

The Current of Sufism in the Environmental Movement: Addressing the Environmental Crisis Through a Sufistic Approach

Azkie Rahmi^{1*}, Zulfan Taufik²

¹ Mahasiswa Prodi Aqidah dan Filsafat Islam UIN Sjech M. Djamil Djambek Bukittinggi

² Dosen Prodi Aqidah dan Filsafat Islam UIN Sjech M. Djamil Djambek Bukittinggi

*E-mail: azkiarahmi927@gmail.com

Abstract

The development of science and technology today shows two contradictory faces. On the one hand, science and technology provide so much convenience for humans, but on the other hand it also provides so many serious, complex and multidimensional global crises such as the environmental crisis. Therefore, this paper tries to “see” the Sufistic approach as the spiritual (esoteric) dimension of Islam towards nature in order to contribute positively to efforts to overcome the environmental crisis. This research is a library-based research with a qualitative approach. Through library research, it is found that Sufism with its doctrines such as *wahdat al-wujud*, *al-insan al-kamil*, *amanah-khalifah*, as well as its practical guidance through *maqamat* and *ahwal*, *ilm* and *amal*, can contribute positively in changing the worldview of modern humans who are anthropocentric into spiritualists. Because with these doctrines, modern humans are invited to rediscover the vision of divinity that they have left behind, and understand that nature is a theophany (*tajalli*) of God that cannot be separated from God Himself. They are also required to treat nature responsibly, as it is an amanah to them as God's khalifah on earth.

Keywords: sufism, ecological crisis, modernism

Abstrak

Perkembangan sains dan teknologi dewasa ini menunjukkan dua wajah kontradiktif. Di satu sisi, sains dan teknologi memberi begitu banyak kemudahan bagi manusia, namun di sisi lain juga memberi begitu banyak krisis global yang begitu serius, kompleks, dan multidimensional seperti krisis lingkungan. Oleh karenanya, tulisan ini mencoba “melihat” pendekatan sufistik sebagai dimensi spiritual (esoterik) Islam terhadap alam guna dapat berkontribusi positif dalam upaya-upaya menanggulangi krisis lingkungan. Penelitian ini merupakan riset berbasis kepustakaan (*library research*) dengan pendekatan kualitatif. Melalui riset kepustakaan ditemukan bahwa tasawuf dengan doktrin-doktrinnya seperti *wahdat al-wujud*, *al-insan al-kamil*, *amanah-khalifah*, serta bimbingan praktisnya melalui *maqamat* dan *ahwal*, *ilm* dan *amal*, dapat berkontribusi positif dalam merubah *worldview* manusia modern yang antroposentris menjadi manusia yang spiritualis. Karena dengan doktrin-doktrin tersebut, manusia modern diajak untuk menemukan kembali visi keilahian yang selama ini mereka tinggalkan, dan memahami bahwa alam sebagai teofani (*tajalli*) Tuhan yang tidak bisa dipisahkan dari Tuhan itu sendiri. Mereka juga dituntut untuk memperlakukan alam dengan penuh tanggung jawab, karena hal tersebut merupakan *amanah* kepada mereka sebagai khalifah Tuhan di bumi.

Kata Kunci: sufisme, krisis lingkungan, modernisme

Introduction

The various multiple crises that haunt humanity this century are the main concern that must be addressed. Starting from the moral crisis, cultural crisis, educational crisis, natural crisis and other crises, this has slowly eroded human welfare. It happened damage to natural resources (land, water and air), deforestation, forest degradation and forest fires, the extinction of various biological species, rising sea levels and the sinking of several islands, and the spread of various diseases are forms of environmental crises that must be immediately sought solutions.

The environmental crisis is a global crisis whose impact transcends national, ethnic, ideological, culture, and religion. This problem has actually become a common discourse at the international level by gathering strength from the leaders of developed countries through high-level conferences (*summits*) such as the Kyoto Protocol, the *United Nation Framework Convention on Climate Change* (UNFCCC), and the *United Nation Environment Program* (UNEP). These various environmental meetings are held in collaboration with a country's regional bodies. Meanwhile, in academic circles, popular works such as *The Silent Spring* by Rabel Carson (1962), *The Historical Roots of Our Ecological Crisis* by Lynn White (1967) and *Tragedy of the Commons* by Garret Hardins (1968) marked the beginning of discourse about the environmental crisis in the 60s -an.¹

The birth of modern epistemology, which is a combination of rationalism, empiricism and positivism, has given birth to a scientific method that is based on logic and can be proven empirically. Thus, new knowledge can be recognized as scientific if it is logically coherent (coherent) with previous truths and supported by empirical facts.² With such an epistemology, modern science has produced scientific and technological progress that is very beneficial for human prosperity. However, this epistemology has also removed humans from nature, from each other, even from themselves. Bateson, through his article, *Pathologies of Epistemology*, stated that Western epistemology had made fundamental errors, which resulted in disaster and misery for humanity.³

In line with Bateson above, Fritjof Capra said that science and technology with its inherent modern values, apart from making human life easier, also has a serious, complex and multidimensional impact on the global crisis. The dimensions of this crisis include intellectual, moral and spiritual aspects, and touch almost all aspects of life, such as economics, politics, science and technology, environmental quality and human social relations.⁴ This seems relevant to the problems currently affecting Indonesia. In fact, Indonesia's condition is presented with increasingly complex environmental damage problems which are increasingly in an alarming condition.

¹ Kirkpatrick Sale, *Revolusi Hijau: Sebuah Tinjauan Historis Kritis Gerakan Lingkungan Hidup di Amerika Serikat* (Jakarta: Yayasan Obor Indonesia, n.d.), Bab I.

² Jujun S. Suriasumantri, *Ilmu Dalam Perspektif: Sebuah Karangan Tentang Hakikat Ilmu* (Jakarta: Yayasan Pustaka Obor Indonesia, 2012), 10.

³ Gregori Bateson, *Steps to an Ecology of Mind* (New York: Ballantine Books, 1972), 487.

⁴ Fritjof Capra, *Titik Balik Peradaban* (Yogyakarta: Benteng Budaya, 1999), 3.

According to the Environmental Service report, several environmental degradation problems were found. He said that the first problem was found in the fact that the rate of deforestation reached 1.8 million hectares/year, which resulted in 21% of Indonesia's 133 million hectares of forest being lost. Loss of forests causes a decrease in environmental quality, increases the incidence of natural disasters, and threatens the preservation of flora and fauna. Second, 30% of the 2.5 million hectares of coral reefs in Indonesia were damaged. Damage to coral reefs increases the risk of disasters in coastal areas, threatens marine biodiversity, and reduces marine fisheries production.

