



Downstreaming of Natural Resources in the Perspective of Islamic Jurisprudence (Fiqh): Weighing Its *Maslahah* and *Mafsadah* for the Ecosystem, Environment, and Humanity

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Article Info	Abstract
Article history: Received: March 18, 2026 Revised: April 7, 2026 Accepted: April 11, 2026 Keywords: Natural Resources; Downstreaming; Environmental Fiqh; <i>Maslahah Mafsadah</i>; Sustainability.	ABSTRACT Downstreaming of natural resources has become a strategic policy in many developing countries, including Indonesia, as an effort to increase commodity value through domestic processing and reduce dependence on raw material exports. However, downstreaming practices—particularly in the mining and plantation sectors—often present a dilemma between economic gains and environmental damage as well as social injustice. This research examines natural resource downstreaming from the perspective of environmental fiqh, grounded in sharia principles such as trusteeship over the earth, social justice, and ecosystem preservation, with a focus on weighing <i>maslahah</i> and <i>mafsadah</i> for the ecosystem, environment, and local communities. A qualitative approach based on literature study is employed, including analysis of downstreaming policies in Indonesia, empirical studies of environmental and social impacts, and fiqh literature related to the ethics of natural resource management. Data were collected from three main sources: classical and contemporary fiqh books related to <i>hifz al-bī'ah</i> (environmental preservation), government policy reports on natural resource downstreaming in Indonesia, and academic literature and international journals on natural resource management and environmental sustainability. The analysis was conducted using a descriptive-critical method, which allows the researcher to connect fiqh principles with downstreaming practices and to assess the <i>maslahah</i> and <i>mafsadah</i> for the community. The findings indicate that natural resource downstreaming has significant <i>maslahah</i> potential including increased economic added value, job creation, and regional welfare development. For example, the downstreaming policy for minerals such as nickel has contributed to national and regional income. However, if not balanced with environmental regulations and ethical implementation, downstreaming can cause <i>mafsadah</i> in the form of environmental degradation, deforestation, pollution, and inequality in benefit distribution. Therefore, this paper recommends the integration of environmental fiqh norms into natural resource downstreaming policies, including distributive justice, sustainable management, and participatory community oversight. With such an approach, natural resource downstreaming becomes not merely an economic strategy but a sustainable, just, and responsible development effort in order to preserve the <i>maslahah</i> of the people, the ecosystem, and the environment.
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Introduction

Downstreaming is an economic strategy that places processing or manufacturing processes domestically with the aim of increasing the added value of natural resources. Instead of exporting raw materials, the state encourages their processing into semi-finished or finished products (Amanda et al., 2024). This strategy is expected to increase state revenue, create high-value jobs, strengthen domestic value chains, and encourage industrialization and national technological

capacity (Fakhrina and Hamid, 2025). To achieve all this, downstreaming policy requires a clear roadmap, measurable incentives, and consistent regulations (Bappenas Library, n.d.). The implementation of downstreaming in Indonesia combines fiscal incentives such as tax holidays, investment facilities, and import duty exemptions with trade regulations such as restrictions on raw material exports. This combination has proven effective in attracting smelter and manufacturing investment; however, it can lead to market distortions if the transition is carried out too quickly without domestic capacity readiness (PPID BKPM, n.d.). Macroeconomic contributions from downstreaming can increase the manufacturing sector's contribution to gross domestic product while strengthening economic diversification, thereby reducing dependence on volatile raw commodity exports (World Bank, 2022). However, this success is only achieved if physical infrastructure, human resource quality, and supporting institutions are capable of managing the industrial value chain sustainably (World Bank, 2022). The nickel sector has become a laboratory for Indonesia's downstreaming policy (DPR RI, n.d.). The ban on nickel ore exports encouraged massive investment in smelters and accelerated the integration of the production chain, from ferronickel to battery raw materials (DPR RI, n.d.). Although generating economic growth, this case also reveals significant environmental and social challenges (ERIA, 2021; LPPM UHN Medan, 2021).

