

ISLAMIC ECO-THEOLOGY: Recycling Used Cooking Oil into Soap for *Maṣlahah* Oriented Families

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Abstract

This study explores the concept of ecological theology through the utilization of used cooking oil as a primary material in bar soap production and examines its implications for the development of *maṣlahah*-oriented families. Typically regarded as household waste, used cooking oil poses significant environmental risks if not properly managed. Therefore, this research seeks to investigate the theological values embedded in environmentally sustainable household waste management practices and to assess their social and ecological impacts on family well-being. Employing a descriptive qualitative approach grounded in Participatory Action Research (PAR), the study focuses on the *Fatayat* community in Serang Regency. The findings indicate that processing used cooking oil into soap can reduce household expenditures on cleaning products by approximately 3%. From an economic standpoint, this activity serves as an educational initiative for family members, fostering awareness in transforming waste into economic



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value, thereby providing additional income for families in Serang Regency. Environmentally, it contributes to reducing liquid waste pollution by converting it into environmentally friendly and utilitarian products. These outcomes are in line with the principles of *maṣlahah* (benefit), *i'tidal* (ecological justice), *tahdhib al-nafs* (spiritual refinement), and *tawāḥuṣṣun* (balance between nature and humanity).

Keywords: Islamic Eco-Theology; *Jelantah* Oil, Recycling, Soap Production, *Maṣlahah* Families

Abstrak

Penelitian ini mengkaji konsep teologi ekologi melalui pemanfaatan minyak jelantah sebagai bahan dasar pembuatan sabun batang dan implikasinya terhadap konsep keluarga *maṣlahah*. Minyak jelantah, yang sering kali dianggap sebagai limbah rumah tangga, berpotensi mencemari lingkungan jika tidak dikelola dengan baik. Oleh karena itu, penelitian ini bertujuan untuk mengeksplorasi nilai-nilai teologi ekologi dalam pengelolaan limbah rumah tangga secara ramah lingkungan serta mengidentifikasi dampak sosial, dan ekologis terhadap keluarga. Metode penelitian yang digunakan adalah kualitatif deskriptif yang berbasis pada *Participatory Action Research* (PAR) studi pada komunitas *Fatayat* Kabupaten Serang. Hasil yang didapatkan yaitu pengolahan minyak jelantah menjadi sabun dapat meminimalisir sebanyak 3% menghemat pengeluaran produk kebersihan. Dari aspek ekonomi dapat menjadi aktivitas edukatif bagi anggota keluarga dalam pengelolaan limbah menjadi nilai ekonomis yang memberikan tambahan penghasilan bagi keluarga di Kabupaten Serang. Sementara untuk lingkungan membantu mengurangi limbah cair yang mencemari lingkungan menjadi nilai guna yang ramah lingkungan. Sehingga hal ini sejalan dengan prinsip *maṣlahah* (kemanfaatan), prinsip *i'tidal* (keadilan ekologis), *tahdhib al-nafs* (kesadaran spiritual), dan prinsip *tawāḥuṣṣun* (keseimbangan alam dan manusia).

Kata Kunci: Eko-Teologi Islam; Minyak Jelantah; Produksi Sabun; Keluarga *Maṣlahah*

Introduction

Used cooking oil is often considered useless waste, left over after daily cooking activities. Cloudy in color with a sharp aroma, this oil has extraordinary potential that is often overlooked. When used repeatedly, it undergoes physical and chemical changes. Food residue, high heat, and exposure to air make it thicker and darker. Many people simply throw them away, without realizing their impact on the environment. Used cooking oil or oil used from cooking activities, if used repeatedly, can cause various diseases, one of which is cholesterol. Other diseases that can be experienced as a

result of accumulating used cooking oil in the long term can cause abnormal oil deposits, cancer, and loss of control function in the nerve center.¹

Based on research results in the Banten and West Java regions, it was found that each head of family produces approximately 1 liter of cooking oil per week. In fact, according to Vanessa, most people throw away used cooking oil in the trash, up to 51%.² This means that used cooking oil waste that is not managed properly indirectly contributes to increasing levels of pollution to the environment, which has an impact on reducing the quality of health for the family.³

One of the biggest factors in this is because they do not have proper education on the management of used cooking oil, apart from that, another factor is the lack of public knowledge and awareness about the dangers of using used cooking oil and its waste. Ghutum's research results stated that 31.6% of respondents had poor knowledge about the use of used cooking oil. The results of this research show that the level of knowledge can influence attitudes towards using used cooking oil.⁴

Ecological issues have become a major focus across various academic fields, including environmental sciences, social sciences, and economics. Numerous previous studies have examined how humans respond to environmental crises through technical approaches, public policy, and behavior change driven by social awareness. However, when entering the realm of eco-theology, particularly from the Islamic perspective, research that specifically

¹ Fitri Damayanti et al., "Pemanfaatan Limbah Minyak Jelantah Sebagai Upaya Peningkatan Kepedulian Masyarakat Terhadap Lingkungan," *Dinamisia: Jurnal Pengabdian Kepada Masyarakat* 5, no. 1 (2020): 162, <https://doi.org/10.31849/dinamisia.v5i1.4434>.

