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Strategic Hedging in Critical Mineral Diplomacy: Indonesia's Foreign Policy Positioning in the Global Electronic Vehicle's (EV) Supply Chain on the Green Energy Transition Agenda

Nurnaningsih Al-Hasmi
Gadjah Mada University

Abstract: This article examines Indonesia's strategy in positioning its foreign policy to respond to the global green energy transition agenda, which emphasizes the enhancement of the critical mineral supply chain as raw materials for electric vehicles (EVs). This research applies the hedging strategy concept in foreign policy analysis to assess the calculations and objectives of Indonesia's foreign policy in the EV supply chain. The study employs a qualitative method with an analytical-descriptive approach. Data were collected thru document studies such as academic literature like journals and books, government reports, as well as local and international media. The findings of this research indicate that Indonesia employs a hedging strategy in positioning its foreign policy within the EV supply chain and critical mineral diplomacy by calculating maximum gains thru the utilization of its geopolitical advantage as the world's largest nickel producer. Amid the rivalry between China and the United States as electric vehicle producers, without having to focus on cooperating with one side. Indonesia implemented a policy banning the export of raw nickel ore in 2020 and promoted the domestic nickel downstreaming agenda with cooperation from several countries in terms of investment and nickel export as an important instrument in supporting this strategy. Indonesia makes the commitment to fulfilling the Sustainable Development Goals (SDGs), especially points 7 and 13, a normative framework in legitimizing the nickel downstreaming policy to support the clean energy transition agenda. This research also explores the limits and structural barriers of this strategy, including the capacity imbalances in the nickel mining process for electric vehicle needs, as well as the paradox of the global green energy transition narrative thru the utilization of nickel and the environmental-social impacts at the local level, such as in nickel-exporting countries like Indonesia.

Keywords: Critical minerals, Electric vehicle, Nickel downstreaming, Strategic hedging

Introduction

The global transformation toward clean energy in recent decades has created new patterns of competition in international dynamics. The green energy transition agenda is driving a shift from dependence on petroleum as a fossil fuel to the utilization of critical minerals as a new global geopolitical center. The utilization of critical minerals such as nickel, cobalt, and lithium as raw materials for the production of electric vehicle batteries has become a new alternative in supporting this agenda (Lahadalia et al., 2024).

Geopolitical competition is no longer solely related to access to oil and gas but is increasingly connected to a country's ability to secure critical mineral supplies and dominate the low-carbon technology supply chain. Developed countries like the United States and the European Union are competing to become the world's producers of electric vehicles in order to reduce carbon emissions, with production increasing every year (IEA, 2025). This has also led these countries to start competing to secure access to critical mineral supply chains as part of their national security and economic strategies.

In the context of raw materials for electric vehicle batteries, nickel occupies a very crucial position. According to data from the International Energy Agency (IEA), the demand for electric vehicle batteries will continue to increase until 2030, in line with the acceleration of the green energy transition through carbon emission reduction and net-zero emission targets (IEA, 2025). The increase in demand for electric vehicles has made nickel one of the strategic resources with both economic and geopolitical value. The demand for nickel for electric vehicle battery needs reached almost 370 kilotons in 2023, an increase of about 30 percent compared to the previous year (INSG, 2024). The high demand for batteries for electric vehicles will automatically increase the demand for nickel from the main supplying countries. Therefore, this development indicates that the global energy transformation is also changing the status of certain minerals from mere commodities to strategic resources in the global industrial competition.

This condition makes countries with nickel reserves like Indonesia have a strategic position in the global electric vehicle production supply chain. Indonesia occupies a very strategic position in the supply chain of electric vehicles within the global clean energy transition agenda. Based on data from the United States Geological Survey (USGS), Indonesia has the largest nickel reserves in the world, significantly contributing to global nickel needs (USGS, 2024). Indonesia is predicted to hold 42% of the world's total nickel reserves, giving it a strategic position to leverage its nickel bargaining power for maximum benefit in the global clean energy supply chain (Putri et al., 2026).