Downstreaming creates demand for a more diverse workforce ranging from technicians and logistics personnel to manufacturing operators that does not emerge in the pure extractive sector (ERIA, 2021). However, these benefits are only optimal when local workers receive training and fair access to employment (ERIA, 2021). The concentration of processing facilities, component suppliers, and research and development institutions within a region triggers the formation of industrial clusters (AIPI, n.d.). Such clusters accelerate technology transfer, university-industry collaboration, and the growth of micro, small, and medium enterprise suppliers (AIPI, n.d.). Behind its benefits, downstreaming has the potential to cause environmental damage, especially in the mineral and agro sectors. Hazardous waste, emissions, and land degradation are serious risks that require clean technology and strict regulations to avoid long-term ecological costs (The Guardian, 2022). Downstreaming projects often trigger land conflicts, loss of traditional livelihoods, and inequality in benefit distribution (LPPM UHN Medan, 2021). Non-participatory licensing processes exacerbate social exclusion (LPPM UHN Medan, 2021). Although foreign investment accelerates the development of downstream facilities, the dominance of foreign ownership can reduce domestic benefits and hinder technology transfer (Reuters, 2023a). Local content policies are instruments to address this imbalance (Reuters, 2023a). Downstreaming has the potential to increase state revenue through taxes and added value, but the initial phase requires large fiscal incentives (PwC Indonesia, 2021). Without careful planning, this policy can reduce state revenue in the short term without adequate long-term results (PwC Indonesia, 2021). In the palm oil and other agro commodity sectors, downstreaming can increase national income through derivative products such as biodiesel and oleochemicals (Bappenas Library, n.d.). However, issues of deforestation, sustainability, and certification must be a primary concern to maintain global market access (Bappenas Library, n.d.).

The integration of low-emission technology, industrial waste recycling, and renewable energy in downstreaming is very important to suppress negative externalities and maintain long-term competitiveness (CREA, 2022). The quality of a strong Environmental Impact Assessment, known in Indonesia as AMDAL, is key to ensuring that downstreaming does not damage the natural resource base (Asad et al. 2025). The main challenge is the implementation of AMDAL which still varies between regions (ResearchGate, n.d.). Rapidly developing industrial areas often face pressure on public services, worker safety, and infrastructure capacity (WIRED, 2022). Many cases of work accidents and environmental health reflect suboptimal industrial supervision (WIRED, 2022). Effective downstreaming policy requires a layered strategy: short-term focus on capacity and investment, medium-term focus on strengthening rules and industrial linkages, and

long-term focus on research and development and green transition (ERIA, 2022). Not all commodities are suitable for aggressive downstreaming. Prioritization must consider market potential, comparative advantage, and environmental risks (Muallif, 2024). Benefit-sharing mechanisms such as local employment, regional royalties, and environmental funds need to be institutionalized so that the benefits of downstreaming are not only concentrated in large corporations (The Prakarsa, 2021). Public access to investment contracts, independent oversight, and civil society involvement are very important so that downstreaming implementation is not vulnerable to corruption and harmful practices (Delve Database, 2021). Downstreaming can improve Indonesia's position in global supply chains (Reuters, 2023b). However, the dominance of foreign companies indicates the need to increase national industrial capacity to maintain economic sovereignty (Reuters, 2023b). Downstreaming is a promising but complex long-term economic transformation instrument (ERIA, 2023). Success is not determined solely by export bans, but by the integration of human resource development, infrastructure, governance, environmental mitigation, benefit sharing, and sustainable industrial strategy (ERIA, 2023).

In classical fiqh literature, natural resource management is permitted based on *maslahah* and the principle that it should not cause harm to others or the environment (Al-Fiqh al-Islami, Vol. V, pp. 584-585). Natural resources are divided into two categories: hidden natural resources (*al-ma'dan al-bāṭin*), whose exploitation requires significant costs and is managed by the state for public *maslahah*, and visible natural resources (*al-ma'dan al-zāhir*), which are shared among people like water and pasture (Al-Fiqh al-Islami, Vol. V, pp. 584-585; Al-Mahally, Vol. III, pp. 94-95). Environmental fiqh integrates sharia principles with natural resource management to achieve a balance between human needs and ecosystem preservation (Al-Qaradawi, 2011). The concept of *hifz al-bī'ah* emphasizes the prohibition of *tabdzīr* (wastefulness), forest destruction, and water or air pollution (Al-Qaradawi, 2011). *Maslahah* refers to the benefits obtained by the community from an action, while *mafsadah* is the potential loss or harm (Prastiwi, 2025). Good natural resource downstreaming must maximize *maslahah* and minimize *mafsadah*, including social, economic, and ecological risks (Hannan et al., 2024). Several studies mention that natural resource downstreaming is in line with sharia principles if it pays attention to distributive justice, resource sustainability, and community welfare. Implementation of downstreaming without control can cause *mafsadah* in the form of environmental degradation and social inequality (Putri et al., 2025). This research focuses on the legal and ethical analysis of natural resource downstreaming based on classical fiqh principles and contemporary environmental challenges (Muhammad Iqbal, 2021; Ahmad Fauzi, 2020).