² Mulyaningsih Mulyaningsih and Hermawati Hermawati, "Sosialisasi Dampak Limbah Minyak Jelantah Bahaya Bagi Kesehatan Dan Lingkungan," *Jurnal Penelitian Dan Pengabdian Kepada Masyarakat UNSIQ* 10, no. 1 (2023): 62, <https://doi.org/10.32699/ppkm.v10i1.3666>.

³ Mulyaningsih and Hermawati.62

⁴ Mulyaningsih and Hermawati.62

links daily ecological practices to religious values remains significantly limited. Several previous studies, such as Zhang (2022), emphasize the utilization of used cooking oil (UCO) for biodiesel as a technical solution to reduce household oil waste.⁵ However, this approach tends to overlook theological or spiritual aspects, especially regarding how sustainability awareness can be connected to religious values in the daily practices of Muslim communities.

While the study by Khaerul Fuad (2018) attempted to integrate Islamic values into environmental education within Islamic-based schools, its scope remains limited to formal educational institutions.⁶ At the family level, research on how Islamic eco-theological values can be implemented in practical actions such as processing household waste into useful products remains scarce and underexplored.

Accordingly, this study aims to fill the existing research gap by proposing an Islamic eco-theological approach to the recycling of used cooking oil into soap, specifically designed to support *maṣlahah*-oriented families.⁷ This research is expected not only to generate environmentally friendly technical solutions but also to foster spiritual-ecological awareness that can enhance sustainability practices within Muslim households.

This study focuses on the *Fatayat* community in Serang Regency as the primary object of analysis. This community was selected due to its significant potential in empowering women and families to adopt environmentally friendly practices grounded in

⁵ Haoran Zhang, "Diversity, Complementarity and Synergy: The Reception of Ecological Theology in China," *HTS Teologiese Studies / Theological Studies* 80, no. 1 (2024): 1,

<https://doi.org/10.4102/hts.v80i1.10245>.

⁶ Soedarto Khaerul Fuad, "Paradigma Teologi Lingkungan Dalam Islam Dan Eco-Pesantren," *Sosiologi* 1, no. 1 (2018): 35.

⁷ et.al Eko Zulfikar, "Eko-Teologi Dalam Tafsir Al-Azhar: Upaya Hamka Dalam Membangun Paradigma Dan Berkesadaran Lingkungan," *Proceeding International ...*, 2023, 48,

<http://proceeding.iainkudus.ac.id/index.php/ICQS/article/view/399/0%0Ahttp://proceeding.iainkudus.ac.id/index.php/ICQS/article/download/399/335>.

religious values. To clarify this focus, the study is guided by the following research questions: (1) How can the Islamic eco-theological approach be applied in the practice of recycling used cooking oil into soap to support the principle of *maṣlahah* families?; and (2) To what extent can the values embedded in Islamic eco-theology enhance the spiritual-ecological awareness of families in managing household waste sustainably?

This study employs a descriptive qualitative approach utilizing the Participatory Action Research (PAR) method, a research framework that actively involves the community or target group in all stages of the research process.⁸ Qualitative data are collected through observations, interviews, and documentation, and subsequently analyzed thematically to explore the relationships among the utilization of used cooking oil waste, ecological awareness, and family well-being. While PAR emphasizes close collaboration between researchers and participants, in this study, the primary partner is the *Fatayat* community of Serang Regency. Within the context of promoting *maṣlahah*-oriented families through soap production from used cooking oil, the PAR method is particularly relevant, as it engages the community in jointly identifying issues, designing interventions, implementing actions, and reflecting on outcomes.