Third, high air pollution, water pollution, land pollution and sea pollution in Indonesia. Even in 2010, the Citarum River was named the Most Polluted River in the World by the huffingtonpost.com site. The *World Bank* also ranked Jakarta as the city with the third highest pollutants after Beijing, New Delhi and Mexico City. Hundreds of rare and endangered Indonesian plants and animals. According to IUCN Redlist records, 76 Indonesian animal species and 127 plant species are in the highest threat status, namely Critically Endangered status, and 205 animal species and 88 plant species are in the Endangered category, and 557 animal species and 256 plant species are Vulnerable status.⁵

The occurrence of environmental degradation, according to the anthropocentric paradigm, which places humans at the center of the universe is caused by human consumptive and exploitative behavior.⁶ Achmad Mubarak also explained that the multiple crises that occurred were caused by an imbalance in the reality of human life living in the circle of modern civilization which indirectly uses technology as the highest reference. As a result, human values are distorted and humans experience dehumanization because they do not have the intellectual, mental and mental abilities to overcome modern civilization.⁷ Apart from that, the environmental crisis is said to be the result of the Western worldview's mistake of marginalizing religious spirituality.⁸

Various real efforts have been made to prevent and minimize the impacts caused by the environmental crisis. Various international conferences on the environment were held in response to the increasingly worrying condition of the earth's carrying capacity, such as conferences in Stockholm (1972), Nairobi-Kenya (1982), and Johannesburg (2000). Even after the Konferensi Tingkat Tinggi Bumi (KTT) in Rio De Janeiro (1992), climate change summits were regularly held every year. This began with the 1st Summit in Berlin in 1995 and continued with the 15th Summit in Denmark in 2009. The several high-level meetings held showed how important the problem of damage was.environmentglobal in the contemporary world. However, like an iceberg, most efforts focus only on the tip of the

⁵ Dinas Lingkungan Hidup Kabupaten Luwu Utara, "Kerusakan Lingkungan Hidup dan Penyebabnya," Dinas Lingkungan Hidup Kabupaten Luwu Utara, 2017, <https://dlh.luwuutarakab.go.id/berita/5/kerusakan-lingkungan-hidup-dan-penyebabnya.html>.

⁶ Abdul Quddus, "Ecotheology Islam: Teologi Konstruktif Atasi Krisis Lingkungan," *Ulumuna: Jurnal Studi Keislaman* 16, no. 2 (2012): 312.

⁷ Achmad Mubarak, *Solusi Krisis Keruhanian Manusia Modern: Jiwa dalam AlQur'an* (Jakarta: Paramadina, 2000), 4.

⁸ Abdul Quddus, *Green religion: Konservasi Alam Berbasis Spiritualitas Islam* (Mataram: Sanabil, 2020), 90.

problem without examining the roots. It is not surprising that these efforts have not produced significant results.

Interesting to note is the development of the latest ecological discourse which makes religion a very important factor in overcoming this crisis. In fact, nowadays religion is being sought again and is hoped to be able to solve various difficulties faced by humans.⁹ The Global Ethics Declaration was created as a basis for dealing with human ecological problems at the Parliament of World Religions conference held in Chicago from 28 August to 5 September 1993. Then in Jakarta and Trawas-East Java, a workshop took place with the theme *Traditional Belief and Religious Approaches to Environmental Preservation*.¹⁰

The developments above reflect human awareness of the impact of their rationality abilities which actually shackle humans and give rise to many disasters. Capra argues that there is development in science that is not accompanied by spiritual insight results in many natural disasters, such as environmental damage. Therefore, Capra encouraged scientists to abandon the scientific paradigm which was too materialistic and fragmentary and to ignore spiritual and religious issues.¹¹ In line with Capra, Seyyed Hossein Nasr wrote many works describing how the Earth has changed due to advances in science, technology, and capitalist economics. His works are basically centered on the spiritual crisis of modern humans. Therefore, Nasr emphasized that embracing spirituality again is important to overcome the current environmental crisis. Then he emphasized how important it is to use perennial wisdom and spirituality to rebuild a harmonious relationship between humans, nature and God.¹²

The study of ecosufism through a Sufistic approach is interesting. For studied more deeply. To find the novelty of this study, the author explored several previous studies that are relevant to the theme discussed. The *first* research was conducted by Wiwi Siti Sajaroh entitled "*Wahdah al-Wujud and Nature Conservation: Sufism Studies on the Environment*". His research focuses on Ibn 'Arabi's concept of wahdatul wujud in placing nature as a unity that cannot be separated from the three elements, God, humans and nature, which is then compared with the theories of illumination, tajalli, hikmah muta'alliyah and atomism.¹³ *Second*, Ridhatullah Assya'bani's research entitled "*Eco-Futurology (Ziauddin Sardar's Thoughts)*", his research focuses on the thoughts of Ziauddin Sardar who is considered an observer of mass ecology based on his studies such as sharia as *problem solving*, *tazkiyyah*, hierarchy of consciousness and futurology. The results of this study indicate a new discourse in Islamic ecological discourse, namely eco-futurology, a perspective constructed through awareness, between environmental awareness (nature) with divine awareness and awareness of the future.¹⁴

⁹ Quddus, 90.

¹⁰ Syamsul Arifin, *Spiritualitas Islam dan Peradaban Masa Depan* (Yogyakarta: Sipress, 2006), 177.

¹¹ Capra, *Titik Balik Peradaban*, xi.

¹² Seyyed Hossein Nasr, *Islam and the Plight of Modern Man* (London: Longman, 1975), 4.

¹³ Wiwi Siti Sajaroh, "Wahdah Al-Wujud dan Pelestarian Alam: Kajian Tasauf tentang Lingkungan Hidup," *Ilmu Ushuluddin* 2, no. 1 (2014): 69.

¹⁴ Ridhatullah Assya'bani, "Eko-Futurologi: Pemikiran Ziauddin Sardar," *Dialogia* 15, no. 2 (2017): 247, <https://doi.org/10.21154/dialogia.v15i2.1193>.

