Reassessing Sovereignty and Sustainability in Nickel Downstreaming: An Economic Analysis of Indonesia's Legal Framework

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Abstract

Indonesia hosts the largest global reserves of nickel, designating the commodity as a critical mineral and a strategic national asset. In accordance with Article 33 of the 1945 Constitution, the governance of natural resources is mandated to align with principles of justice, sustainability, and the enhancement of public welfare. Among recent state-led initiatives, the nickel downstreaming policy—primarily operationalized through the expansion of smelter industries—has emerged as a tangible assertion of economic sovereignty. However, this policy has raised significant legal and economic concerns, particularly in relation to environmental degradation, inequitable distribution of economic benefits, and continued dependence on non-renewable and high-emission energy sources such as coal.This study applies an economic analysis of law framework to critically assess the efficiency, equity, and sustainability embedded within the current regulatory regime governing nickel downstreaming. Employing a normative juridical method, combined with statutory and conceptual approaches, the research reveals a dissonance between the formal legal assertions of state control and the substantive realization of constitutional mandates. The findings indicate that, despite signaling sovereignty, the existing regulatory architecture fails to deliver on key constitutional imperatives, particularly environmental protection and social justice for affected communities.From a legal-economic perspective, the downstreaming policy has yet to achieve optimal allocative efficiency, internalization of externalities, or distributive fairness. These shortcomings underscore the urgent need for regulatory reform aimed at enhancing legal certainty, promoting ecologically responsible industrial practices, and safeguarding community welfare. The study contributes to ongoing debates on natural resource governance by highlighting the critical intersection between constitutional law, environmental justice, and economic rationality in Indonesia's extractive policy landscape.

I. Introduction

Indonesia has an abundance of natural resources [1], both renewable and non-renewable resources. In the energy sector there are renewable energy resources such as solar energy, geothermal, water flow, wind movement, and many more. While non-renewable energy resources such as petroleum, natural gas, and coal [2]. Similarly, the mining sector is classified as a non-renewable natural resource. Indonesia has various types of critical mineral mines that other countries do not have in abundance, for example nickel.

Based on publications released by the United States Geological Survey (USGS), Indonesia is classified as the largest nickel producing country in the world with a total of 55 million tons [3]. The data used as a reference for global countries has placed Indonesia as the country with the largest nickel reserves in the world with a percentage of ownership of 55% of total global nickel reserves. With such a large amount of nickel reserves, the economic value of nickel is one type of natural resource classified as a critical mineral that is important to the state and controls the lives of many people. Therefore, all natural resource commodity wealth such as critical mineral mining owned by Indonesia must be managed wisely and optimized to realize the welfare of the people. This mandate is in line with the objectives of natural resource management stated in Article 33 paragraph (3) of the 1945 Constitution of the Republic of Indonesia, which states that "*The land and water and the natural resources contained therein shall be controlled by the state and utilized for the greatest prosperity of the people*." When referring to the meaning of the economic constitution in Article 33 of the 1945 Constitution, it is appropriate to categorize nickel as a type of strategic natural resource that must be controlled by the state for the greatest prosperity of the people, in other words, it cannot be controlled directly by the private sector [4].

Not all countries have abundant nickel commodities like Indonesia, therefore as a form of state sovereignty of natural resources, Indonesia has a great opportunity to manage nickel as a product that has high selling value. Nickel mining products in the form of ore that are still raw can be processed as semi-finished materials or ready-to-use finished materials. Nickel mining products do need to increase added value from an economic point of view, which is generally termed "downstream." Through the downstreaming of nickel, it is

[1] Irfan Nur Rachman, "Politik Hukum Pengelolaan Sumber Daya Alam Menurut Pasal 33 UUD 1945," *Jurnal Konstitusi* 13, no. 1 (2016): 192, https://doi.org/10.31078/jk1319.
[2] Indah Dwi Qurbani, "Politik Hukum Pengelolaan Minyak dan Gas Bumi di Indonesia," *Arena Hukum* 5, no. 2 (August 1, 2012): 115, https://doi.org/10.21776/ub.arenahukum.2012.00502.5; Ahmad Redi, *Hukum Energi: Konsep, Sejarah, Asas, Dan Politik Hukum* (Depok: Rajawali Pers, 2020), 47.
[3] USGS, *Mineral Commodity Summaries 2024* (Virginia: USGS, 2024), 125.
[4] Rachman, "Politik Hukum Pengelolaan Sumber Daya Alam Menurut Pasal 33 UUD 1945," 201–2.

hoped that there will be an economic impact so that nickel products contribute to the improvement of the national economy to be used as development capital, and also provide welfare impacts for the wider community.