Result and Discussion

Concept of Islamic Eco-Theology and Family *Maṣlahah*

Theology in the context of the environment, is applied in a more practical domain by examining the relationship between the environment and the Creator. The term “environment” here is not limited to biophysical aspects but also encompasses humans and other living beings. The exploration of Islamic spiritual-ecological

⁸ Achmad Baidlowi et al., “Participatory Action Research Masyarakat Dusun Kamongan Dalam Budidaya Jamur Tiram (*Pleurotus Ostreatus*) Sebagai Upaya Meningkatkan Pendapatan,” *IJCD: Indonesian Journal of Community Dedication* 02, no. 01 (2024): 127.

values aims to enrich the understanding of prophetic Islamic ecology while offering alternative or transformative ecological concepts.⁹ In general, environmental theology is defined as a theological study that focuses on environmental issues grounded in the values and teachings of Islam. Therefore, environmental theology addresses the fundamental Islamic principles related to ecosystems as a response to the development of human civilization and the growing complexity of challenges, including environmental problems.¹⁰

Theology in the context of the environment, is applied in a more practical realm by examining the relationship between the environment and the Creator. The environment referred to is not limited to the biophysical aspect but also includes humans and other living beings. The exploration of these Islamic ecological spiritual values aims to enrich the insights of prophetic Islamic ecology and offer alternative or transformative ecological concepts. In general, environmental theology is defined as a theological study that focuses on environmental issues based on the values of Islamic teachings. Therefore, environmental theology discusses the basic principles of Islam related to ecosystems as a response to the development of human civilization and the complexity of challenges, including environmental issues.

Islam, in a transcendent sense, acknowledges the existence of all creatures on Earth as a unity and creation of the Creator. The damage caused by any of these creatures is a denial of God's creation. Islam itself has fundamental principles related to environmental preservation and natural resource management. These principles are *tanḥīd*, *amānah* (trust), *khalīfah* (stewardship), *ḥalāl* (permissible), *ḥarām* (forbidden), *‘adl* (justice), *Tawasshur*

⁹ Muhammad Hanif, “Kontestasi Ideologi Dai Indonesia Dalam Membahas Wacana Politik Di Media Sosial Youtube,” *Tajdid Jurnal Ilmu Ushuluddin* 23, no. 2 (2024): 587.

¹⁰ Husnul Khitam, “Kontekstualisasi Teologi Sebagai Basis Gerakan Ekologi,” *DINIKA: Academic Journal of Islamic Studies* 1, no. 2 (2016): 147, <https://doi.org/10.22515/dinika.v1i2.62>.

(simplicity), *iṣlah* (preservation), and *tawāḥḥun* (balance and harmony).¹¹

These principles are the ideal principles offered by Islam as an effort to address environmental issues. The core environmental problem, according to Soemarwoto, is the relationship between living creatures, especially humans, and their environment. This reciprocal relationship is ecology.¹² Its central concept is the ecosystem, which is an ecological system formed by the reciprocal relationship between living creatures and their environment. In viewing the ecosystem, the elements within the environment must not be seen in isolation, but as an integrated whole, as components that are interconnected within a system. This approach is called the ecosystem approach or the holistic approach.¹³

Meanwhile, in the context of *maṣlahah*, terms such as *sakīnah* family, *maṣlahah* family, and prosperous family are used. All ideal family concepts with different names both require the fulfillment of inner and outer needs well. *Maṣlahah* family (*maṣāliḥ al-usrah*) is a term popularized by Nahdlatul Ulama. This means that a family in its husband-wife and parent-child relationship applies the principles of justice (*i'tidāl*), balance (*tawāḥḥun*), moderation (*tawassut*), tolerance (*tasāmuh*), and love is not sorry, virtuous, *sakīnah*, *mawaddah*, *warahmah*, inner and outer prosperity, as well as playing an active role in seeking the benefit of the social and natural environment as a manifestation *Islam rahmatan li-l- 'ālamīn*.¹⁴

¹¹ Khitam. 148

¹² Jamilus Tugiah, "Pengembangan Pendidik Sebagai Sumber Daya Manusia Untuk Mempersiapkan Generasi Milenial Menghadapi Era Digital," *Jurnal Sosial Teknologi* 2, no. 6 (2022): 502, <https://doi.org/10.59188/jurnalsostech.v2i6.350>.

¹³ Khitam, "Kontekstualisasi Teologi Sebagai Basis Gerakan Ekologi." 149

¹⁴ Nur Rofiah et al., *Fondasi Keluarga Sakinah Bacaan Mandiri Calon Pengantin, Correspondencias & Analisis*, 1st ed. (Jakarta: Subdit Bina Keluarga Sakinah Direktorat Bina KUA & Keluarga Sakinah Ditjen Bimas Islam Kemenag RI Tahun, 2017), 12.