Third, Restu Aulad al-Fattaah's research entitled "*The Interaction of Sufism, Ecology and Theology in the Era of Postmodernism: Between Wahdat al-Wujûd Ibn 'Arabi and Sulûk al-Ghazali*", his research concluded that ecosufism and the concept of Sufism as a methodology for Islamic theology can be the first step to overcome the influence that comes from outside also builds the stability of the faith from within through the concept of suluk which was initiated by al-Ghazali.¹⁵ *Fourth*, Muhammad Iqbal's research with the title "*Creating Energy Awareness Through the Concept of Caliph fi al-'Ard*". His research concluded that the basis of the "*caliph fi al-'ard*" concept was a comprehensive knowledge of energy consciousness.¹⁶

After explaining the results of previous studies that are relevant to the theme raised, the author finds that there are differences in the studies that the author will examine. *First*, Wiwi Siti Sajaroh's study only focuses on Ibn 'Arabi's concept of *wahdatul wujud* as an effort to preserve nature. *Second*, Ridhatullah Assya'bani's study presents energy awareness of nature, namely between environmental awareness and divine awareness. *Third*, Restu Aulad al-Fattaah's study which integrates Ibn 'Arabi's concept of *wahdatul wujud* with al-Ghazali's concept of *suluk*. *Fourth*, Muhammad Iqbal's study discusses the concept of "*caliph fi al-'ardh*" as a form of awareness of nature. Meanwhile, researchers examine the Sufi concept by presenting nature as a blessing, nature as verse, and nature as *mi'raj* as a practical effort to invite modern humans to view nature.

Furthermore, to gain a comprehensive understanding, researchers used *library research* with a qualitative approach. In analyzing the data, the author uses a descriptive analyst model. The focus of library research is to find various theories, laws, postulates, principles, opinions, ideas, etc. that can be used to analyze and solve the problems being studied. In other words, this research looks at previous books related to the research topic. Library research, does not require field research and is limited to library collection materials. This paper aims to "see" the Sufistic approach as a spiritual (esoteric) dimension of Islam towards nature in order to make a positive contribution to efforts to overcome the environmental crisis. This approach became known as ecosufism.

Results and Discussion

The Sins of Modernism: The Philosophy of Anthropocentrism

The majority of experts believe that the incompatibility of the axiological values (practical dimensions) of science is the main cause of environmental damage. However, the facts have shown that the contemporary scientific paradigm built in the West is the main cause of this damage. A philosophy that considers the structure and reality of the cosmos to be very mechanistic and materialistic originate from his phenomenal ontological approach. So that automatically reduces its spiritual value.

¹⁵ Restu Aulad Al-Fattaah, Muhammad Iqbal, dan Muhammad Rusydi, "Interaksi Sufisme, Ekologi dan Teologi di Era Postmodernisme: Antara wahdat al-wujûd Ibn 'Arabi dan sùluk al-Ghazali," *Al-Banjari: Jurnal Ilmiah Ilmu-Ilmu Keislaman* 22, no. 1 (2023): 19, <https://doi.org/10.18592/al-banjari.v22i1.7671>.

¹⁶ Muhammad Iqbal, "Mewujudkan Kesadaran Energi Melalui Konsep Khalifah Fi al-'Ard," *Penelitian* 13, no. 2 (2016): 187.

According to Western Scientific Philosophy Doctrine, the cosmos (nature) has no special purpose. Nature, like a giant machine that moves mechanistically. Nature has a neutral position, like science, because there is no “*The Other*” that overcomes nature. Nature must submit completely to human desires in order to succeed. Anthropocentrism, a product of modernism, is based on the belief that humans have absolute power over nature, placing humans at the center of every rule applied to nature. This ethical neutrality of science (and nature) then colors epistemological and axiological theories.¹⁷

Anthropocentrism is an environmental ethical theory that makes humans the core of the universe system. Humans are believed to be able to directly and indirectly influence ecosystems and other natural policies. The highest value is human interest. Only humans receive attention and value. Everything in this universe will receive attention and value as long as it supports and is for the benefit of humans.¹⁸ Thus, humans lose their spiritual value when they become masters of their own fate. Ironically, as Roger Garaudy said, in the end modern humans cannot answer their own life questions.¹⁹

The paradigm of human domination over nature, which involves the development of science and technology to explore and exploit nature for human benefit, has resulted in an arrogant form of science and technology, which has resulted in unstable ecological conditions. Historically, Western rationalism and humanism, which positions humans above all else, is the philosophical basis of this ecological existence. The modern human mindset towards nature, for Franz Magnis-Suseno, is called a technocratic approach, namely a natural resource management paradigm that is based on an understanding of simply mastering (and even conquering) nature.²⁰

The view that the world is just a machine has replaced the concept of the universe as something organic, living, and spiritual. The new research methods masterfully developed by Francis Bacon, which incorporated mathematical explanations and analytical reasoning methods developed by Rene Descartes, formed the basis of modern science. Bacon's passion changed the paradigm about the goals of scientific research. The goal of science since ancient times has been to gain wisdom by understanding how life and the natural order are in harmony with each other. With the basic ecological attitude of science, knowledge is sought "for the glory of God." However, this view has changed from ecological-integrative to self-assertive in the contemporary era.²¹ Since Bacon, science and technology have been used for purposes completely contrary to nature, and the purpose of science has changed to knowledge being used to master and control nature. According to him, nature must be “hunted in its wanderings,” “bound into service,” and “made a slave,” and the goal of scientists is to take nature's secrets by force.

¹⁷ Arifin, *Spiritualitas Islam dan Peradaban Masa Depan*, 189.

¹⁸ Lorens Bagus, *Kamus Filsafat* (Jakarta: PT. Gramedia Pustaka Utama, 2002), 60.

¹⁹ Roger Garaudy, “The Balance Sheet of Western Philosophy in This Century,” *ISTAC* (Malaysia, 1998), 397.

²⁰ Franz Magnis Suseno, *Etika Sosial* (Jakarta: Gramedia, 1991), 197.

²¹ F Mayer, *A History of Ancient and Medieval Philosophy* (California: University of Redlands, 1950), 75.

This perspective changed and became something significant and revolutionary in the further development of Western civilization. Two great figures from the 17th century, Rene Descartes and Newton, improved Bacon's opinion. Descartes argued that scientific knowledge must be true because he separated two distinct and independent realms: the realm of mind, or *res cogitans*, "thinking being" and the realm of matter, or *res extensa*, "vast matter."²² In his view the material universe has no purpose, life, or spirituality, and is simply a machine. Nature works based on mechanical laws, where everything in nature can be explained in terms of the order and movement of its parts.

