

Post-Mining Land Restoration from Environmental Fiqh: A Case Study in Morowali

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| Keywords | Abstract |
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| Land Restoration, Environmental Fiqh, Mining, Maqashid Syariah, PT. AFB Morowali | This study aims to analyze the concept of post-mining land restoration from the perspective of environmental jurisprudence, with a case study on PT. Ang and Fang Brother in Morowali Regency. A qualitative approach was used with data collection techniques through interviews and documentation. The results of the study show that the principles of environmental fiqh such as hifzh al-bi'ah, islah al-ardh, and ihya al-mawat are in line with national regulations such as the Mineral and Mineral Law No. 3/2020, but their implementation still faces technical, financial, and supervisory challenges. The integration of Islamic values in restoration policies can strengthen ethical commitment and community participation in post-mining environmental recovery. |

INTRODUCTION

Mining activities play an important role in supporting the Indonesian economy, but on the other hand, they have negative impacts on the environment, such as ecosystem damage, water, air, and soil pollution, as well as permanent changes in land morphology (Sembiring et al., 2024). Post-mining land restoration is a necessity to restore the ecological and social functions of affected land. However, its implementation still faces various challenges, such as severe physical and chemical damage to the soil, technological limitations, weak regulatory enforcement, and lack of local community involvement (Fauzia & Makarim, 2024; Harahap, 2016).

In the context of Indonesia as a country with a Muslim majority population, the environmental fiqh approach (fiqh al-bi'ah) offers a strong theological and ethical foundation to encourage sustainable land restoration (Amanda et al., 2024). Environmental jurisprudence not only plays an ethical role, but also as a legal instrument that can strengthen land restoration policies (Ubaidillah, 2010). Principles such as hifzh al-bi'ah (environmental conservation), islah al-ardh (improving the earth), and ihya al-mawat (reviving dead soil) are relevant to be integrated into post-mining land restoration regulations and practices (Sholihin, 2025; Istiani & Purwanto, 2019).

This study examines the integration of environmental jurisprudence in post-mining land restoration with a case study on PT. Ang and Fang Brother (PT. AFB) in Lalampu Village, Morowali Regency (Nurhidayah et al., 2023). The significance of the research lies in its ability to bridge the technical aspects of restoration with local faith-based values, so as to encourage more active community participation and ecological sustainability.

METHOD

This research used a qualitative approach with the type of field research (Subagyo, 1991). The location of the research is PT. Ang and Fang Brother (PT. AFB), a nickel ore mining company operating in Lalampu Village, Bahodopi District, Morowali Regency, Central Sulawesi Province.

The research informants were selected using purposive sampling techniques, including employees of PT. AFB and the Lalamp community affected by the mine. Data collection techniques are carried out through:

1. Interviews – direct dialogue with informants to dig up in-depth information related to post-mining land restoration.
2. Documentation – the collection of data from written documents such as relevant archives, regulations, activity reports, and policies.

The data validity technique uses triangulation by comparing the results of interviews, observations, and documentation. Data analysis follows the Miles and Huberman model through three stages:

1. Data Reduction – filtering relevant data;
2. Data Presentation – compiling data in the form of narratives and tables;
3. Drawing Conclusions and Verification – drawing provisional conclusions and verifying with additional data.

RESULT AND DISCUSSION

The Concept of Land Restoration in Environmental Science

Land restoration is defined as a strategic process to restore ecosystems that have been degraded due to human activities, including mining (Umami et al., 2024). In the context of mining, restoration includes reclamation, revegetation, and rehabilitation aimed at restoring the ecological function, soil productivity, and socio-economic value of land (Regulation of the Minister of Energy and Mineral Resources No. 26/2018). Commonly used methods include land recontouring, planting local vegetation, and erosion control (Herdiyanti et al., 2022).

However, post-mining land restoration in Indonesia still faces serious obstacles, such as heavy land damage, technological limitations, and weak supervision (Directorate of Open Access Land Damage Recovery, 2018). Case study at PT. AFB shows that although companies have developed reclamation plans, their implementation is often constrained by financial and technical factors (Field Data, 2025).