This highly strategic geopolitical position of nickel makes Indonesia play an important role in the electric vehicle supply chain within the global clean energy transition agenda. Regions in Indonesia such as Central Sulawesi, North Maluku, and South Sulawesi are predicted to hold 90% of Indonesia's nickel reserves, making them the primary source of the world's nickel reserves (Syarifuddin, 2022). That position can be understood as a form of positional leverage, which is a strategic advantage that arises because Indonesia controls one of the resources needed by other countries in the development of the electric vehicle supply chain. Thus, Indonesia is not only in a position as a supplier of raw materials but also has the opportunity to influence economic and diplomatic relations related to access to nickel. The competition among major countries to secure critical minerals increasingly provides Indonesia with the opportunity to leverage its position in its foreign policy.

The Indonesian government responded to global conditions by promoting strategic geopolitical policies, including the implementation of a ban on the export of raw nickel ore in 2020 (Anindita et al., 2025). This is done by the Indonesian government to leverage the strategic conditions of nickel geopolitics in Indonesia to gain greater benefits for domestic interests. Furthermore, the Indonesian government is intensifying the push for domestic nickel downstreaming through the construction of smelters and strengthening the domestic processing industry so that Indonesia can obtain greater added value in the global production chain. This policy not only has an economic dimension but also brings significant geopolitical implications as it affects the interests of industrial countries that depend on Indonesia's mineral supply.

External changes such as the intensifying competition between the United States and China in the electric vehicle supply chain have made Indonesia a country that these nations are vying for to secure their nickel supply. The pressure from the European Union's palm oil issue has also softened after the signing of the Indonesia–European Union Comprehensive Economic Partnership Agreement (IEU-CEPA) by President Prabowo, which provides a bargaining opportunity for Indonesia's nickel industry. Additionally, the United States' policy through the Inflation Reduction Act (IRA), aimed at reducing production dependence on China, has elevated Indonesia's position as a strategic partner of the United States (Hyldmo et al., 2025). However, Indonesia cannot seize the opportunity for expanded cooperation and become a key player in the supply chain if it continues to rely on a single partner for domestic nickel processing.

That condition creates opportunities for Indonesia to expand economic and investment relations beyond China. Indonesia has the leverage to adopt a strategy of maintaining cooperative relations with various major powers simultaneously without having to favor one over the other. Indonesia continues to choose to cooperate with China in terms of investment in nickel smelter development and other technologies, while also keeping the door open for cooperation with the United States, South Korea, Japan, and the European Union. The European Union has become one of the important actors in this context. On one hand, the European Union exerts pressure on Indonesia's policies through trade issues and environmental standards. On the other hand, the European Union's need for critical minerals opens up negotiation space for Indonesia. The development of IEU-CEPA shows how the relationship can evolve from merely a trade relationship into part of the dynamics of critical mineral diplomacy (Barizi & Triarda, 2023).

This policy pattern indicates a more flexible strategy compared to the balancing or bandwagoning approaches in international relations studies. Excessive dependence on China has the potential to reduce Indonesia's flexibility when changes occur in the strategic environment. Meanwhile, the United States and the European Union can provide alternative investments, markets, and technology, but increasing closeness with these two actors could also potentially affect Indonesia's relationship with China. This condition shows that Indonesia's choices cannot be understood solely through the logic of alignment with one major power. Indonesia actually has an interest in gaining benefits from various parties while maintaining strategic options if the global power configuration changes. This pattern is relevant to be analyzed through the concept of strategic hedging developed by Cheng-Chwee Kuik. This concept explains how middle powers strive to maintain strategic flexibility by engaging with various major powers without being exclusively bound to one party (Kuik, 2008). By using this approach, this article will discuss how Indonesia implements a hedging strategy in critical mineral diplomacy and its implications for Indonesia's position in global green energy governance.

In conditions of uncertainty and great power competition, a country can choose not to exclusively side with one power but instead maintain relationships with various actors to gain benefits while simultaneously reducing risks. Kuik (2008) explains that hedging has two main orientations, namely return-maximizing options and risk-contingency options. The first dimension is return-maximizing, which is the state's effort to obtain maximum benefits from relations with great powers. This dimension includes economic pragmatism, binding engagement, and limited forms of bandwagoning. In the context of Indonesia, economic pragmatism can be seen through openness to investments and economic cooperation from various countries as long as such cooperation benefits national interests (Kuik, 2008).