This image of highly mechanically transformed organisms influenced the way humans viewed nature. Even Descartes shared Bacon's view that science aims to master and control nature, and claimed that we can become masters and owners of nature by using information obtained from science. This is due to the idea that the organic world implicitly supports ecological behavior.²³

Since the Renaissance, efforts to eliminate the world of metaphysics from modern human life have begun. Philosophical schools such as rationalism, empiricism, positivism and materialism later became the pillars of modernism.²⁴ Therefore, Nasr truly believes that the crisis that has hit modern civilization is caused by the gradual elimination of *artiwiyah* from human life and the rejection of things that are spiritual. Much evidence shows that humanity's attempt to live on bread alone, seeking to kill all Gods, and defying the powers of heaven, is the cause of the environmental crisis, psychological imbalance, and environmental ugliness in such cities. Nevertheless, humans cannot avoid the consequences of their actions, which are also the consequences of their current living conditions. According to Nasr, the only possibility for humans is to change from being a creature that disbelieves into a creature that is at peace with God and submits to Him.²⁵

Nasr said that modern humans made two big mistakes in understanding and formulating human concepts. First, considering humans as the only ones who have the authority to determine the truth of world power, especially from Descartes' idea of "*cogito ergo sum*". Second, considering humans to be the same as objects that can be perceived (*positivism*) or just material particles and economic creatures. As a result, scientifically advanced Western societies are not only unable to achieve happiness in their lives, but they are instead filled with fear and dread caused by the prosperity of their lives.²⁶ The epistemological principles above are the cause of the emergence of crises in modern society, both in the social and material ecosystems. Furthermore, ethical neutrality in natural epistemology (*dedivinization*), *deus otiosus*, God has retired. Even Nietzsche stated that God was dead. The immanence, even

²² Francisco Budi Hardiman, *Filsafat Modern: Dari Machiavelli Sampai Nietzsche* (Jakarta: PT Gramedia Pustaka Utama, 2007), 39–40.

²³ Capra, *Titik Balik Peradaban*, 62–63.

²⁴ More clarity regarding the views of these streams, Look: Francisco Budi Hardiman, *Filsafat Modern: Dari Machiavelli Sampai Nietzsche*.

²⁵ Seyyed Hossein Nasr, *Man and Nature: The Spiritual Crisis of Modern Man* (London: Allen and Unwin, 1981), 18.

²⁶ Nasr, *Islam and the Plight of Modern Man*, 12.

transcendence of God becomes completely meaningless. So there are no moral ties whatsoever for modern humans in any of their actions, including towards nature. Nature can be "tortured" with unlimited "scientific" exploitation.

Nasr argues that problems such as the ecological crisis, environmental destruction by technology, and modern amnesia are the result. Because he has been trapped in his own circle of life, modern man has forgotten who he really is. They have acquired a knowledge of the world that, although quantitatively extraordinary, is still very shallow. He has portrayed himself as foreign and untrue. Once he gets to know the world in this way, he tries to use this external knowledge to reconstruct his personal picture. As a result, humans are increasingly far from the center of their existence and their cosmic environment because of the various "falls" that have occurred.²⁷

Sufism's Perspective on Nature

As stated by Mulyadhi Kartanegara, the Sufi concept of nature includes many aspects, but there are three characteristics which according to him are most relevant to the theme of environmental ethics, namely nature as a blessing, nature as *verse*, and nature as *mi'raj*.²⁸

1. Nature as a blessing

As stated in the Qur'an, Allah states that everything created is for the benefit of humans.²⁹ Indeed, humans have been treated by both nature and God in a very special way. However, we as humans who are given gifts, often do not realize how great the blessings nature has given us. As Mulyadhi said, only after we pay attention and reflect, we will realize and be amazed by the countless blessings nature has given us.³⁰ Sufis believe that humans have a special position in the natural and cosmic order as part of nature. Humans are considered the "ultimate goal of creation" and God's representatives on earth (*khalifatullah fi al-ardh*), humans are considered as creatures. Therefore, humans are given the right to control nature only to the extent of their theomorphic existence (*theomorphic*), not as a rebellion against heaven, as many modern humans do today.³¹

The concept of *khalifatullah fi al-ardh* must not be understood in the sense of ruler (*domination over*) on earth because this understanding tends to position humans as more powerful than nature or the environment. The ideal expression put forward by Musthafa Abu-Sway regarding *khalifatullah fi al-ardh* is an attitude of responsibility towards the environment. According to this argument, the idea of God's agency will only be useful if the use of nature is carried out within a management framework full of ethics and responsibility.³² In line with Yusuf Qaradawi, he connects *khalifatullah fi al-ardh* with "*ibadah*," which means

²⁷ Nasr, 4.

²⁸ Mulyadhi Kartanegara, *Mengislamkan Nalar: Sebuah Respon terhadap Modernitas* (Jakarta: Penerbit Erlangga, 2007), 160.

²⁹ See QS. al-Baqarah [2]: 164

³⁰ Kartanegara, *Mengislamkan Nalar: Sebuah Respon terhadap Modernitas*, 161.

³¹ Kartanegara, 162.

³² Musthafa Abu Sway, "Towards an Islamic Jurisprudence of the Environment: Fiqh al-Bi'ah Fi al-Islam," 1998, <http://homepages.iol.ie/~afifi/Articles/htm>.

working to plant, improve, support, and avoid dangerous things.³³ Thus, in an ecological framework, *kehalifatullah fi al-ardh* is not the same as a king; he is a combination of king, prophet, morality, ethics, and vertical and horizontal responsibility that focuses on the wisdom of religion and human civilization. It is more comprehensive and includes all the most popular biotic families in the world.