The abundance of nickel, the target of economic growth, and the strong commitment to downstreaming are economic benefits that must be supported by legal instruments as a form of management of economic resources that are important to the state and control the lives of many people. In this case, the economic analysis of law study is an approach used to analyze the effectiveness and efficiency of regulations related to nickel downstreaming, taking into account its legal and economic impacts holistically [5]. This approach helps assess the extent to which existing policies and regulations can create the right incentives for business actors, while maintaining the principles of social welfare and environmental sustainability.

This research was conducted to examine the state sovereignty policy over nickel downstreaming in Indonesia with reference to the perspective of "economic analysis of law". The analysis was conducted by examining the alignment of existing regulations with the principles of national economic governance as stipulated in Article 33 of the 1945 Constitution of the Republic of Indonesia, which targets the creation of social justice. In this research, the analysis is conducted to evaluate whether the regulations implemented have reflected the balance between economic interests and environmental sustainability from the perspective of economic analysis of law.

A previous study was conducted by Atik Krustiyati and Gita Venolita Valentina Gea in an article titled *"The Paradox of Downstream Mining Industry Development in Indonesia: Analysis and Challenges."* Essentially, the article concludes that the Indonesian government's policy to promote the downstreaming of the nickel mining sector—through an export ban and mandatory domestic processing—has triggered a lawsuit from the European Union at the WTO [6]. The WTO panel ruled that Indonesia had violated the provisions of the GATT 1994, particularly due to the absence of a clear time limit and the fact that nickel was not considered to be in a state of critical shortage. Although Indonesia holds sovereignty over its natural resources, it is obliged to comply with WTO rules and adjust its national regulations to prevent further disputes [7].

[5] Erma Denniagi, "Analisis Ke-Ekonomian Pemidanaan Tindak Pidana Pencucian Uang Dalam Undang-Undang Nomor 8 Tahun 2010 Tentang Pencegahan Dan Pemberantasan Tindak Pidana Pencucian Uang," *Lex Renaissance* 6, no. 2 (October 26, 2021): 247, https://doi.org/10.20885/JLR.vol6.iss2.art3.
[6] Atik Krustiyati and Gita Venolita Valentina Gea, "The Paradox of Downstream Mining Industry Development in Indonesia: Analysis and Challenges," *Sriwijaya Law Review* 7, no. 2 (July 31, 2023): 335–49, https://doi.org/10.28946/slrev.Vol7.Iss2.2734.pp335-349.
[7] Krustiyati and Gea, "The Paradox of Downstream Mining Industry Development in Indonesia."

This article differs from the focus of the present research, which will examine the effectiveness of the legal policy on nickel downstreaming in generating added value for the national economy and assess the extent to which existing regulations can optimize natural resource management based on the constitutional economic principles of Article 33 of the 1945 Constitution of the Republic of Indonesia ("UUD NRI 1945". Therefore, this research is expected to provide recommendations for improving the regulatory model of nickel downstreaming to better align with the principles of sustainable development and public welfare from the perspective of "economic analysis of law".

2. Research Method

This research uses normative juridical type, also known as "*doctrinal legal research*" [8]. This research focuses on a normative study of the laws and regulations governing nickel downstreaming and their implications for sustainable economic development goals, especially in realizing state sovereignty that is socially just and environmentally friendly according to "*economic analysis of law*". As a normative research, this research identifies regulatory weaknesses that have the potential to cause imbalances between the utilization of nickel energy resources and environmental protection efforts. The approaches used are the legislative approach and the conceptual approach . Through these approaches, this research will examine nickel downstreaming issues from the aspects of regulation, policy practice, environmental cases, to policy solution models that can be applied by policy makers. Therefore, this research will produce prescriptive legal policy recommendations. The legal materials used are primary legal materials in the form of laws and regulations, as well as secondary legal materials sourced from books, journals, online articles, and other supporting publications [9] through systematic literature review (SLR). The analysis technique uses deductive reasoning and systematic interpretation.