In the frame *maqāṣid al-sharī'ah*, maintaining benefit or welfare is the core objective of Islamic law. Benefits include everything that brings goodness, benefits, and protection in various aspects of life, whether for individuals, families, or the environment. The relationship between family benefits and the environment is a form of real implementation of this principle, where both support each other to achieve a balanced, harmonious, and sustainable life.¹⁵

Imam Syatibi divides this category into five basic principles of law (*al-kullīyyat al-khamsah*), that is: *First*, preserve religion (*ḥifẓ al-dīn*), namely protecting religious norms from things that pollute them in terms of faith and charity. In the current context, maintaining religion means maintaining one's religious dignity and beliefs without harming the dignity and religion of others.

Second, preserves the soul (*ḥifẓ al-nafs*), namely protecting the right to life of every individual and society collectively as well as all things that can threaten life, such as the eradication of menural diseases and punishment for crimes. *Ḥifẓ al-nafs* can also be translated as protecting oneself from a dirty environment by caring for the surrounding nature so that it provides benefits for a decent and healthy life. So this can be interpreted as protecting and preserving the surrounding natural environment.

Third, preserving reason (*ḥifẓ al-'aql*) namely preventing defects in the mind that can interfere with thinking and creativity. Because reason is very important in fostering enthusiasm for exploring religious values, it must be protected from things that damage morals such as alcohol, narcotics and juvenile delinquency.

Fourth, preserve honor and lineage (*ḥifẓ al-nasl*). Namely preserving generational sustainability by protecting the benefit of

<https://simbi.kemenag.go.id/eliterasi/storage/perpustakaan/kabupaten-kota/7d027ea5-6ef0-4901-ba35-5dcacb2eec56/buku-digital/5cc2d0b9b0-7773090169.pdf>.

¹⁵ Khotimatul Husna, "Kajian Dalalah Dalam Perspektif Relasi Kesalingan Suami Istri Menurut Konsep Keluarga Masalah Nahdlatul Ulama," *DIKTUM: Jurnal Syariah Dan Hukum* 20, no. 2 (2022): 327–328, <https://doi.org/10.35905/diktum.v20i2.3633>.

the family. This means an effort to maintain household harmony with the mutual relations of husband and wife as well as parents and children, in maintaining a beneficial family.

Fifth, preserve property (*hifz al-māl*), namely developing the community's economic resources, guaranteeing personal belongings, and maintaining the security of these assets.¹⁶

Thus, relations *maṣlahah* family and environment in context *maqāṣid al-shari'ah*, namely families who are able to manage resources wisely, including utilizing household waste or preserving the environment, not only improve their quality of life but also create stability that supports the achievement of Sharia goals.

Meanwhile, managing relationships with environmental benefits, namely being able to be responsible, such as reducing waste, recycling, and preventing pollution, is part of worship that supports the creation of collective benefits. This attitude shows gratitude for Allah's blessings as well as responsibility as caliph on earth.

Soap Production Practices Using Recycled Used Cooking Oil

Used cooking oil is a cooking oil that has been used repeatedly in frying food. Usually, after it is no longer used, this oil will experience physical, chemical, and taste changes due to air and exposure to high heat, due to fried food, and experiencing oxidation.

Used cooking oil itself has the characteristics of several variants, namely color, texture, aroma, and content. *First*, in terms of color, palm cooking oil usually has a golden yellow color.¹⁷ This bright and seductive color is not just aesthetic, but the result of the natural ingredients in the oil that reflect its origin and production

¹⁶ Rofiah et al., *Fondasi Keluarga Sakinah Bacaan Mandiri Calon Pengantin*.¹⁴

¹⁷ Hasrul Abdi Hasibuan, "Produksi Minyak Sawit Merah Kapasitas 100 Kg/Batch Dan Produk Diversifikasinya Berupa Shortening Dan Margarin Kapasitas 50 Kg/Batch," *WARTA Pusat Penelitian Kelapa Sawit*, Vol 26, no. 1 (2021): 20, <https://doi.org/10.22302/iopri.war.warta.v26i1.33>.

process. Palm oil produces red-orange fruit that is rich in natural pigments, such as carotenoids, especially beta-carotene. This pigment, which is also found in carrots, is the compound that gives various natural ingredients their yellow to orange color. When palm oil fruit is processed to be extracted into oil, the carotenoid content is carried along, creating the golden yellow color that is characteristic of palm cooking oil.¹⁸