2. Nature as *verse* (signs of God)

The word nature in Arabic comes from the word 'alam, which is one root word with 'ilm (knowledge) and 'alamat (sign). It is so named because this universe is a sign of the existence of the Almighty Creator, namely God Almighty. In Greek, the universe is called kosmos, which means harmony, harmony.³⁴ In line with Fazlur Rahman's view which says that the universe is a sign of the existence of something above it, and without that something, the universe and its natural causes would never exist.³⁵

In the Islamic religion, nature is never considered as an entity that is not connected to other higher realities. On the other hand, Islam considers nature as verses, or signs of God's power, which are the original source of reality.³⁶ Sufis saw nature as a symbol of higher realities, in contrast to the way modern people see it from a physiological and quantitative point of view. Nature is a universal mirror that reflects everything in the world (upper dimensions), a vast panorama of symbols that speak to humans and have meaning for them. Sufis often refer to nature as a shadow in this condition.³⁷

Nature is called the shadow of God, because nature is the means for us to understand the Ultimate Reality. Because the universe originates from the Infinite and the Absolute, the universe is the key to unlocking the secrets of human existence like the secrets of the universe. The embodiment of the Absolute in the form of symbols (*rumuz*) is an ontological aspect. It is the revelation of a higher order of reality within a lower order, which allows man to find his way back to the sublime world. Accepting the multi-level structure of the universe and the many levels of life is the way to understand symbols.³⁸

3. Nature as *mi'raj* (Spiritual Ladder)

For Sufis, nature is a place to carry out their spiritual journey (*spiritual voyage*). According to Mulla Sadra, there are four journeys that must be taken, namely *safar min al-kehalq ila al-Haq* (journey from the realm of creatures to God); *safar fi al-Haq ma'a al-Haq* (journey in Allah with Allah); *safar min al-Haq ila al-kehalq ma'a al-Haq* (journey from Allah to creation with Allah); and *safar fi al-kehalq ma'a al-Haq* (journey with Allah in creation).³⁹ Humans see the existence of nature at the level of universal existence (*al-wujud al-kulli*) in

³³ Yusuf Al-Qaradhawi, *Islam Agama Ramah Lingkungan* (Jakarta: Pustaka Al-Kautsar, 2002), 25–26.

³⁴ Nurcholish Madjid, *Islam Doktrin dan Peradaban* (Jakarta: Paramadina, 1992), 289.

³⁵ Fazlur Rahman, *Tema-tema Pokok Al-Qur'an* (Bandung: PT Mizan Pustaka, 2017), 100.

³⁶ See QS. Ali 'Imran [3]: 190-191.

³⁷ Kartanegara, *Mengislamkan Nalar: Sebuah Respon terhadap Modernitas*, 163.

³⁸ Seyyed Hossein Nasr, *Tasawuf: Dulu dan Sekarang* (Jakarta: Pustaka Firdaus, 1991), 118.

³⁹ Husein Shahab, *Mazhab Tasawuf Perspektif Ahlul Bait* (Bandung: Pustaka Hidayah, 2000), 85.

their relationship with the universe. This allows humans to know where they come from, why they live, and where they are going. As stipulated in the Qur'an with its great words: "Indeed, we belong to Allah and to Him we return."⁴⁰

Ibn Sina (d. 1037) described the spiritual journey of humans, in the form of a fictional-narrative work (*visionary recital*), namely the *Risalah al-Thayr*. *Risalah al-Thayr* tells the story of a butung who was trapped in the earth, then had to stay in a cage for a long time, so that in the end he forgot his heavenly origins. This continued until one day a flock of birds from the sky passed over him, singing a heavenly song. Hearing the song, the bird in the cage tried to call them. After meeting him, he realized how trapped he had been in the world's cage, and wanted to return to his heavenly origin (heaven). To return to its heavenly origin, the bird must undertake a heavenly journey through eight cosmic peaks, the higher, the more beautiful. And the journey ended with the bird meeting the King of birds whose beauty surpassed any beauty he had ever experienced. He is the King from whom all existing birds originate.⁴¹

It can be understood from the explanation above that nature (the physical world) is just one of the other worlds, which functions as a ladder to climb the spiritual ascent (*mi'raj*) to the peak of existence, namely God. With this analysis, it can be understood that Sufism's view of nature is different from the views of materialists and idealists. Nature is considered something spiritual by idealists, who regard it as something virtual, false, and false; what is real is the concept itself. Meanwhile, materialists argue that whatever exists at the same time is natural and cannot be changed.⁴² In Sufism's perspective, the universe was created according to His rules, most of which have been understood by humans through research into ratios. Nature is not empty maya; that is the actual reality.⁴³ So, it can be used by humans as a facility and tool to fulfill their needs as the best creation. while fulfilling his obligations as caliph in this world and as a servant who must serve Allah.⁴⁴ In summarizing his views on nature compared to the Qur'an, Fazlur Rahman stated that the main studies of the Qur'an regarding the universe are: (1) that it is a cosmos, an order; (2) that it is a developing, dynamic order; (3) that it is not a zero-sum game but must be taken seriously.⁴⁵

Sufism as an Ethical Basis for Environmental Conservation

Many international environmental declarations and conventions, as well as environmental conservation concepts and ideas, are now considered insufficient to reduce the negative impacts caused by contemporary science. Modern ecologists are starting to turn to local traditions and world religions. Its sources come from the customs of indigenous

⁴⁰ See QS. al-Baqarah [2]: 191.

⁴¹ Kartanegara, *Mengislamkan Nalar: Sebuah Respon terhadap Modernitas*, 166. Excerpts of stories of the spiritual journeys of other Sufis such as Farid al-Dīn 'Aththar, Ibn 'Arabī, and Jalal al-Dīn Rūmī, can be seen in: Mulyadhi Kartanegara, *Menyelami Lubuk Tasawuf* (Jakarta: Penerbit Erlangga, 2006), 203-225.

⁴² Louis O Kattsaff, *Pengantar Filsafat* (Yogyakarta: Tiara Wacana, 1996), 224.

⁴³ See QS. at-Tin [95]: 4, "Indeed, We have created humans in the best form".

⁴⁴ See QS. al-Baqarah [2]: 30, "Remember when your Lord said to Malikat that I will make a caliph on the face of the earth." Also QS al-Dzariyat [51]: 56, "And I did not create jinn and humans except so that they would worship Me".

⁴⁵ Fazlur Rahman, *Konsep al Qur'an tentang Tuhan, Alam dan Manusia* (Bandung: Mizan, 1998), 75.

tribes in the interior, as well as Taoism, Confucianism, Jainism, Hinduism, Buddhism and Abrahamic beliefs (Judaism, Christianity and Islam).⁴⁶

Tu We-Ming states there are three concepts of spiritual source inheritance that can serve as a moral basis for a safer future for Earth.⁴⁷ *First*, the religious ethical traditions of the modern Western world, especially Greek philosophy, Judaism and Christianity. To enable noble values such as the sacredness of the Earth, continuity, and beneficial interactions between humans and nature, dichotomies such as matter, spirit, body, mind, sacred, profane, human, and nature must be transcended. According to the traditions of Judaism and early Christianity, living a vegetarian life was necessary to maintain the continuity of nature and check human power over it. The principle of *bal tashchit*, which means “do no harm,” is one of the most important principles known to the Jews in human relations with nature.