The study aims to analyze the practice of natural resource downstreaming in Indonesia through the lens of environmental fiqh, assess the potential benefits and harms (*maslahah-mafsadah*) of natural resource downstreaming, offer policy recommendations and ethical guidelines for implementing just and sustainable natural resource downstreaming, and strengthen academic and religious discourse on the importance of integrating sharia values into modern natural resource management (Muhammad Iqbal, 2021; Ahmad Fauzi, 2020). Thus, it is hoped that the results of this research can serve as a reference for academics, policymakers, and the community—especially in formulating natural resource policies that pursue not only economic growth but also justice, environmental protection, and the *maslahah* of the people (Muhammad Iqbal, 2021; Ahmad Fauzi, 2020). Based on this background, this research formulates two main questions (Al-Ghazali, 1993; Al-Shatibi, 2002). First, how can the principles of environmental fiqh and *maqāṣid al-sharī'ah* serve as a normative basis for evaluating natural resource downstreaming policies in Indonesia (Al-Qaradawi, 2011; Wahbah Al-Zuhaili, 2011)? Second, under what conditions can natural resource downstreaming be considered to produce *maslahah* for the community, and when does it potentially cause *mafsadah* from the perspective of Islamic law?

Material & Methods

This research employs a qualitative method with a literature study approach, which is appropriate for examining the normative and ethical dimensions of natural resource downstreaming through the lens of Islamic jurisprudence (Mestika Zed, 2018; Sugiyono, 2022). Data were collected from three main sources: classical and contemporary fiqh books related to *hifz al-bī'ah* (environmental preservation), government policy reports on natural resource downstreaming in Indonesia, and academic literature and international journals on natural resource management and environmental sustainability (Lexy J. Moleong, 2021; Burhan Bungin, 2020).

The analysis was conducted using a descriptive-critical method, which allows the researcher to connect fiqh principles with downstreaming practices and to assess the *maslahah* and *mafsadah* for the community (Mestika Zed, 2018; Sugiyono, 2022). The primary classical sources consulted include *Al-Mustaṣfā* by Al-Ghazali, *Al-Muwāfaqāt* by Al-Shatibi, *Ri'āyat al-Bī'ah* by Al-Qaradawi, and various volumes of *Al-Fiqh al-Islāmī wa Adillatuh* by Wahbah Al-Zuhaili, as well as classical texts on mining and public finance such as *Al-Aḥkām al-Sultāniyyah* by Al-Mawardi and *Al-Maḥallī* (Al-Ghazali, 1993; Al-Shatibi, 2002; Al-Qaradawi, 2011; Wahbah Al-Zuhaili, 2011; Al-Mawardi, 1996; Al-Mahally, n.d.). Secondary sources include reports from the World Bank, the Economic Research Institute for ASEAN and East Asia, the Centre for Research on Energy and Clean Air, the Organisation for Economic Co-operation and Development, and other international institutions, as well as peer-reviewed journal articles on downstreaming policies in Indonesia (World Bank, 2022; ERIA, 2021; CREA, 2022; OECD, 2022). The analysis focuses on two main questions: first, how environmental fiqh and *maqāṣid al-sharī'ah* can serve as a normative framework for evaluating natural resource downstreaming, and second, under what conditions downstreaming produces *maslahah* versus *mafsadah* from an Islamic legal perspective (Al-Ghazali, 1993; Al-Shatibi, 2002). By integrating classical fiqh principles with contemporary policy analysis, this research aims to provide a holistic ethical assessment that goes beyond conventional economic or technocratic evaluations (Al-Qaradawi, 2011; Wahbah Al-Zuhaili, 2011).