The second dimension is risk-contingency, which refers to the state's efforts to prepare alternatives to face the possibility of worsening external conditions. In Kuik's (2008) framework, this dimension includes dominance denial and indirect balancing. Countries do not have to engage in open confrontation but can strive to prevent one power from becoming too dominant and gradually strengthen alternatives that can be used when strategic conditions change. Kuik (2021) then emphasizes that hedging is a response to uncertainty. Countries strive to avoid exclusive dependence, implement policies that can provide benefits from various directions, and build contingency options to face changes in the strategic environment (Kuik, 2021).

This research argues that Indonesia's critical mineral diplomacy demonstrates the character of strategic hedging through a combination of two main dimensions, namely return-maximizing and risk-contingency. Indonesia leverages the global demand for nickel to gain economic benefits through downstream processing and cooperation with various partners, while simultaneously diversifying relationships to reduce the risk of dependence on a single major power. However, this strategy has not yet fully achieved strategic autonomy because Indonesia still faces dependence on foreign capital, technology, and processing capacity.

Method

This research will use a qualitative research method with a descriptive-analytical approach. The research was conducted through a literature review by examining various academic sources, international reports, and policy documents related to critical mineral diplomacy and the global energy transition. Data for this research will be collected from articles, academic journals, books, and other internet-based sources, including policy documents and corporate reports related to the topic, as well as various literature discussing strategic hedging and Foreign Policy Analysis (FPA). Additionally, this article will also use data and information from official government publications and reports from international organizations related to the electric vehicle industry and critical minerals.

The analysis technique involves linking Indonesia's foreign policy in the nickel sector with the components of strategic hedging developed by Kuik. With this approach, the article not only views downstream policies as economic policies but also as foreign policy strategies related to global geopolitical changes. The analysis is conducted by linking Indonesia's policy in the nickel industry with Kuik's concept of strategic hedging (Kuik, 2008, 2021).

The research does not categorize all of Indonesia's economic policies as foreign policy, but rather examines how economic policies and nickel industrialization have consequences for Indonesia's diplomatic position in an international environment marked by great power competition. The analysis is divided into five parts. First, the research explains Indonesia's geopolitical leverage as a condition that provides space for hedging. Second, the research analyzes return-maximizing through downstream processing and economic cooperation. Third, the

research analyzes risk-contingency through diversification and efforts to avoid the dominance of a single power. Fourth, the research discusses the limitations of hedging, particularly asymmetric dependence and the sustainability issues of the nickel industry. Fifth, the research discusses the implications of Indonesia's strategic hedging for the rise of the Global South. The strategic hedging will be analyzed using several indicators as follows:

Table 1. Indicator analysis of strategic hedging opportunities in Indonesia's foreign policy

Hedging Indicator	Focus of Analysis in Indonesia's Foreign Policy
Return-Maximizing	Opportunities for economic cooperation, investment, market access, technology transfer.
Risk-contingency	Diversification of partners, prevention of dominance by a single actor, investment and technology alternatives.

Results and Discussion

Leverage Indonesia's Geopolitics: Why Indonesia has Room for Strategic Hedging

The global green energy transition has shaped a new geopolitical competition for natural resources that no longer focuses solely on natural gas and oil. Critical minerals mark this transformation as a new resource supporting the green energy transition agenda in advancing clean energy technology through electric vehicle instruments. In the IEA report, it is explained that the demand for critical minerals has sharply increased in recent years and is expected to continue experiencing significant surges as the global decarbonization targets accelerate (IEA, 2025).

In this context, Indonesia occupies a highly strategic geopolitical position in the electric vehicle supply chain. Indonesia plays an important role in influencing a stable supply chain for electric vehicle batteries. Indonesia is estimated to have nickel reserves of 21 million metric tons from 2021 to 2023 and holds the position of the largest nickel producer in the world, surpassing China, the Philippines, and Russia (Ahtali Grasia et al., 2024). This strategic position makes Indonesia a chokepoint in the global electric vehicle supply chain, which gives Indonesia a strategic advantage as a Global South country, being a key player rather than a passive one in the global geopolitical arena (Jaewon Chung, 2025). Therefore, a more adaptive and non-partisan foreign policy management in accordance with the constitutional mandate of the free and active ideology, gives Indonesia the opportunity to have high bargaining power in this supply chain.