3. Results and Discussion

Doctrine of State Sovereignty in the Management of Nickel Downstream

There are many legal doctrines that can be used as justification for state sovereignty in natural resource management. For example, in the international sphere there is recognition of natural resource sovereignty by nation states in the form of UN General Assembly Resolution 1803 (XVII) concerning "*Permanent Sovereignty over Natural*

[8] Soerjono Soekanto and Sri Mamudji, *Penelitian Hukum Normatif: Suatu Tinjauan Singkat* (Jakarta: Rajawali Pers, 2012), 13–14.
[9] Peter Mahmud Marzuki, *Penelitian Hukum: Edisi Revisi*, 13th ed. (Jakarta: Prenada Media, 2017), 181.

Resources" (PSNR) dated December 14, 1962 [10]. Based on the UN Resolution, based on jurisdiction according to international law, the country that owns natural resources is entitled to sovereignty over the management of its natural resources without any foreign intervention, including metal minerals classified as critical minerals [11].

However, there is a debate about state sovereignty in the PSNR, which is widely understood as absolute sovereignty, so that the doctrine contained in the PSNR can be used as a basis for justifying the national interests of each country that owns natural resources. One of the points in the PSNR states that "*The right of peoples and nations to permanent sovereignty over their natural wealth and resources must be exercised in the interest of their national development and of the well-being of the people of the State concerned*." This means that PSNR provides protection for the national interests of each country so that their natural resources can be used as capital for their national development. In order to avoid the control of natural resources not being concentrated in one country absolutely, there is another UN Resolution, namely Resolution 3201 (SVI) "*Charter of Economic Rights and Duties of States*" (1974) which regulates the rights and obligations of countries in the economic field so that each country opens itself to cooperate in managing natural resources. The resolution emphasizes that the new international economic order should be based on the state's right to control its natural resources and not ignore the economic interests of other countries in order to create a balance of economic distribution.

In addition to the principle of Permanent Sovereignty over Natural Resources (PSNR), the justification for state control over natural resource governance is also supported by the doctrine of resource nationalism. On this subject, Eve Warburton describes "resource nationalism" as the state's involvement in the natural resource sector to secure greater authority over the conditions governing private investment [12]. Warburton differentiates between "nationalist intervention," which pertains to official legal instruments, and "nationalist mobilization," which involves actions by both state and non-state actors aimed at advancing formal nationalist agendas through means such as public campaigns,

[10] Petra Gümplová, "Sovereignty over Natural Resources – A Normative Reinterpretation," *Global Constitutionalism* 9, no. 1 (March 2020): 16–17, https://doi.org/10.1017/S2045381719000224; Nico Schrijver, *Sovereignty Over Natural Resources: Balancing Rights and Duties* (Cambridge: Cambridge University Press, 1997), 168.
[11] Raphael J Heffron, "The Role of Justice in Developing Critical Minerals," *The Extractive Industries and Society* 7, no. 3 (2020): 856, https://doi.org/10.1016/j.exis.2020.06.018; Indah Dwi Qurbani, Raphael J Heffron, and Arrial Thoriq Setyo Rifano, "Justice and Critical Mineral Development in Indonesia and Across ASEAN," *The Extractive Industries and Society* 8, no. 1 (2021): 357–58, https://doi.org/10.1016/j.exis.2020.11.017.
[12] Eve Warburton, "Resource Nationalism in Indonesia: Ownership Structures and Sectoral Variation in Mining and Palm Oil," *Journal of East Asian Studies* 17, no. 3 (November 2017): 288, https://doi.org/10.1017/jea.2017.13.

litigation, proposed laws, and similar efforts [13]. Similarly, as Jeffrey D. Wilson says, *resource nationalism* is a political-economic concept that describes the policies or actions of a state to control, regulate, or limit the exploitation of its natural resources in their own national interest to obtain economic and political benefits [14].