Land restoration in environmental science is a systematic effort to restore degraded ecosystems to a condition close to their original state, both in terms of biodiversity, ecological function, and economic potential. Based on an interview with the management of PT. AFB, this concept is implemented through a series of technical methods. To overcome land degradation, the company conducts gradual revegetation, starting with pioneer crops (acacia, sengon) to improve the soil, then continuing with perennials and fruits (mahogany, jackfruit) to build a more sustainable ecosystem (Yoga Interview, 2025). On the other hand, to deal with water pollution, mine acid water treatment technology is applied using limestone and sedimentation ponds (Yoga Interview, 2025). However, findings from the people of Lalampu Village reveal a gap between planning and implementation. The community stated that many mine pits were left gapping and the revegetation carried out was not taken care of, so that the

ecological function of the land had not recovered optimally (James Interview, 2025). Technical challenges such as changes in soil contours and weather, as well as fluctuating budget commitments, also affect the effectiveness of these restorations (Yoga Interview, 2025).

Environmental Fiqh and Its Relevance to Land Restoration

Environmental jurisprudence (fiqh al-bi'ah) is a set of Islamic sharia rules that govern human behavior towards the environment (Abdillah, 2005; Abta, 2006). Its main principles include:

1. Hifzh al-Bi'ah – environmental conservation as part of the sharia maqashid (Rifzikka, 2024).
2. Islah al-Ardh – the command to repair the earth and not to do any damage (QS. Al-A'raf: 56) (Shihab, 1996a).
3. Prohibition of Dharar – the rules of fiqh la darar wa la dirar that prohibit actions that are harmful to the environment (Sabani, 2022; Idris & Anita, 2020).
4. Ihya al-Mawat – reviving the dead land as a social worship (HR. Bukhari) (Ginoga et al., 2024).

These principles are aligned with the goal of land restoration, which is to restore damage and create sustainable benefits. In the context of PT. AFB, the environmental fiqh approach can encourage companies to be more morally and spiritually responsible in carrying out reclamation (Field Data, 2025).

Environmental Fiqh (Fiqh al-Bi'ah) is an elaboration of Islamic law that regulates the relationship between humans and the environment, based on principles such as hifzh al-bi'ah (protecting the environment), islah al-ardh (repairing damage to the earth), and ihya al-mawat (reviving the dead land). Although the term “Environmental Fiqh” is specifically less familiar at the management level of PT. AFB, its basic principles are understood and their relevance is recognized (Yoga Interview, 2025). The company's resource person stated that the principle of ihya al-mawat is very much in line with the mission of reclamation, which is not only seen as a legal obligation, but also as a moral responsibility (Yoga Interview, 2025). At the community level, James Roberto Makatutu firmly identifies environmental destruction activities without restoration as sinful acts that are contrary to the teachings of Islam (James Interview, 2025). He explicitly links the obligation of post-mining land restoration to the concept of *ihya al-mawat*, equating barren former mining land with “dead land” that must be revived (James Interview, 2025). This perspective shows that Environmental Fiqh offers a strong ethical and spiritual framework to encourage environmental conservation actions.

Integration of Environmental Fiqh and National Regulations

Land restoration regulations in Indonesia, such as Law No. 3 of 2020 concerning Mineral and Mineral Resources (Articles 91-92) and the Minister of Energy and Mineral Resources Regulation No. 26/2018, have regulated reclamation and post-mining obligations (Alfarizi et al., 2023). However, its implementation is still weak due to a lack of supervision and infirm sanctions (Lubis & Lubis, 2024).

The integration of environmental jurisprudence can strengthen these regulations by providing an ethical and spiritual foundation. For example, the concept of waqf al-bi'ah

(environmental waqf) can be applied to manage post-mining land as a sustainable asset for the benefit of the people (Rilansari & Ulhaq, 2024). MUI Fatwa No. 22/2011 on Environmentally Friendly Mining can also be used as a reference to encourage ethical mining practices (Hafiz et al., 2017).