In the ASEAN region, Indonesia is the largest nickel producer, far surpassing the Philippines in the area. Indonesia is estimated to have around 52% of the world's nickel reserves, with Central Sulawesi, North Maluku, and South Sulawesi predicted to hold 90% of Indonesia's nickel reserves (Syarifuddin, 2022). Countries producing electric vehicles then make Indonesia a strategic partner for fulfilling the nickel supply chain for EV needs. Thus, Indonesia's presence in the ASEAN region makes this area a space for geopolitical rivalry in accessing nickel resources by major powers.

In addition, the dynamics of change and external pressures, especially the competition between the United States and China, and EV-producing countries like the European Union in securing the electric vehicle supply chain, provide a strong bargaining position for Indonesia. However, this poses a potential risk if Indonesia is unable to cooperate well with all the major powers that desire access to Indonesia's nickel. Previously, the IEU-CEPA negotiations were hindered by various issues related to the European Union's demands for a ban on the export of raw nickel ore and the issue of deforestation caused by Indonesia's palm oil industry. However, the increase in negotiations between Indonesia and the EU-CEPA indicates that the European Union has changed its approach toward Indonesia to be slightly more flexible in order to gain support for access to Indonesian nickel to meet its green energy transition agenda. Therefore, the increase in IEU-CEPA negotiations can be utilized by Indonesia to open up the market as much as possible for nickel exports and strengthen its bargaining power to gain investment support and technology transfer benefits with the European Union (Barizi & Triarda, 2023).

Therefore, based on these conditions, Indonesia has the opportunity to implement strategic hedging in its foreign policy by leveraging its strategic position to enhance its political and economic influence on the global stage. Hedging can be applied when a powerful country then relies on natural resources controlled by a single country, thereby giving that country room to maneuver in ways that are not available to countries without similar leverage. Control over strategic resources is closely related to the distribution of global power. Therefore, Indonesia's strategic position as the country with the largest nickel reserves in the world plays an important role in the global EV supply chain.

Return Maximizing: Downstream Processing and the Indonesian Government's Ban on Raw Nickel Exports

The Indonesian government's ban on raw nickel ore exports in 2020 marked the beginning of a shift in Indonesia's foreign policy toward taking a strategic role in the competition for critical mineral resources like nickel for the green energy transition agenda (WTO, 2022). The Indonesian government aims to increase profits by processing raw nickel domestically rather than exporting raw nickel ore, which would yield greater profits for nickel-processing countries for use in electric vehicle batteries. This domestic downstream nickel policy encourages the development of domestic processing facilities and nickel smelters to maximize Indonesia's economic benefits in the global electric vehicle supply chain (Lahadalia et al., 2024). This policy agenda also opens up opportunities for cooperation in various supporting sectors, especially capital and technology investments, with electric vehicle-producing countries such as China, South Korea, the United States, Japan, and the European Union.

The 2020 ban on raw nickel ore exports also created investment opportunities for electric vehicle-producing countries to strengthen their commitments to net zero emissions targets from the global green energy transition agenda (Lahadalia et al., 2024). Although this export ban policy was challenged by the European Union at the WTO, it remains a strategic policy for Indonesia in opening up cooperation opportunities in the domestic nickel processing industry, particularly Indonesia's commitment to supporting the Sustainable Development Goals (SDGs) related to clean energy. Indonesia actively connects the global green energy transition agenda with downstream policies and the achievement of SDGs, especially SDG 7 on clean energy and SDG 13 on climate action. This then becomes an instrument of soft balancing employed by Indonesia in its hedging strategy to legitimize its foreign policy through the utilization of normative and institutional frameworks (Kariswan et al., 2026).

This is done to maximize profits by processing nickel into semi-finished products and opening up opportunities for technology transfer cooperation from all partner countries, not just focusing on one country. Indonesia is taking steps to significantly enhance the development of nickel processing capacity from raw ore to nickel pig iron, ferronickel, and nickel sulfate needed for high-energy batteries (IEA, 2021). By engaging in hedging, Indonesia can also create conditions to indirectly balance the power of major countries. In this case, Indonesia's strategic position as the world's largest nickel producer makes countries like the European Union more lenient toward trade rules and demands on Indonesia in the WTO.