Results and Discussion

The discussion is organized around answering the two research questions (Al-Ghazali, 1993; Al-Shatibi, 2002). Regarding the first question—how environmental fiqh and *maqāṣid al-sharī'ah* can serve as a normative basis for evaluating natural resource downstreaming policies—the findings reveal that Islamic jurisprudence provides a comprehensive ethical framework that balances economic development with ecological preservation and social justice (Al-Qaradawi, 2011; Al-Shatibi, 2002). In the Islamic tradition, humans are positioned as *khalīfah* (trustees) on earth, entrusted with the responsibility to protect and manage nature justly and sustainably (Al-Qaradawi, 2011). This principle emphasizes that nature is not merely an economic commodity but a moral and spiritual trust that must be managed responsibly (Al-Qaradawi, 2011). Contemporary studies in Islamic economics and sharia law affirm that natural resource management should respect ecological balance, distributive justice, and the rights of future generations (Al-Qaradawi, 2011; Al-Shatibi, 2002). Environmental fiqh, sometimes called ecological fiqh, emerged as a response to the global ecological crisis, including habitat destruction, deforestation, pollution, and uncontrolled resource exploitation (Al-Ghazali, 1993; Wahbah Al-Zuhaili, 2011). It offers a relevant sharia value framework centered on preserving life (*hifz al-nafs*), maintaining wealth (*hifz al-māl*), protecting environmental balance (*hifz al-bī'ah*), and avoiding excess (*isrāf*) and corruption (*fāsād*) (Al-Ghazali, 1993; Wahbah Al-Zuhaili, 2011). In the context of natural resource downstreaming, these concepts are crucial (ERIA, 2021; World Bank, 2022). Economic transformation through downstreaming must be designed so that it does not damage the environment physically through land degradation, pollution, and loss of biodiversity nor socially through injustice for local communities, unequal distribution of benefits, and neglect of future

generations (CREA, 2022; LPPM UHN Medan, 2021). Thus, downstreaming can become a form of *maslahah* rather than *mafsadah* (Al-Ghazali, 1993; Al-Shatibi, 2002).

Several empirical studies in Indonesia have attempted to bridge downstreaming policies with Islamic justice principles (e-journal UIN SGD, n.d.). Research on Islamic justice and the political economy of nickel downstreaming in eastern Indonesia shows that although nickel downstreaming provides economic added value, there is often tension between economic growth, environmental damage, and social injustice, especially towards local communities. Without an ethical foundation and regulations guaranteeing benefit distribution and environmental preservation, downstreaming can violate Islamic justice principles (Fakhrina and Hamid 2025). Classical *fiqh* also provides a robust basis for government regulation of natural resources (Al-Fiqh al-Islami, Vol. V, pp. 584-585). In classical *fiqh* literature, the utilization of natural resources is permitted based on *maslahah* and the principle that it should not cause harm to others or the environment (Al-Fiqh al-Islami, Vol. V, pp. 584-585). Natural resources are divided into two categories: hidden natural resources (*al-ma'dan al-bāṭin*), which require significant costs to exploit and are managed by the state for public *maslahah*, and visible natural resources (*al-ma'dan al-ẓāhir*), which are shared among people like water and pasture (Al-Fiqh al-Islami, Vol. V, pp. 584-585; Al-Mahally, Vol. III, pp. 94-95). Imam Al-Ghazali in *Al-Mustasfā* defines *maslahah* as the preservation of the five objectives of *sharia*: religion, life, intellect, lineage, and property (Al-Ghazali, 1993, Vol. I, p. 378). Everything that preserves these five principles is *maslahah*, and everything that eliminates them is *mafsadah* (Al-Ghazali, 1993, Vol. I, p. 378). Classical *fiqh* also recognizes the authority of the government (*ulī al-amr*) to make policies and regulations based on *maslahah*, as long as they do not contradict explicit *sharia* texts (Al-Fadani, p. 396). Imam Al-Shafi'i famously stated that the position of the imam towards the people is like the position of the guardian towards the orphan, meaning that rulers must act in the best interest of the public (Al-Fadani, p. 396). The principle that the ruler's actions towards the people are conditioned by *maslahah* is well-established, and the government has the right to intervene in legitimate private ownership to achieve justice and public *maslahah*, including imposing restrictions on permissible activities if they lead to public harm (Al-Fiqh al-Islāmī, Vol. V, pp. 518-519). Regarding environmental protection, classical *fiqh* strongly emphasizes the prohibition of causing harm through the *ḥadīth* "*lā ḍarar wa lā ḍirār*" (there shall be no harm nor reciprocating harm), and the ruler is obliged to remove harm from the people (Al-Fiqh 'alā al-Madhāhib al-Arba'ah, Vol. V, p. 407). Thus, environmental *fiqh* and *maqāṣid al-sharī'ah* provide a comprehensive normative basis for evaluating natural resource downstreaming policies (Abdullah et al. 2025).