Apart from carotenoids, palm oil also contains tocopherol and tocotrienol compounds, natural forms of vitamin E, which not only contribute to the color but also to the stability of the oil. Vitamin E helps cooking oil last longer without oxidizing easily, making it an economical and long-lasting choice for cooking purposes.¹⁹ However, after being used many times, this oil turns cloudy, dark, and even brownish. This color transformation is not accidental, but rather the result of various chemical and physical processes that occur during heating and use. When oil is heated for cooking, the high temperature triggers a reaction called oxidation, in which oil molecules react with oxygen in the air. This oxidation produces new compounds, such as free fatty acids and polymers, which make the oil lose its clarity and become dark.²⁰

Second, aroma. Used cooking oil, which has been used repeatedly for cooking, often has a stronger or even rancid aroma than fresh oil. This aroma is the result of various chemical reactions that occur during heating, exposure to air, and interactions with food ingredients. Repeated exposure to heat also breaks down oil molecules into smaller, more reactive compounds. One result is the formation of substances such as acrolein, which not only adds a dark

¹⁸ Hasibuan.²¹

¹⁹ Erni Misran, Fery Panjaitan, and Fahmi Maulana Yanuar, "Pemanfaatan Karbon Aktif Dari Ampas Teh Sebagai Adsorben Pada Proses Adsorpsi β -Keroten Yang Terkandung Dalam Minyak Kelapa Sawit Mentah," *Jurnal Rekayasa Kimia & Lingkungan* 11, no. 2 (2016): 98, <https://doi.org/10.23955/rkl.v11i2.5402>.

²⁰ David Nasrun et al., "Pemurnian Minyak Jelantah Menggunakan Arang Aktif Dari Sekam Padi," *Jurnal Penelitian Teknik Sipil Dan Teknik Kimia* 1, no. 2 (2017): 7.

color but also creates the characteristic rancid aroma of used cooking oil. Furthermore, the remaining water content of fried foods can cause a hydrolysis reaction, where water breaks down oil molecules into free fatty acids. This process accelerates color changes while damaging the quality of the oil. With all these processes of oxidation, caramelization, and other chemical reactions, the initially clear oil turns dark and cloudy. These changes are a signal that the oil has lost most of its quality and safety for reuse.

One of the main causes of a sharp odor in used cooking oil is oxidation, namely the reaction between oil molecules and oxygen in the air. When oil is heated to high temperatures, its chemical structure becomes unstable. Oil molecules begin to decompose and react with oxygen, forming new compounds such as aldehydes and ketones. This compound is what produces the characteristic pungent odor of used cooking oil. Another contributing factor is hydrolysis, namely the reaction between water from food and oil. This process breaks down the fats in the oil into free fatty acids and glycerol. These free fatty acids are very reactive and easily oxidize, producing a characteristic rancid odor.²¹

Third, content. As it is used repeatedly, this oil not only loses its clarity, but also accumulates various residual substances that can have a negative impact on health. It contains traces of food particles, polymer compounds, free fatty acids, and carcinogenic substances such as acrolein or acrylamide if used repeatedly. times at high temperatures. The repeated heating process triggers chemical reactions in the oil molecules, causing the formation of polymer compounds. This happens because oxidized fats and oils combine with each other, forming long molecular chains that make the oil

²¹ Hengki Hermawan, Ika Candra Sayekti, and Fitria Bkti Nurhandayani, "Pemanfaatan Minyak Jelantah Menjadi Sabun Untuk Masyarakat Desa Pentukrejo Utilization of Used Cooking Oil as Soap for the Pentukrejo Village Community," *Empati (Edukasi Masyarakat, Pengabdian Dan Bakti)* 1, no. No 1 (2020): 56–61.

thicker. This compound not only reduces the quality of the oil but is also difficult for the body to digest if it is still used for cooking.²²

Manufacturing Procces

1. Refining used cooking oil

The used cooking oil resulting from the activation of the fire heating in the frying pan resulting from the frying activity is then stored first in a container *stainless steel*, type the container is because it can withstand the heat of the oil, because if it is made of plastic, it is feared that it will scald. After pouring it, let the oil cool so that the impurities in the oil settle. After it cools, the oil is filtered first so that food residue is removed.

Once clean, the oil is poured back into the container, which is then soaked in activated charcoal and administered *bleaching earth*, soaking with activated charcoal aims to dissolve and absorb dyes as much as approximately 85% of the dirt and color in used cooking water. Apart from that, it also absorbs residual odors in unwanted oil found in used cooking oil to reduce the amount of peroxide value so that it can improve the quality of used cooking oil (Nasrun et al., 2017).²³ Temporary *bleaching earth* functions to clear used cooking oil that looks cloudy.