This downstream policy has become a strategy implemented by the Indonesian government, reflecting return-maximizing practices from a strategic hedging perspective according to Kuik. Indonesia opens investment cooperation opportunities to various countries without being overly biased toward any particular country. By creating competition among investors, Indonesia gains a better bargaining position in investment negotiations, technology transfer, and domestic industrial development. The nickel downstream policy also demonstrates Indonesia's efforts to transform its position and role in the global nickel supply chain. Indonesia emphasizes its position to become a key actor and play a significant role in the electric vehicle battery supply chain from the utilization of nickel, rather than just being a supplier of raw materials with low added value.

Economic cooperation through investment in Indonesia's nickel production demonstrates hedging practices in the economic policies of developing countries. Indonesia continues to open cooperation opportunities for every country without siding with any particular major power bloc. The Indonesian government opens consistent cooperation space for investors from various geopolitical orientations simultaneously. CATL and Huayou from China, Sumitomo from Japan, POSCO from South Korea, and a consortium related to the US market are all managed by Indonesia to provide space within the Indonesian nickel investment ecosystem, referring to the conditions set by the Indonesian side (IEA, 2021).

The success of Indonesia's downstream policy in 2020 was able to increase investment in domestic smelter development, but this investment is still dominated by a significant partner, namely China (Anindita et al., 2025). Of the 30 nickel smelters in Indonesia built in 2023, 99% came from Chinese investment (Ahtali Grasia et al., 2024). Therefore, structural dependence on China cannot be considered a well-calculated strategy to achieve maximum profit; rather, it indicates a lack of domestic nickel production capacity and the dominance of a single party in the development process. Dependence on a single major power will also reduce Indonesia's flexibility in making foreign policy decisions if there is a rapid geopolitical transformation at the global level.

Additionally, the policy decision regarding the ban on raw nickel ore exports in 2020 also shows that Indonesia is beginning to take steps that could affect the interests of major industrial countries (Lahadalia et al., 2024). The ban on raw nickel ore exports also strengthens Indonesia's position in taking on a major role in the EV supply

chain to maximize its profits. However, the ban on raw ore exports has garnered various responses in the dynamics of international relations. The European Union sued Indonesia at the WTO because it contradicts the principles of free trade, and the policy is also seen as having a significant impact on the European electric vehicle industry (WTO, 2022). However, Indonesia continues to uphold the downstream policy as it is considered important for long-term national interests.

The target of the global green energy transition through decarbonization efforts also encourages European Union countries to fulfill their commitments by utilizing low-carbon technologies. The European Union's need for nickel makes Indonesia's bargaining position in the EU-CEPA agreement more realistic. Therefore, this momentum must be utilized by the Indonesian government to expand strategic partnerships for maximum benefits in the nickel supply chain by engaging electric vehicle-producing countries other than China. This transformation is not just an economic upgrade, but Indonesia's shift to a stronger position in the global value chain. Where previously Indonesia played the role of a raw material seller, it is now becoming a provider of industrial inputs that are not easily replaceable. This change also provides maneuvering space for increased attention from major powers toward Indonesia's critical mineral sector. Foreign investment in the smelter and EV battery industries has significantly increased since the government accelerated its downstream policy. Thus, nickel is no longer viewed merely as an ordinary economic commodity, but also as a geopolitical instrument that influences Indonesia's position in the international system.

Risk-Contingency: Diversification and Prevention of Single Power Domination in Indonesia's Nickel Geopolitics

The rivalry between the United States and China in the development and advancement of the green technology industry increasingly highlights the importance of controlling critical minerals, especially nickel, as a key raw material component in the production of electric vehicle batteries. China took a significant lead in the global electric vehicle battery supply chain through massive investments in Indonesia's nickel processing sector. Many smelter industrial zones in Indonesia are developed through Chinese capital and technology (Lahadalia et al., 2024). On the other hand, the United States is also trying to take a central role in this supply chain by issuing the Inflation Reduction Act (IRA), which provides tax incentives for electric vehicles whose raw materials come from countries not classified as 'foreign entities of concern,' also aimed at reducing dependence on products from China (Putri et al., 2026).