Second, Traditions from non-Western civilizations that include Hinduism, Jainism, Taoism in East Asia and Islam. The term “samkya” in Hindu tradition refers to respect for the five great elements (*maha bhuta*), namely earth, water, fire, air and space. Every object can be used as a tool to remember Brahman, which transcends form (*nirguna*). As in the Taoist belief, human life is connected to nature because humans are part of it. Tu We-Ming is of the view that the above traditions provide complete and useful sources in building human relationships with nature, world views, ceremonies, institutions and educational models. *Third*, original traditions from various tribes, such as Native American, Hawaiian, Maori and other traditions. In some of the indigenous traditions and cultures above, nature is considered a sacred object or spirit, therefore humans must respect it and not exploit it.

Although Tu We-Ming acknowledged that religious approaches, methodologies and ethical orientations were different from those religious traditions, he said that it was necessary to enrich and reinterpret the three spiritual source legacies above. He concluded that efforts to explore these traditions were a big step towards finding solutions to overcome the ecological crisis and its various negative aspects.⁴⁸

From the explanation above, it can be understood that in order to escape the catastrophic environmental crisis, modern humans must change their *worldview* about the environment which is secular, dualistic and mechanistic. Therefore, in this position, Sufism as an esoteric dimension of Islam, can contribute positively in changing this *worldview*. As Nasr stated, Sufism is considered to have the ability to revive many aspects of the spiritual life of modern humans, because this tradition is rich in metaphysical and cosmological doctrines.⁴⁹ Sufism with its rich doctrines, especially *wahdat al-wujud* and *al-insan al-kamil*, as

⁴⁶ Dieter T. Hessel dan Rosemary Radford Ruether, *Christianity and Ecology: Seeking The Well-Being of Earth and Humans* (Cambridge: Harvard University Press, 2002).

⁴⁷ Tu We-Ming, “Melampaui Batas Pencerahan”, dalam Mary Evelyn Tucker dan John A. Grim, *Agama, Filsafat dan Lingkungan Hidup* (Yogyakarta: Kanisius, 2003), 15. The book was translated from the original book with the title *Worldview and Ecology: Religion, Philosophy and Environment*.

⁴⁸ See: Tu We-Ming, “Visi Antropokosmik dalam Pemikiran Islam”, in Ted Peters, Muzaffar Iqbal, dan Syed Nomanul Haq, *God, Life, and The Cosmos: Christian and Islamic Perspective* (London: Ashgate Publishing, 2002), 199.

⁴⁹ Nasr, *Living Sufisme* (London: Mandala Books, 1980), 18–19.

well as its practical guidance through *maqamat* and *ahwal*, as well as *al-'ilm* and *al-'amal* is believed to be an ethical-moral basis for viewing nature and contributing to conservation environment.

The doctrine of *wahdat al-wujud* was developed by the Spanish Sufi Ibn al-'Arabi, according to whom Allah is Almighty in terms of His essence (substance) and infinite in terms of His names and attributes, but He can only be known through His names and attributes as absolute essence (substance). That is, without going through this universe, He cannot possibly be known by anyone, not even God, because what God says is that there must be someone who believes in Him.⁵⁰ With his doctrine, Ibn al-'Arabi has brought about very basic developments in the teachings of Sufism. Starting from the view that there is only God, which is the basis of the *makrifah* view of Sufism, furthermore, he sees this universe as an external appearance (*tajalli*) of the names and attributes of God, but the names and attributes of Allah That, according to his teachings, is His absolute essence (substance), appearing in the form of limited nature, so that there is only one thing, namely Allah.⁵¹

The doctrine of *wahdat al-wujud*, according to Nasr, is a direct consequence of the *shahada* which emphasizes that it is impossible for there to be two truly independent realities or existences, because that would mean *shirk*.⁵² In addition, Nasr stated that the aim of all Islamic metaphysics is to attain knowledge of Divine unity (*al-tawhid*), just as the aim of all fields of cosmological science is to discover the unity of all existence. This is the idea that allows cosmology to become a "tool of conceptual integration" because its goal is to obtain knowledge that shows how things are related to each other and to higher levels of the *cosmic hierarchy*. In this way, it becomes knowledge that enables the integration of diversity into unity.⁵³ Fazlun Khalid stated that the principle of *tawhid* is a primordial testimony to the unity of all creatures (*shahadah*) and a symbol of the unity of Allah's creation, starting from the smallest parts such as minerals, plants, animals, humans and the rest of the universe.⁵⁴

According to Ismail Raji al Faruqi, as perpetrators of moral actions, humans must have the ability to change themselves, each other, society, nature and their environment so that they can actualize God's patterns or commands both in themselves and in others.⁵⁵ Not only relationships here, but the unity of nature, or the principle of *tawhid*, must pervade every human action and belief. Regarding this connection, Fazlur Rahman expressed what exists between God, nature and humans, he said: "Indeed, nature is so closely intertwined and works with such regularity that it is a miracle of Allah: this is endlessly stated in the Qur'an".⁵⁶ Hasan Askari added that it is important to see the relationship between God, nature and humans, he said:

⁵⁰ Ibn Al-'Arabi, *Fushush al-Hikam* (Beirut: Dar al-Kitab al-'Arabi, 1980), 81.

⁵¹ Al-'Arabi, 191.

⁵² Seyyed Hossein Nasr, *Ideals and Realities of Islam* (London: George Allen and Unwin, 1975), 137.

⁵³ Seyyed Hossein Nasr, *Science and Civilization in Islam* (New York: New American Library, 1968), 97.

⁵⁴ Fazlun Khalid, "Islam and The Environment", in Ted Munn et al., *Encyclopedia of Global Environmental Change* (Chichester: John Wiley & Sons, 2002), 337.

⁵⁵ Ismail Raji Al-Faruqi, *Tawhid* (Bandung: Pustaka, 1988), 12.

⁵⁶ Rahman, *Tema-tema Pokok AL-Qur'an*, 99.

