water verses in the Qur'an, and the function of water in the Qur'anic and scientific perspective.

CHAPTER III contains a discussion of the water crisis from the Qur'anic and scientific perspective, including water quality criteria and the water crisis in terms of quantity and quality.

CHAPTER IV is an analysis of the water crisis solution in the Qur'anic perspective through a thematic interpretation supported by scientific theories.

CHAPTER V is the closure that contains conclusions from the author and suggestions for future research.