After mixing all the ingredients in oil refining, the oil is then stored at a normal temperature for approximately 24 hours. When finished, the oil is filtered again to remove any charcoal impurities that have settled. After that, the oil is ready to be used as a practical ingredient for making soap.

²² Sumiati Hanjarvelianti and Dedeh Kurniasih, "Pemanfaatan Minyak Jelantah Dan Sosialisasi Pembuatan Sabun Dari Minyak Jelantah Pada Masyarakat Desa Sungai Limau Kecamatan Sungai Kunyit-Mempawah," *Jurnal Buletin Al-Ribaath* 15, no. 2 (2020): 26, <https://doi.org/10.29406/br.v17i1.1878>.

²³ Nasrun et al., "Pemurnian Minyak Jelantah Menggunakan Arang Aktif Dari Sekam Padi." 4

2. Making bar soap

Step 1:

Weigh out 67 grams of NaOH (caustic soda), then prepare it *Aquades* with a dose of 190 ml. After that, dissolve NaOH powder in it *distilled water* little by little in the container *stainless steel* that has been prepared, stir until dissolved until the NaOH feels cold.

Step 2:

Prepare used cooking oil that has been cooled and has undergone filtering and clarification through activated charcoal and *blaching eart*, weigh the oil with a dose of 500 ml. After that, mix the used cooking oil with the NaOH solution that has dissolved in water in a container. After that, stir the mixture of used cooking oil and NaOH until it thickens. For the mixing process, you can use a mixer to make it smoother and faster.

Figure 1: Activity of weighing the ingredients for making soap



Step 3:

After thickening the mixture between NaOH and used cooking oil, then pour it *essential oil* add enough food coloring to- the mixture, besides that, add enough food coloring to give it an attractive color. To add aroma, you can add: *aromatic oil* so that the soap when used has a distinctive fragrance. Once it has been poured, stir it again with the ingredients that were mixed previously until it is thick and even.

Figure 2: The activity of stirring mixed ingredients



Step 4:

Pour the soap ingredients that have been stirred previously into the soap mold, spread it according to the desired size and shape. After that, let it sit until it feels frozen, then to measure the acid and base levels, stick litmus paper into the soap in the mold, and check the results, if the acidity level is still high, let the soap sit for 24 hours, after that the soap can ideally be used after two up to 3 months because you wait until the acid level in the soap is low and does not harm the skin.

Figure 3: The final product of the soap-making process



Relationship Between Islamic Eco-Theology and Its Implications for *Maṣlahah*-Oriented Families

Ecological theology is a concept that integrates religious values with ecological awareness to maintain the balance and sustainability of nature as part of humanity's spiritual responsibility. From a theological perspective, humans are seen as God's partners

for all creatures across the world. This perspective emphasizes that humans carry a moral responsibility to protect and preserve their surrounding environment. Furthermore, it reflects the understanding that human existence and presence ultimately express recognition of, and participation in, the presence of God, who creates, sustains, and redeems all of His creation.²⁴

The presence of humans in the world reflects the continual presence and work of God. This concept serves as a reminder for humans to act responsibly, as all of their roles mirror the divine role. Humans are considered the image of God, which implies a responsibility to express God's nature and character, particularly His care and concern for all of creation.²⁵ When humans neglect or seek merely to dominate nature, they effectively deny the existence of nature as a reflection of God. While representing God, it is important to recognize that humans have inherent limitations; thus, they must understand themselves not as God, but as stewards or representatives of the Creator, who fashioned the universe and remains actively engaged in its boundless preservation and protection. God's sustaining and nurturing role is manifested through humanity's conscious and responsible participation in caring for all of God's creation.²⁶

In this context, eco-theology through the utilization of used cooking oil into bar soap reflects the practical application of ecological theological values.²⁷ Therefore, from a theological perspective, the utilization of used cooking oil encompasses several theological principles, including:

²⁴ Cantika Syalomita Crisye Arnold Maninggolang, Giovani Matimbang, "Kajian Eko-Teologi Tentang Kesadaran Masyarakat Desa Teling Terhadap Kelestarian Lingkungan Hidup," *Hospitalitas: Jurnal Pengabdian Kepada Masyarakat* 1, no. 3 (2024): 57.

²⁵ Khaerul Fuad, "Paradigma Teologi Lingkungan Dalam Islam Dan Eco-Pesantren," 36.