"We need a principle of unification that connects matter with humans, humans with nature, to unite the physical imagination within humans and the physical reality outside of them into one reality. Maybe we don't know what it is called, but it is clear that what can save us from all the disasters of nuclear war, the extinction of the human race on earth or damage to the ecosystem is to look at the unity between the psychic and the physical".⁵⁷

Sufi cosmology pays attention to qualitative and symbolic aspects rather than quantitative aspects, as does modern science. It captures the light upon objects, making them precious, understandable, and clear subjects of contemplation (*tafakkur*), dispelling the usual obscurity and darkness. The main focus of Sufi cosmology and natural science is to show the prototype of the universe and show the relationship between all objects and all cosmic life shown to be alive by nature. It's as if there's only one thing to pay attention to when checking it out.⁵⁸ Apart from *wahdat al-wujud*, the most important thing is the doctrine of *al-insan al-kamil* (perfect human).⁵⁹ In the perspective of Sufism, humans are not just "thinking creatures" as defined by many experts, but creatures who within themselves have various levels of existence, although most humans are not aware of the greatness of their nature and the possibilities contained within them. Only holy people realize the totality of perfect human nature and are therefore perfect mirrors in which God reflects Himself. God created the world to be known, as stated in the hadith: "I am a hidden treasure, I want to be known, therefore I created the world".⁶⁰

According to Ibn al'Arabi, although every human being has the potential to become *al-insan al-kamil*, he said that *al-insan al-kamil* is only a perfect human being who depicts the names and attributes of God, and he has reached the dignity of his consciousness the highest, namely fully realizing one's true relationship with God. Humans have the ability to maximize their potential thanks to this perfection.⁶¹ According to Nasr, from these various benefits, Islam places humans as God's caliphs on earth and servants who are required to worship Him. As servants of God, humans must be passive before God and accept whatever His grace is; as caliphs of Allah, they must be active in the world, maintain the balance of nature, and spread God's grace as the main center. This is God's promise to humans. In this context, Nasr believes that the word "subdue" (*sakhsakhsara*) mentioned in Qs al-Hajj [22]: 65 must be

⁵⁷ Jon Avery dan Hasan Askari, *Menuju Humanisme Spiritual: Kontribusi Perspektif Muslim-Humanis* (Surabaya: Risalah Gusti, 1995), 77.

⁵⁸ Nasr, *Tasawuf: Dulu dan Sekarang*, 42.

⁵⁹ The term perfect human (*al-insan al-kamil*) was first known in the Islamic world around the beginning of the 7th/13th century AD based on the idea of Ibn al-'Arabī (d. 1240 AD) to refer to the concept of the ideal human being which was the locus of appearance (*tajalli*). Lord. After the death of Ibn al-'Arabī, the term immediately spread throughout the Islamic world through his followers, such as Shadr al-Dīn al-Qunāwī (d. 667 AH), Jalal al-Dīn Rūmī (d. 672 AH), Mahmūd Sabistārī (d. 710 AH), and further developed by 'Abd al-Karīm al-Jilli (d. 827 AH). For more details, see: Yunasril Ali, *Manusia Citra Ilahi: Pengembangan Konsep Insan Kamil Ibn 'Arabi oleh al-Jilli* (Jakarta: Paramadina, 1997), 16.

⁶⁰ According to Ibn Taimiyah, the sanad of this hadith is not known among hadith experts, therefore Ibn Taimiyah stated that it is not a hadith, see: Ibn Taimiyah, *Majmu' Fatawa* (Beirut: Dar al-'Arabiyyah, n.d.), 132.

⁶¹ A.E Afifi, *The Mystical Philosophy of Muhyid-Din Ibnul 'Arabi* (Cambridge: Cambridge University Press, 1939), 118.

interpreted as mastery over something that God wills for it, not conquest or exploitation wildly and without control. This mastery must continue to take into account and be in line with God's law (*sunnatullah*). That is the task given to humans as caliphs of Allah.⁶²

Then, with the teachings of *maqamat* and *ahwal*, such as asceticism, patience, tawakkal, and so on, Sufism develops human morals and equips people to have a strong mentality. Sufism reminds modern humans that the source of knowledge is not only birth experience (empiricism), reason (rationalism), but also revelation and intuition.⁶³ With the doctrine of balance between contemplation and action, knowledge and charity, Sufism makes modern humans aware that knowledge must be practiced for the benefit of humanity and nature as a whole (namely emancipatory interests and preserving the environment).⁶⁴

By adopting Sufi cosmological values in the metaphysical, spiritual, qualitative and aesthetic aspects of the universe, human knowledge as a whole will be able to reveal the veil of *al-Haq*. This will have a good impact on the human spirit and will create ecological balance in the human spiritual environment. And by using metaphysical principles, we will be able to rebuild harmony, which will dissolve humans' desire to control nature and encourage them to combine their desire to utilize natural resources with the qualities of contemplation and love. As a result, humans will change from robbers of the earth to become God's caliphs on earth (*khalifatullah fi al-ardh*).

Conclusion

The Sufi concept of nature includes many aspects, but there are three characteristics that are most relevant to the theme of environmental ethics, namely nature as a blessing, nature as *verse*, and nature as *mi'raj*. Apart from that, Sufism with its doctrines such as *wahdat al-wujud*, *al-insan al-kamil*, *amanah-khalifah*, as well as its practical guidance through *maqamat* and *ahwal*, 'ilm and 'amal, can contribute positively in changing the anthropocentric *worldview* of modern humans into spiritual human beings and as a basis for human ethics in "getting along" with the natural environment. Because with these doctrines, modern humans are invited to rediscover the divine vision that they have abandoned, and understand that nature is God's theophany (*tajalli*) which cannot be separated from God Himself, so that they no longer treat nature arbitrarily. Apart from that, they are also required to treat nature responsibly, because this is their mandate as God's vicegerents on earth.

Bibliography

- Afifi, A.E. *The Mystical Philosophy of Muhyid-Din Ibnul 'Arabi*. Cambridge: Cambridge University Press, 1939.
- Al-'Arabi, Ibn. *Fushush al-Hikam*. Beirut: Dar al-Kitab al-'Arabi, 1980.
- Al-Faruqi, Ismail Raji. *Taubid*. Bandung: Pustaka, 1988.

⁶² Nasr, *Man and Nature: The Spiritual Crisis of Modern Man*, 96.

⁶³ Regarding the differences between Western and Islamic epistemologies, see: Kartanegara, *Mengislamkan Nalar: Sebuah Respon terhadap Modernitas*, 2–8.

⁶⁴ Nasr, *Islam and the Plight of Modern Man*, 69.