In addition to PSNR and resource nationalism above, in the Indonesian Constitution there is an arrangement called "state control rights" ("HMN") which is regulated in Article 33 of the 1945 Constitution. Paragraph (2) states that "*Branches of production that are important to the state and that control the livelihood of many people shall be controlled by the state*." Then in paragraph (3) it is also emphasized that "*The land and water and the natural resources contained therein shall be controlled by the state and used for the greatest prosperity of the people.*" Article 33 paragraph (3) emphasizes that the role of the state is very central in the management of natural resources in order to be in line with the livelihood of the wider community in a fair manner. State control implies that the authority to regulate and manage natural resources is in the control of the state [15].

Such constitutional arrangements show that the orientation of natural resource management in Indonesia is to realize the welfare of the people [16], or called social justice. As such constitutional regulation design, Jimly Asshiddiqie calls the 1945 Constitution of the Republic of Indonesia as the "Economic Constitution" and "Social Justice Constitution". It is called the Economic Constitution because the 1945 Constitution regulates national economic policy [17]. Meanwhile, it is called the Social Justice Constitution because it regulates the basics of state policy in the social field and at the same time contains a normative reference system that must be used as a demand and guide by all actors in the life of the community [18].

To understand nickel downstreaming as part of a national policy strategy, it must first be understood that natural resource management, especially nickel as a critical mineral, is not merely an economic or investment issue, but also a manifestation of state sovereignty. It is called a critical mineral, because its material function is difficult to

[13] Warburton, 288.
[14] Jeffrey D. Wilson, "Understanding Resource Nationalism: Economic Dynamics and Political Institutions," *Contemporary Politics* 21, no. 4 (October 2, 2015): 400–402, https://doi.org/10.1080/13569775.2015.1013293.
[15] Tri Hayati, "Hak Penguasaan Negara terhadap Sumber Daya Alam dan Implikasinya terhadap Bentuk Pengusahaan Pertambangan," *Jurnal Hukum & Pembangunan* 49, no. 3 (2019): 780, https://doi.org/10.21143/jhp.vol49.no3.2199.
[16] Mahfud MD., *Demokrasi Dan Konstitusi Di Indonesia: Studi Tentang Interaksi Politik Dan Kehidupan Ketatanegaraan*, 2nd ed. (Jakarta: Rineka Cipta, 2003), 133.
[17] Jimly Asshiddiqie, *Konstitusi Ekonomi* (Jakarta: Kompas Media Nusantara, 2016), 68.
[18] Jimly Asshiddiqie, *Konstitusi Keadilan Sosial: Serial Gagasan Konstitusi Sosial Negara Kesejahteraan Sosial Indonesia* (Jakarta: Kompas, 2019), 450–51.

replace with other minerals [19], so it has a vital function. Thus, on a philosophical level, the state's sovereignty over natural resources reflects a social contract between the government and its citizens, whereby the state is entrusted with the responsibility to manage these resources in a way that ensures the greatest benefit for the people's welfare.

Within the framework of such legal doctrine, the nickel downstreaming policy can be seen as a form of state intervention to increase domestic added value, reduce dependence on raw material exports, and encourage nickel industrialization as a path to more independent development. However, strengthening the state's position through nickel downstreaming must still stand on the principles of social justice and environmental sustainability as mandated by the constitution.

The downstreaming of mineral and coal mining, including nickel, was initially required under the provisions of Article 102 of Law No. 4/2009 on Mineral and Coal Mining which stipulates that "*Holders of IUP and IUPK are obliged to increase the added value of mineral and/or coal resources in the implementation of mining, processing and refining, and utilization of minerals and coal*." However, the direction of the downstream policy is not clearly determined because the regulation is delegated to government regulations (PP) according to Article 103 paragraph (3) of Law No. 4 Year 2009 on Mineral and Coal Mining. At the time of the enactment of Law No. 4/2009, downstreaming did not run optimally due to the unpreparedness of comprehensive regulations, low investment interest, and lack of infrastructure support, mastery of technology, and low human resource capabilities [20]. These problems are the background for the revision of Law No. 4/2009 into Law No. 3/2020. At the time of the enactment of Law No. 3 of 2020, the Indonesian government had a strong commitment to develop the downstream sector of mining commodities, especially nickel. Not only legal policies at the paper level, but the downstreaming of mining commodities such as nickel is also being ambitiously implemented until now.