Indonesia gains economic benefits from the dominance of capital investment from China to accelerate the agenda of developing a smelter-based nickel industry in domestic nickel processing. However, Indonesia is cautious in taking steps to avoid becoming too dependent on capital from China because excessive reliance on a single country can also reduce the flexibility of Indonesia's foreign policy. The dynamics of competition among major powers at the international level in securing the electric vehicle supply chain provide leverage for Indonesia to expand its benefits from this competition. The competition between the United States and China in the global electric vehicle supply chain makes Indonesia's position increasingly strategic. China has already dominated the global electric vehicle supply chain. China has about 80 percent of the refining of critical mineral raw materials for global electric vehicles, 77 percent of battery cell production, and 60 percent of global electric vehicle component manufacturing (Barizi & Triarda, 2023). China's dominance in the global electric vehicle supply chain is prompting its competitors, such as the United States, to take roles in that supply chain.

Through the ongoing nickel downstream policy, Indonesia has the opportunity to continue strengthening this policy and to be flexible in securing investments in the nickel processing industry development sector, which should not be centralized with only one strategic partner like China, which still dominates at present. This is because the nickel processing industry and smelter technology development are still dominated by capital investments from China, which controls 70% of the capital in the nickel processing industry in Indonesia (Kevin Brunelli, 2026). In addition, China also controls the battery supply chain in Indonesia through various companies such as Lygend, Huayou Cobalt, and CATL, with an investment of 6 billion US dollars in the battery supply chain in Indonesia (Kevin Brunelli, 2026). Therefore, Indonesia needs to expand its bargaining power while still opening up investment opportunities with other countries such as the United States, the European Union, South Korea, and Japan.

Moreover, China's dominance in the EV supply chain has caused turmoil in the European Union, which responded by proposing the Net Zero Industry Act (NZIA) in their legislation to strengthen and accelerate net zero emission targets and lead the green energy transition agenda. Through the NZIA, the European Union proposed the Critical Raw Material Act (CRMA) to encourage increased cooperation in diversifying the electric vehicle supply chain

by building partnerships with various strategic partners and reducing exclusive dependence on certain partners, which can also help developing countries enhance their raw material processing industry capacity (Barizi & Triarda, 2023). This policy demonstrates the European Union's significant need for access to critical mineral resources, and it could be a momentum for Indonesia to take a role in economic negotiations with the European Union, particularly in the IEU-CEPA forum.

Although the European Union, in the IEU-CEPA negotiations, promotes several strict environmental sustainability regulations such as Environmental, Social, and Governance (ESG) standards and the EU Deforestation Regulation, which put pressure on Indonesia, especially in the palm oil and nickel processing industries. However, at the same time, the European Union also opens negotiation opportunities through the CRMA, indicating its need for access to nickel raw materials from developing countries like Indonesia to meet its own energy transition targets (Mangani et al., 2025). Therefore, through the signing of the IEU-CEPA, Indonesia can enhance its negotiating opportunities in the Indonesian nickel mining industry by providing access for the European Union to contribute to the development of domestic smelters.

In the context of the United States-China rivalry, Indonesia faces quite complex geopolitical pressures in the competition for critical mineral resources. At this point, Indonesia has the opportunity to take a hedging step by not showing full alignment and dependence on capital from a major country. Indonesia continues to maintain economic cooperation relations with China but also pursues and seizes cooperation opportunities with the United States and other countries in the nickel industry sector. Therefore, Indonesia's foreign policy should focus more on utilizing the strategic advantage calculations from the global green energy transition agenda through strategic hedging to avoid being trapped in dependence on a single major power in the region and to become a key player in the global electric vehicle supply chain. This strategy is referred to by Kuik as the practice of dominance-denial.

Indonesia seeks to ensure and prevent dominant actors with significant power from pressuring and limiting the maneuverability of Indonesia's foreign policy in a non-confrontational manner. By maintaining relationships with various parties simultaneously, Indonesia has greater diplomatic flexibility in facing global geopolitical changes. In addition, this approach also allows Indonesia to benefit from the competition among major powers. Countries that want to gain access to Indonesia's nickel must compete through investments, technology, and economic cooperation that are more beneficial for Indonesia.