- Al-Fattaah, Restu Aulad, Muhammad Iqbal, dan Muhammad Rusydi. "Interaksi Sufisme, Ekologi dan Teologi di Era Postmodernisme: Antara wahdat al-wujûd Ibn 'Arabi dan sûluk al-Ghazali." *Al-Banjari: Jurnal Ilmiah Ilmu-Ilmu Keislaman* 22, no. 1 (2023): 1–20. <https://doi.org/10.18592/al-banjari.v22i1.7671>.
- Al-Qaradhawi, Yusuf. *Islam Agama Ramah Lingkungan*. Jakarta: Pustaka Al-Kautsar, 2002.
- Ali, Yunasril. *Manusia Citra Ilahi: Pengembangan Konsep Insan Kamil Ibn 'Arabi oleh al-Jilli*. Jakarta: Paramadina, 1997.
- Arifin, Syamsul. *Spiritualitas Islam dan Peradaban Masa Depan*. Yogyakarta: Sypress, 2006.
- Assya'bani, Ridhatullah. "Eko-FuturologiI: Pemikiran Ziauddin Sardar." *Dialogia* 15, no. 2 (2017): 247. <https://doi.org/10.21154/dialogia.v15i2.1193>.
- Avery, Jon, dan Hasan Askari. *Menuju Humanisme Spiritual: Kontribusi Perspektif Muslim-Humanis*. Surabaya: Risalah Gusti, 1995.
- Bagus, Lorens. *Kamus Filsafat*. Jakarta: PT. Gramedia Pustaka Utama, 2002.
- Bateson, Gregori. *Steps to an Ecology of Mind*. New York: Ballantin Books, 1972.
- Capra, Fritjof. *Titik Balik Peradaban*. Yogyakarta: Bentang Budaya, 1999.
- Francisco Budi Hardiman. *Filsafat Modern: Dari Machiavelli Sampai Nietzsche*. Jakarta: PT Gramedia Pustaka Utama, 2007.
- Garaudy, Roger. "The Balance Sheet of Western Philosophy in This Century." *ISTAC*. Malaysia, 1998.
- Hessel, Dieter T., dan Rosemary Radford Ruether. *Christianity and Ecology: Seeking The Well-Being of Earth and Humans*. Cambridge: Harvard University Press, 2002.
- Iqbal, Muhammad. "Mewujudkan Kesadaran Energi Melalui Konsep Khalifah Fi al-'Ard." *Penelitian* 13, no. 2 (2016): 187–200.
- Kartanegara, Mulyadhi. *Mengislamkan Nalar: Sebuah Respon terhadap Modernitas*. Jakarta: Penerbit Erlangga, 2007.
- Kattsaff, Louis O. *Pengantar Filsafat*. Yogyakarta: Tiara Wacana, 1996.
- Madjid, Nurcholish. *Islam Doktrin dan Peradaban*. Jakarta: Paramadina, 1992.
- Mayer, F. *A History of Ancient and Medieval Philosophy*. California: University of Redlands, 1950.
- Mubarak, Achmad. *Solusi Krisis Kerubanian Manusia Modern: Jiwa dalam AlQur'an*. Jakarta: Paramadina, 2000.
- Munn, Ted, Michael C. MacCracken, John S. Perry, Harold A. Money, Josep G. Canadell, Ian Douglas, Mostafa K.Tolba, dan Peter Timmermen. *Encyclopedia of Global Environmental Change*. Chichester: John Wiley & Sons, 2002.
- nasr. *Living Sufisme*. London: Mandala Books, 1980.
- Nasr, Seyyed Hossein. *Ideals and Realities of Islam*. London: George Allen and Unwin, 1975.
- . *Islam and the Plight of Modern Man*. London: Longman, 1975.
- . *Man and Nature: The Spiritual Crisis of Modern Man*. London: Allen and Unwin, 1981.
- . *Science and Civilization in Islam*. New York: New American Library, 1968.
- . *Tasawuf: Dulu dan Sekarang*. Jakarta: Pustaka Firdaus, 1991.
- Peters, Ted, Muzaffar Iqbal, dan Syed Nomanul Haq. *God, Life, and The Cosmos: Christian and Islamic Perspective*. London: Ashgate Publishing, 2002.

- Quddus, Abdul. "Ecotheology Islam: Teologi Konstruktif Atasi Krisis Lingkungan." *Ulumuna: Jurnal Studi Keislaman* 16, no. 2 (2012).
- . *Green religion: Konservasi Alam Berbasis Spiritualitas Islam*. Mataram: Sanabil, 2020.
- Rahman, Fazlur. *Konsep al Qur'an tentang Tuhan, Alam dan Manusia*. Bandung: Mizan, 1998.
- . *Tema-tema Pokok AL-Qur'an*. Bandung: PT Mizan Pustaka, 2017.
- Sajaroh, Wiwi Siti. "Wahdah Al-Wujud dan Pelestarian Alam: Kajian Tasawuf tentang Lingkungan Hidup." *Ilmu Ushuluddin* 2, no. 1 (2014).
- Sale, Kirkpatrick. *Revolusi Hijau: Sebuah Tinjauan Historis Kritis Gerakan Lingkungan Hidup di Amerika Serikat*. Jakarta: Yayasan Obor Indonesia, n.d.
- Shahab, Husein. *Mazhab Tasawuf Perspektif Ahlul Bait*. Bandung: Pustaka Hidayah, 2000.
- Suriasumantri, Jujun S. *Ilmu Dalam Perspektif: Sebuah Karangan Tentang Hakikat Ilmu*. Jakarta: Yayasan Pustaka Obor Indonesia, 2012.
- Suseno, Franz Magnis. *Etika Sosial*. Jakarta: Gramedia, 1991.
- Sway, Musthafa Abu. "Towards an Islamic Jurisprudence of the Environment: Fiqh al-Bi'ah Fi al-Islam,," 1998. <http://homepages.iol.ie/~afifi/Articles/htm>.
- Taimiyah, Ibn. *Majmu' Fatawa*. Beirut: Dar al-'Arabiyyah, n.d.
- Tucker, Mary Evelyn, dan John A. Grim. *Agama, Filsafat dan Lingkungan Hidup*. Yogyakarta: Kanisius, 2003.
- Utara, Dinas Lingkungan Hidup Kabupaten Luwu. "Kerusakan Lingkungan Hidup dan Penyebabnya." Dinas Lingkungan Hidup Kabupatten Luwu Utara, 2017. <https://dlh.luwuutarakab.go.id/berita/5/kerusakan-lingkungan-hidup-dan-penyebabnya.html>.