The overall implementation of nickel downstreaming and the political commitment to strengthen domestic industries align with the doctrine of state sovereignty over natural resources as enshrined in Article 33 of the 1945 Constitution. One example is the issuance of Minister of Energy and Mineral Resources Regulation No. 11 of 2019, through which the government officially prohibited the export of nickel ore starting January 1,

[19] Aji Baskoro, "ESG Dan Tata Kelola Hilirisasi Critical Minerals: Mampukah Infrastruktur Hukum Indonesia Menjamin Keberlanjutan Dan Keadilan?," *Jurnal Rechts Vinding: Media Pembinaan Hukum Nasional* 14, no. 1 (May 15, 2025): 68, https://doi.org/10.33331/rechtsvinding.v14i1.2069.
[20] Dwi Qurbani, "Politik Hukum Pengelolaan Minyak dan Gas Bumi di Indonesia," 116; Rachman, "Politik Hukum Pengelolaan Sumber Daya Alam Menurut Pasal 33 UUD 1945," 193.

2020 [21]. The ban policy at that time was an effort to improve the industrial development climate through increasing the added value of mining commodities in the country. So that indirectly as a stimulus for domestic economic development [22]. As Rizal Budi Santoso et al. explained, Indonesia utilizes nickel as a tool of economic diplomacy to increase its influence in global trade and politics [23]. This view makes sense, because Indonesia's nickel content is around 55% of global reserves.

However, the ban was challenged by the European Union at the World Trade Organization ("WTO") [24] on the grounds that the ban was detrimental to their industries that depend on raw material supplies from Indonesia [25]. In its lawsuit to the WTO, the EU argued that the export ban contradicts the principle of free trade stipulated in the WTO agreement. In addition, they highlighted that Indonesia's domestic smelter industry is not yet fully prepared to process and refine large quantities of nickel ore, so this policy is considered more an act of protectionism than an effort to effectively encourage downstreaming. The strategic steps taken through the raw nickel ore export ban reflect a combination of economic sovereignty and political sovereignty [26].

As an actualization of sovereignty over natural resources, technical implementation and regulatory guarantees regarding nickel downstreaming must be strictly ensured to remain in line with the principles of the economic constitution in Article 33 of the 1945 Constitution of the Republic of Indonesia such as compliance with the principles of fair, sustainable and environmentally sound economic distribution [27]. Because Article 33 is the parent regulation that must be obeyed by all parties. Economic distribution means the creation of community economic impacts that can be felt fairly, so that the impact is to improve the community's economy evenly [28]. Likewise, the principle of sustainability