Regarding the second question—under what conditions natural resource downstreaming can be considered to produce *maslahah* for the community and when it potentially causes *mafsadah*—the findings indicate that downstreaming has significant potential to produce *maslahah* across three dimensions: economic, social, and environmental (World Bank, 2022; ERIA, 2021; CREA, 2022). Economically, transforming raw materials into downstream products increases national income, strengthens local economic independence through manufacturing and processing industries, and reduces dependence on volatile raw commodity exports (World Bank, 2022). World Bank studies confirm that a well-planned downstreaming strategy can increase gross domestic product, diversify the economy, and foster local industrial independence (World Bank, 2022; World Bank, 2023). Socially, downstreaming offers a more equitable mechanism for benefit distribution through increased employment, local workforce training, regional royalties, and environmental funds, which help improve the welfare of local communities who have previously only been raw material suppliers (ERIA, 2021). Research by the Economic Research Institute for ASEAN and East Asia shows that downstreaming combined with participatory mechanisms reduces social inequality and improves the quality of life of affected communities (Akbar 2025). Environmentally, downstreaming can produce *maslahah* when it adopts green technologies, renewable energy, industrial waste recycling, and efficient production processes that reduce

hazardous waste, greenhouse gas emissions, and ecosystem degradation (CREA, 2022). Studies from the Centre for Research on Energy and Clean Air affirm that eco-technology integration is essential for combining economic development with environmental preservation (Amalina et al. 2026).

However, mafsadah arises when downstreaming is implemented without proper regulations and ethical oversight (Hannan et al., 2024). The findings reveal four main forms of mafsadah. First, over-exploitation occurs when accelerating downstream production depletes natural resources without extraction quotas, threatening the sustainability of domestic raw material supply (OECD, 2022). Second, environmental degradation manifests as air and water pollution, deforestation, and loss of biodiversity, especially when downstreaming lacks environmentally friendly technology or waste mitigation (CREA, 2022; The Guardian, 2022). Third, social mafsadah appears as inequality in benefit distribution, land conflicts, loss of traditional livelihoods, and social exclusion when downstreaming management benefits only large corporations or foreign investors (ERIA, 2021; LPPM UHN Medan, 2021). Fourth, economic mafsadah arises from foreign dominance and limited technology transfer, where dependence on foreign capital and technology threatens long-term economic sovereignty (Reuters, 2023a; Reuters, 2023b). Classical fiqh principles affirm that mafsadah must be minimized and that *maslahah* is not valid if accompanied by more dominant mafsadah (Ibn ‘Abd al-Salām, Vol. I, pp. 83). When *maslahah* and mafsadah coexist, if the mafsadah is greater than the *maslahah*, the mafsadah is warded off; if the *maslahah* is greater, it is achieved while accepting the mafsadah; if they are equal, one may choose or refrain (Ibn ‘Abd al-Salām, Vol. I, pp. 84). Therefore, downstreaming can be considered to produce *maslahah* when it meets several conditions: *maslahah* must be more dominant than mafsadah; it must not damage the environment (*hifẓ al-bī’ah*); it must uphold the rights of local communities and future generations; and it must be governed with transparency, justice, and community participation (Muhid et al. 2026).