²⁶ Crisye Arnold Maninggolang, Giovani Matimbang, "Kajian Eko-Teologi Tentang Kesadaran Masyarakat Desa Teling Terhadap Kelestarian Lingkungan Hidup," 57.

²⁷ Khitam, "Kontekstualisasi Teologi Sebagai Basis Gerakan Ekologi." 150.

First, the principle of *khalīfah*. In Islam, humans are viewed as *khalīfah* (leaders) on earth, tasked with preserving and maintaining nature. The use of used cooking oil as a base for soap making reflects human responsibility in managing natural resources wisely and sustainably. By processing waste into useful products, this action helps reduce environmental pollution caused by the improper disposal of used cooking oil into waterways or the soil. This aligns with religious teachings not to corrupt the earth, as stated in the verse of Allah: "*And do not cause corruption on the earth after its reformation. And pray to Him in fear and hope. Indeed, the mercy of Allah is near to the doers of good.*" (al-A' rāf (7:56).

Second, the principle of *maṣlaḥah* (benefit and well-being). Ecological theology emphasizes the importance of achieving *maṣlaḥah* (the common good) through efforts that bring benefits to both humans and the environment. Turning used cooking oil into soap not only reduces waste but also provides economic value for the community. This product can be sold or used for household needs, supporting the family economy, especially in the *Fatayat* community. Thus, the utilization of this waste supports social well-being while also preserving the ecosystem.

Third, the principle of *i'tidāl* (ecological justice). Islam teaches the importance of maintaining balance (*i'tidāl*) in life, including in environmental management. Disposing of used cooking oil into waterways can cause pollution and harm ecosystems, such as damaging water quality and killing microorganisms. Processing used oil into soap demonstrates an effort to restore ecological balance by reducing the negative impact on the environment. This reflects ecological justice, where humans do not act exploitatively toward nature.

Fourth, *taḥdhīb al-naḥs* (spiritual awareness). Managing waste and transforming it into useful products is also a form of purification of the soul and spiritual awareness. From the perspective of ecological theology, this action reflects gratitude for the natural blessings given by God and maintaining cleanliness as

part of faith. This process encourages a clean lifestyle, environmental care, and frugality, all rooted in the values of faith.

Fifth, the principle of *tawāzun* (balance between humans and nature). Ecological theology emphasizes the harmonious relationship between humans and nature. The use of used cooking oil to make soap demonstrates that humans can live alongside nature without causing harm. This process highlights the concept of *tawazun*, where humans maintain balance by utilizing existing resources without creating waste that harms the environment.

Sixth, the principle of *mubādalah* (mutual benefit). Transforming used cooking oil into useful products creates a mutually beneficial relationship between humans and nature. Waste that initially causes pollution is transformed into items with economic and ecological value. This principle of *mubādalah* also demonstrates a commitment to creating a sustainable system for future generations, in line with religious teachings to preserve the inheritance of the Earth for future descendants.²⁸

In the context of the *maṣlahah* family, the utilization of waste can have an impact on the family, processing used cooking oil into soap can save costs on cleaning products. The processed soap itself can be used for household purposes, such as washing dishes, clothes, or even as bath soap if it is formulated with appropriate additional ingredients. By processing used cooking oil into soap, families can reduce the costs they usually spend on cleaning products. Homemade soap can be used to wash dishes, clothes, and even for other cleaning purposes, thereby helping families allocate their budget for other more important needs.

Apart from the economic aspect, the process of making soap from used cooking oil can be an educational activity for all family members. Children and adults can learn about recycling, the

²⁸ Dede Al-Mustaqim, "Peran Perempuan Sebagai Pencari Nafkah Keluarga Perspektif Qira'ah Mubadalah Dan Maqashid Syariah," *SETARA: Jurnal Studi Gender Dan Anak* 6, no. 1 (2024): 117, <https://ejournal.metrouniv.ac.id/index.php/jsga/article/view/5463%0Ahttps://ejournal.metrouniv.ac.id/index.php/jsga/article/download/5463/3146>.

importance of managing waste, and the principles of sustainability. This not only strengthens family relationships, but also increases awareness of environmental responsibility. The process of making soap from used cooking oil is a simple but educational activity. Family members can learn about the science behind soap making, such as the chemical reaction called saponification. These skills can also be utilized for small business opportunities, providing additional income for the family.²⁹

Making soap from used cooking oil can be a fun joint activity. When all family members are involved, this activity becomes a moment of togetherness that can strengthen relationships, as well as provide a sense of pride in the results of their work together. Homemade soap allows families to control the ingredients used. By adding essential oils or other natural ingredients, families can create soap that is more skin-friendly and free from harmful chemicals that may be present in commercial products.