[21] Kementerian ESDM, "Bijih Nikel Tidak Boleh Diekspor Lagi per Januari 2020," 2019, esdm.go.id/id/media-center/arsip-berita/bijih-nikel-tidak-boleh-diekspor-lagi-per-januari-2020.
[22] Syukron Mahal Farawansa and Elfrida Ratnawati Gultom, "Diagnosis Of Nickel Industry Downstreaming Policy In Export Restriction Towards Increasing Economic Added Value In Indonesia," *Jurnal Legalitas* 17, no. 1 (April 28, 2024): 3–4, https://doi.org/10.33756/jelta.v17i1.19688.
[23] Rizal Budi Santoso, Windy Dermawan, and Dwi Fauziansyah Moenardy, "Indonesia's Rational Choice in the Nickel Ore Export Ban Policy," *Cogent Social Sciences*, December 31, 2024, 1, https://www.tandfonline.com/doi/abs/10.1080/23311886.2024.2400222.
[24] Liputan6.com, "Jokowi Larang Ekspor Mineral Mentah Dan Batu Bara, Eropa Hingga Jepang Meradang," 2022, https://www.liputan6.com/bisnis/read/4870420/jokowi-larang-ekspor-mineral-mentah-dan-batu-bara-eropa-hingga-jepang-meradang.
[25] Hilmi Prabowo, "Alternatif Penyelesaian Sengketa Larangan Ekspor Nikel Indonesia di WTO," *PROGRESIF: Jurnal Hukum* 18, no. 1 (June 30, 2024): 48, https://doi.org/10.33019/progresif.v18i1.4209.
[26] Santoso, Dermawan, and Moenardy, "Indonesia's Rational Choice in the Nickel Ore Export Ban Policy," 1 and 5–6.
[27] Baskoro, "ESG DAN TATA KELOLA HILIRISASI CRITICAL MINERALS," 64; Arfan Faiz Muhlizi, "Penataan Regulasi dalam Mendukung Pembangunan Ekonomi Nasional," *Jurnal Rechts Vinding: Media Pembinaan Hukum Nasional* 6, no. 3 (2017): 351, https://doi.org/10.33331/rechtsvinding.v6i3.191.
[28] Laura Notess et al., "Community Land Formalization and Company Land Acquisition Procedures: A Review of

and environmental insight requires that the implementation of nickel downstreaming is in line with environmental interests and intergenerational justice to obtain a clean and healthy environment.

Indeed, in terms of domestic technological support, Indonesia is not yet fully prepared to implement a sustainable and environmentally sound nickel downstream industry. Therefore, what needs to be criticized is the extent to which the nickel downstream policy is truly implemented in accordance with the principles of the welfare state and the economic constitution. If in practice downstreaming creates new social inequalities, environmental damage, unfair exploitation of labor, and does not provide significant benefits to local communities, then the policy deviates from the spirit of equitable natural resource sovereignty.

Although nickel downstreaming has significant benefits for the growth of state economic revenues, the principle of implementing nickel downstreaming is not always comply with the principles of a sustainable economy as desired by Article 33 of the 1945 Constitution. The main problem of unsustainable nickel downstreaming can be seen from the massive deforestation that targets forest areas to open up land for nickel downstreaming smelters, as well as the use of coal-fired Captive Power Plants (PLTU Captive) which have a bad impact on the environment. Not to mention the impact of environmental pollution and declining air quality around the smelter area which continues to worsen, further threatening the health of the community and surrounding ecosystems. An example of nickel downstream practices that do not reflect sustainable economic principles is the Weda Bay Industrial Park (IWIP) in North Maluku. The nickel downstreaming area of PT Virtue Dragon Nickel Industry, as one of the case studies, shows that despite large investments, the surrounding community still faces poverty and economic difficulties that are exacerbated by environmental damage and air quality due to industrial activities [29]. This situation highlights a disconnect between economic growth and the protection of the environment and social welfare—objectives that should be central to the nickel downstreaming policy.

In this context, the economic analysis of law becomes essential to evaluate whether the current legal framework promotes efficiency, ensures an equitable distribution of benefits, and avoids generating negative externalities that impact communities.

33 Procedures in 15 Countries," *Land Use Policy*, Land governance and tenure security at scale, 110 (November 1, 2021): 452, https://doi.org/10.1016/j.landusepol.2020.104461.

[29] Muhamad Nafi Uz Zaman, "Implementasi Economic Analysis of Law Dalam Pengaturan Hilirisasi Indonesia: Antara Permanent Sovereignty over Natural Resources Dan Perdagangan Internasional," *Jurnal Rechts Vinding: Media Pembinaan Hukum Nasional* 14, no. 1 (May 15, 2025): 40, https://doi.org/10.33331/rechtsvinding.v14i1.2044.

Ultimately, state sovereignty in the context of nickel downstreaming should not be viewed merely as an economic tool *an sich*, but rather as encompassing broader principles, including the state's obligation to ensure the welfare of its people. It is imperative that the management of natural resources is conducted in a fair, sustainable, and constitutionally aligned manner. Accordingly, any analysis of downstreaming policies must incorporate an understanding of the sovereignty doctrine, the welfare state principle, and legal norms that seek to balance economic objectives with the protection of community rights and environmental integrity.