Conversely, downstreaming causes mafsadah when it focuses solely on economic profit without environmental mitigation, when it leads to over-exploitation and resource depletion, when it creates social inequality and excludes local communities, and when it results in foreign dominance that undermines national sovereignty (OECD, 2022; CREA, 2022; ERIA, 2021; Reuters, 2023a). Strategies to reduce mafsadah include applying sharia principles such as the prohibition of *tabdzīr* (wastefulness) and the principle of justice (‘*adl*’); establishing strict environmental regulations with continuous monitoring; promoting education and community participation; and integrating circular economy principles and green technology (Fadli and Sarjan 2024). The integration of environmental fiqh into downstreaming policies is not merely a matter of economics versus ethics but a holistic sustainable development paradigm that brings together social justice, ecological sustainability, the *maslahah* of the people, and resource sovereignty (Amanda et al. 2024). In conclusion, downstreaming oriented solely towards economics without environmental mitigation does cause ecosystem damage and, according to fiqh, should not be continued in a form that causes more damage than benefits (Al-Ghazali, 1993; Al-Shatibi, 2002). Downstreaming can only be considered sharia-compliant when *maslahah* is more dominant than mafsadah, when it does not damage the environment, and when it upholds the rights of the community and future generations (Al-Qaradawi, 2011; Wahbah Al-Zuhaili, 2011).

Conclusions

Based on the analysis conducted to answer the two research questions, several conclusions can be drawn. Regarding the first question—how environmental fiqh and *maqāṣid al-sharī’ah* can serve as a normative basis for evaluating natural resource downstreaming policies—this research concludes that Islamic jurisprudence provides a comprehensive and robust ethical framework that integrates economic development with ecological preservation and social justice. The principles of *amānah* (trusteeship), *khalīfah* (vicegerency), *mīzān* (balance), ‘*adl*’ (justice), and the prohibition of *fasād* (corruption or destruction) offer moral standards to ensure that downstreaming is not

oriented towards short-term profit but is ecologically sustainable and socially just. Maqāṣid al-sharī'ah, particularly the preservation of life (hifẓ al-naḥs), wealth (hifẓ al-māl), and the environment (hifẓ al-bī'ah), affirms that environmental damage, unfair exploitation, and unequal distribution of benefits contradict the objectives of sharia. Classical fiqh also recognizes the authority of the government (ulī al-amr) to make policies and regulations based on maslahah, including imposing restrictions on permissible activities to prevent greater mafsadah, based on the principle that preventing harm takes precedence over bringing benefit (dar' al-mafāsid muqaddam 'alā jalb al-maṣāliḥ). Thus, environmental fiqh and maqāṣid al-sharī'ah are not only relevant but essential as a normative foundation for evaluating and guiding natural resource downstreaming policies in Indonesia.

Regarding the second question—under what conditions natural resource downstreaming produces maslahah versus mafsadah—this research concludes that downstreaming produces maslahah when it meets the following conditions: maslahah must be more dominant than mafsadah across economic, social, and environmental dimensions; it must not damage the environment through pollution, deforestation, or biodiversity loss; it must uphold the rights of local communities through fair benefit distribution, participation, and compensation; and it must be governed with transparency, accountability, and independent oversight. Conversely, downstreaming causes mafsadah when it focuses solely on economic profit without environmental mitigation, leading to over-exploitation, resource depletion, social inequality, foreign dominance, and long-term ecological damage. The potential maslahah of downstreaming is generally more dominant than its mafsadah, but this dominance is conditional on consistent integration of economic policy, green technology, strict environmental regulations, community participation, and sharia-based ethical principles. Without these conditions, mafsadah can outweigh maslahah, rendering downstreaming a source of destruction rather than benefit. Therefore, downstreaming can be a means of public maslahah if it meets the principles of justice, sustainability, transparency, and community participation; otherwise, it turns into a form of modern exploitation that contradicts sharia principles.

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Author Contribution Statement

ZN, SI, YM conceptualized the research and developed the theoretical framework. ZN conducted data collection and performed the literature review. SI analyzed primary and secondary sources (including classical fiqh texts and contemporary policy reports) and interpreted the findings in light of environmental fiqh and *maqāṣid al-sharī'ah*. YM wrote the original draft and reviewed and edited the manuscript for intellectual content. All authors approved the final version for publication.

AI Disclosure Statement

The authors used a large language model (ChatGPT by OpenAI) during the preparation of this work solely for the purpose of refining sentence structures, improving grammatical flow, and enhancing overall readability. No AI tool was used for generating research ideas, analyzing fiqh texts, formulating legal conclusions, identifying sources, or citing references. After using the tool, the authors thoroughly reviewed and edited all content as needed and take full responsibility for the accuracy, originality, and integrity of the content of this publication. All references cited in this manuscript have been verified against their original sources.

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