Strategic hedging becomes the most advantageous option for Indonesia to maximize profits and bind major countries to become its strategic cooperation partners. Multi-directional diversification needs to be realized to prevent overly deep asymmetric dependence on China. This is because China remains the largest destination for Indonesia's nickel exports, with millions of tons of nickel per year, while Indonesia only exports less than six thousand tons of nickel to the United States (Nasution et al., 2024). By leveraging the IRA subsidy policy from the United States, Indonesia's opportunity to expand market access for nickel exports beyond the Asian region becomes realistic and allows Indonesia to be more proactive in the global nickel supply chain.

The Challenge of Indonesia's Strategic Hedging: The Paradox of SDG Norms Working in Two Directions

The utilization of SDG norms in supporting the global green energy transition agenda within Indonesian policy faces its own challenges. Indonesia's commitment through the SDG 7 and 13 frameworks related to clean energy and climate action is used to support the global energy transition toward green energy to address the climate crisis caused by global warming. However, it cannot be denied that this agenda becomes contradictory when viewed from the environmental impact generated by the nickel mining process, especially in developing countries like Indonesia.

The development and increase in nickel production in Indonesia have caused environmental damage in the areas surrounding the mines. For example, in the Indonesia Morowali Industrial Park (IMIP) area, Central Sulawesi, one of the largest nickel mining regions in Indonesia, serious environmental issues have arisen. The rising demand for nickel for electric vehicles has accelerated downstream processing and increased mining activities in IMIP, leading to ecological damage such as pollution and degradation of water quality, freshwater shortages, and damage to mangrove ecosystems (Febriany & Akbar, 2024). The increase in nickel mining activities in Morowali has also resulted in significant deforestation. In Central Sulawesi, deforestation has reached 723 thousand hectares, partly due to nickel mining (Malik, 2025).

Therefore, the environmental issues arising from Indonesia's support for the green energy transition through the normative legitimization of SDG 7 and 13 also face obstacles from the paradox of other SDG norms such as SDG

3 on health, SDG 14 on marine ecosystems, and SDG 15 on terrestrial ecosystems. This gap will then become a unique challenge in the implementation of the hedging strategy through soft balancing of international norms, as it will be exploited by international actors to pressure Indonesia in questioning the consistency of its support for sustainable development (Overland, 2019).

The normative paradox occurring in Indonesia's foreign policy is something that will be structurally difficult to resolve with mere diplomatic rhetoric. Therefore, if this paradox of tension is not resolved properly, Indonesia's legitimacy as a country that declares itself a nickel supplier through its normative hedging dimension for the clean energy agenda may decline. Therefore, the long-term success of Indonesia's critical mineral diplomacy will depend on Indonesia's capability to maintain its foreign relations while balancing its commitment to supporting the SDGs related to the domestic environmental impact of the domestic nickel processing industry.

Implications of Strategic Hedging in the Rise of the Global South

The implementation of strategic hedging in Indonesia through critical mineral diplomacy, in this case nickel, shows that Global South countries also have the opportunity to enhance their diplomatic bargaining position in the international system by leveraging geopolitics through the management of strategic resources. Indonesia's position is no longer merely as an object in the global supply chain; rather, Indonesia occupies a crucial position and is beginning to play a role as an actor with the capability of being the world's largest nickel producer to influence industrial policies and the direction of international investment. Hedging is not only understood as a diplomatic strategy but also as an effort to maintain economic and industrial maneuvering space.

Through the application of strategic hedging in its foreign policy, Indonesia opens up space to maintain flexibility in its diplomatic direction, especially in the era of rivalry among major powers, to avoid being too exclusively aligned with one major power bloc. This flexibility gives Indonesia a greater opportunity to gain political, economic, and technological advantages. Moreover, strategic hedging also allows Indonesia to reject the dominance of major powers in the management and export of Indonesian nickel. Rejecting dominance encourages strategic flexibility to avoid unilateral monopolies by countries with significant power over access to national resources (Kuik, 2008, 2021).