While it has an impact on ecology, the use of used cooking oil to make soap helps reduce liquid waste which is usually just thrown into waterways. Oil waste that is not managed properly can clog drains, pollute groundwater and damage aquatic ecosystems. By processing it into soap, this problem can be minimized.

If used cooking oil is thrown away carelessly, especially into waterways, it can pollute the environment. Oil that does not decompose easily will form a layer on the surface of the water, blocking oxygen from entering and disrupting the life of aquatic creatures. In the long term, dumping oil into the ground can also pollute groundwater. By processing it into soap, the threat of this pollution can be minimized.

In addition, used cooking oil soap is an environmentally friendly alternative to commercial soap which may contain dangerous chemicals. The use of processed household soap reduces

²⁹ Abdul Quddus, "Ecotheology Islam: Teologi Konstruktif Atasi Krisis Lingkungan," *Ulmuna Jurnal Studi Keislaman* 16, no. 2 (2019): 333, <http://scioteca.caf.com/bitstream/handle/123456789/1091/RED201>

dependence on products made from chemical raw materials, thereby reducing the carbon footprint resulting from industrial production. Commercial soap is often produced on a large scale, using chemicals that can have a negative impact on the environment, and produce carbon emissions in the process. By making soap from used cooking oil, families reduce dependence on these products, thereby reducing their carbon footprint and industrial waste.³⁰

Used cooking oil is one of the most frequently generated kitchen waste. By turning it into soap, the amount of household waste that has to be disposed of is reduced significantly. This supports efforts to reduce waste and reduce pressure on final disposal sites (TPA). When used cooking oil is not thrown away carelessly, local ecosystems, such as rivers, lakes and terrestrial habitats, are protected from pollution. This helps maintain ecosystem balance and protects various living creatures from the negative effects of oil waste.

Utilizing used cooking oil into soap is a clear example of the principles of recycling and reuse. This process converts something considered waste into a useful product, thereby supporting an environmentally friendly and sustainable lifestyle. Through the use of used cooking oil, families become part of the solution to overcome waste and pollution problems. This action provides a real example of how every individual can contribute to protecting the environment, starting from home.

Based on the research findings, this article offers concrete recommendations for key stakeholders, including local governments, civil society organizations, and Islamic educational institutions like pesantren. These recommendations include: (1) the development of community-based training programs for producing soap from used cooking oil, incorporating religious values; (2) the integration of Islamic-based environmental education into formal

³⁰ Hajar Hari Antoro, "Efektivitas Pelaksanaan Program Keluarga Harapan Dibidang Pendidikan Di Desa Sungai Kakap Kabupaten Kubu Raya," *PublikA, Jurnal Ilmu Administrasi Negara* 4, no. 4 (2015): 6.

and non-formal educational activities; and (3) policy support to facilitate local initiatives that promote the alignment between ecological responsibility and spiritual obligations. Thus, the model developed in this study is expected to serve as an alternative approach that can be replicated in other regions to support sustainability efforts grounded in Islamic values.

Conclusion

This study demonstrates that the recycling of used cooking oil into soap, when framed within the perspective of Islamic eco-theology, provides not only a practical, eco-friendly solution for household waste management but also fosters spiritual-ecological awareness within Muslim families. Through participatory engagement with the *Fatayat* community in Serang Regency, the research illustrates how religious values can be effectively integrated into daily ecological practices to support *maṣlahah*-oriented families.

Theoretically, this research contributes to the development of Islamic theology and *fiqh*, an emerging concept that bridges Islamic jurisprudence with contemporary environmental ethics. By positioning ecological responsibility as an extension of religious duty, the study enriches the theoretical discourse on Islamic eco-theology, offering a nuanced framework that connects theology, sustainability, and family welfare.

In terms of policy and practice, the findings provide concrete recommendations for government agencies and Islamic educational institutions such as *pesantren*. These stakeholders are encouraged to implement community-based training programs on eco-friendly household practices, integrate environmental stewardship into religious education curricula, and develop local initiatives that promote sustainable behaviors grounded in religious teachings.

However, this study has several limitations, including its focus on a single community and the limited scope of intervention. Future research should explore the application of the proposed model across diverse socio-cultural contexts, conduct longitudinal studies

to assess long-term behavioral change, and investigate the integration of Islamic eco-theological principles into broader environmental policy frameworks at regional and national levels.

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