National regulations, such as the Mineral and Mineral Law No. 3/2020 and the Minister of Energy and Mineral Resources Regulation No. 26/2018, have established clear legal obligations for mining companies to reclaim and restore the environment. PT. The AFB acknowledges that these regulations are their “legal license to operate” (Yoga Interview, 2025) and is aware of the existence of severe sanctions, including revocation of licenses, for violators of them (Yoga Interview, 2025). However, the effectiveness of these sanctions is recognized to be highly dependent on the consistency of government supervision (Yoga Interview, 2025). This is where Environmental Fiqh can play a complementary role. Both the company and the public agreed that positive law and religious values reinforce each other. Positive law serves as a compelling obligatory framework, while the fatwa of scholars and religious values provide an intrinsic “spirit” or motivation that builds awareness that environmental restoration is not only an obligation to the state, but also to the Creator (Yoga Interview, 2025). In fact, the community sees religious appeals, in the form of ulama fatwas on the prohibition of damaging the environment, can be more effective in creating a deterrent effect than legal threats alone, especially in religious communities such as Lalampu Village (James Interview, 2025).

Field Findings at PT. The Brothers and Sisters of the Fang Brothers

Based on interviews and observations, PT. AFB has been carrying out reclamation efforts by planting local vegetation and recontouring the land. However, community participation is still limited, and long-term monitoring is not optimal (Field Data, 2025). Local communities complain about the impact of mining on water and soil quality, as well as the lack of sustainable economic benefits (Field Data, 2025).

The environmental fiqh approach, through socialization by religious leaders and religious institutions, can increase public and corporate awareness of environmental responsibility as part of worship (Indrajati et al., 2023).

Findings on the ground illustrate a complex situation. On the one hand, PT. The AFB already has a documented system of planning, budgeting, and technical methods of restoration and has received government approval (Yoga Interview, 2025). The company also has a closely supervised reclamation guarantee fund mechanism (Yoga Interview, 2025). However, on the other hand, there is a significant disparity between the company’s claims and the public’s first-hand perception and experience. Communities report ongoing negative impacts, such as dust, murky water, and decreased agricultural yields (James Interview, 2025). They also feel not substantively involved in the restoration planning and oversight process, resulting in a sense of distrust (James Interview, 2025). The CSR program run by the company is considered to have not touched the core needs of the community, namely access to post-mining productive land and alternative economic empowerment (James Interview, 2025). This gap is exacerbated by the fading of the local wisdom of “take care of the debt to nature” that was once upheld by the community (Interview James, 2025). These findings indicate that the approach of PT. AFB towards restoration still tends to be limited to fulfilling legal and technical administrative

aspects (Yoga Interview, 2025), without a holistic approach that fully involves the community and integrates the ethical-religious dimension and local wisdom in depth.

CONCLUSION

Based on a comprehensive analysis of post-mining land restoration, PT. AFB, the findings of the research reveal a significant gap between technical planning and implementation in the field. Although the company has drawn up a comprehensive reclamation plan that includes gradual revegetation and treatment of mine acid water, the community still finds many abandoned mine pits and revegetation that are not optimally maintained. The restoration approach carried out by PT. AFB is still limited to fulfilling legal and technical administrative aspects, without being balanced by substantive community participation and integration of local wisdom. This research proves that Environmental Fiqh offers a relevant ethical-spiritual framework to strengthen land restoration. The principle of *_ihya al-mawat_* (reviving the dead earth) is recognized by both sides as a moral foundation that is in line with the goal of restoration. The integration between national regulations and Environmental Fiqh creates a synergy where positive law serves as a coercive framework, while religious values provide intrinsic motivation and build a spiritual awareness of responsibility. The religious approach through the fatwa of the ulama is considered more effective in providing a persuasive effect in religious communities such as Lalampu Village, so that it can be a catalyst for strengthening the commitment to sustainable land restoration.

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