Conclusion

This article shows that external pressures and the dynamics of geopolitical transformation of nickel in the global green energy transition drive countries with critical mineral resources to have a strategic position in the global electric vehicle supply chain. Indonesia's strategic position as the world's largest nickel producer necessitates leveraging the momentum to gain maximum advantage from the competition among major powers such as the United States, China, and the European Union through strategic hedging. Indonesia has strategic opportunities and bargaining power in the nickel supply chain as a key player, not just a passive country.

The heavy dependence on the nickel processing sector and large nickel exports to China will continuously weaken Indonesia's diplomatic position with other strategic partners. Therefore, the external dynamics occurring at the global level and efforts to reduce structural dependence on China could provide opportunities for Indonesia to implement strategic hedging. The softening of the European Union and the IRA subsidies offered by the United States can be utilized by Indonesia to avoid alignment with a single major power and to expand cooperation in the nickel sector by maximizing greater economic benefits.

The opportunities for Indonesia's foreign policy strategy, especially in the critical minerals sector, can be understood through the concept of strategic hedging developed by Cheng-Chwee Kuik. Indonesia maximizes its strategic geopolitical potential as the country with the largest nickel reserves in the world to maintain relations with various competing major powers, especially in fulfilling the clean energy transition agenda simultaneously without being bound or overly biased toward any one country. Strategies such as the ban on nickel ore exports, domestic nickel downstream policies, the opening of multi-directional investments, and the use of the normative framework of the SDGs agenda in international diplomacy show that Indonesia is striving to maximize both political and economic gains while maintaining the flexibility of its strategic cooperation. In this context, strategic hedging not only becomes a defensive strategy but also an instrument to strengthen Indonesia's position in the governance of the global green energy supply chain through the utilization of electric vehicles that make nickel their main raw material.

However, this strategy still faces challenges such as the normative paradox of environmental sustainability, particularly the contradiction between fulfilling the environmental sustainability agenda and local environmental issues. Therefore, the effectiveness of Indonesia's hedging strategy will ultimately depend on the government's ability to strengthen domestic industrial capacity, maintain environmental sustainability, and preserve diplomatic balance amid global geopolitical changes.

Recommendations

The Indonesian government can optimize hedging strategies in Indonesia's critical mineral diplomacy as a foreign policy priority, especially in the nickel industry sector. This policy aims to prevent a single dominance by China in accessing nickel resources in Indonesia and to expand Indonesia's bargaining power with various strategic partners such as the United States and the European Union. Diversifying partners through multi-directional mechanisms prevents Indonesia from relying on a single hegemonic dominance, which could potentially weaken Indonesia in the event of global shocks, particularly sudden capital withdrawals by China in nickel processing.

The Indonesian government can leverage the momentum of the IEU-CEPA signing to encourage increased cooperation with the European Union in technology transfer and reduce single dependence on technology from China. Indonesia can also enhance its bargaining power in the EU-CEPA negotiations by emphasizing mutually beneficial policy incentives between the European Union and Indonesia. Indonesia can leverage this momentum to pressure the European Union into providing more lenient space for the EUDR regulations that hinder Indonesia's palm oil industry. On the other hand, Indonesia can offer market access and strategic investments to the European Union in terms of technology transfer and investments in the domestic nickel processing industry. The downside is that Indonesia could face pressure from China due to the reduction in Chinese investment in Indonesia's nickel processing. In addition, this negotiation requires a considerable amount of time and significant negotiation capacity.

Indonesia needs to strengthen coordination among domestic ministries, especially those managing critical minerals, by accelerating the enhancement of nickel governance standards that prioritize environmental sustainability and SDG consistency to avoid WTO lawsuits. This is important to prevent European Union demands in the WTO, particularly regarding deforestation and environmental damage in the nickel processing sector. In addition, by meeting ESG standards, it has the potential to open wider access to the European Union market and accelerate the implementation of the EU-CEPA.

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* The author declares that the scientific ethical and legal responsibility of this article published in EPES Journal belongs to the author.

Conflict of Interest

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Author(s) Information

Nurnaningsih Al Hasmi

Gadjah Mada University

Yogyakarta, Special Region of Yogyakarta, Indonesia

ORCID iD: <https://orcid.org/0009-0007-6209-5956>

*Contact e-mail: nurnaningsih.alhasmi@mail.ugm.ac.id

*Corresponding author(s) contact email

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