Actualization of the Concept of Economic Analysis of Law in the Management of Nickel Downstreaming

Law and economics have a very close relationship, because economic policies are generally translated through legal policies to provide clarity on the rules of the game in economic activity. In other words, every economic system is composed of a set of values that shape and build a legal framework that contains a certain hierarchy of values [30]. Since the beginning, the development of law and economics has indeed had a positive essence because it uses economic theories to project and explore various rules related to the economy so as to create governance efficiency [31]. Even as a new discipline that developed rapidly since the 1970s, there was a shift in view from initially seeing law as "right" and "wrong" to "risks" and "benefits" [32]. The relationship between economics and law is conceptually termed as "*economic analysis of law*", which is the application of economic principles as a rational choice to analyze various legal issues [33].

There are many figures who give their thoughts about economic analysis of law. One of the best known is Richard A. Posner after publishing his thoughts in a book entitled "*Economic Analysis of Law*" in 1986 [34]. However, long before Posner's work, there was the thought of Jeremy Bentham (1748-1832) who introduced the purpose of law to provide maximum benefits to society (*utilitarianism*) [35]. Bentham's view then underwent development in the study of economics to be regulated in legal instruments to ensure the creation of social welfare. This is also what Erman Rajagukguk asserted that maximizing social welfare is not in the sense of maximizing individual welfare, but welfare for the entire community without exception [36].

Economic analysis determines choices in conditions of resource *scarcity*, which assumes that society or individuals must make maximum efforts to meet their needs as well as

[30] Cut Asmaul Husna TR, "Adopsi Prinsip Permanent Sovereignty over Natural Resources (PSNR) Migas," *Jurnal Hukum & Pembangunan* 46, no. 4 (December 30, 2016): 471, https://doi.org/10.21143/jhp.vol46.no2.74.
[31] Romli Atmasasmita and Kodrat Wibowo, *Analisis Ekonomi Mikro Tentang Hukum Pidana Indonesia* (Jakarta: Kencana, 2016), 5.
[32] Atmasasmita and Wibowo, 5.
[33] Richard A. Posner, *Economic Analysis of Law* (Boston, Toronto, London: Little, Brown and Company, 1986), 533.
[34] Fikri Hadi and Ristawati Rosa, "Pemindahan Ibu Kota Indonesia Dan Kekuasaan Presiden Dalam Perspektif Konstitusi," *Jurnal Konstitusi* 17, no. 3 (2020): 533.
[35] Kristianus Pramudito Isyunanda, "Pemanfaatan Law and Economics Sebagai Metodologi Analisis Hukum Di Indonesia," *Mimbar Hukum* 34, no. 1 (June 30, 2022): 129–30, https://doi.org/10.22146/mh.v34i1.2063; Endang Pratiwi, Theo Negoro, and Hassanain Haykal, "Teori Utilitarianisme Jeremy Bentham: Tujuan Hukum Atau Metode Pengujian Produk Hukum?," *Jurnal Konstitusi* 19, no. 2 (2022): 277–79, https://doi.org/10.31078/jk1922.
[36] Erman Rajagukguk, *Butir-Butir Hukum Ekonomi* (Jakarta: Lembaga Studi Hukum dan Ekonomi Fakultas Hukum Universitas Indonesia, 2011), 311.

possible, even though the available resources are limited. In the context of economic analysis of law - as viewed by Richard Posner - it requires the need for efficiency as much as possible. As in civil cases, it will be more efficient to settle amicably or through arbitration which is a faster process [37]. In the criminal context, for example in the calculation of the period of punishment and payment of fines [38], and compensation for victims of criminal acts [39], as well as in environmental criminal law in the form of analysis of determining the nominal cost of compensation and environmental restoration.

According to Fajar Sugianto, the economic analysis of law serves as an approach that constructs legal reasoning based on economic principles and concepts. Its primary aim is to evaluate the impact of legal rules, assess policy effectiveness, and predict the features, efficiency, and quality of a legal instrument. This approach also functions as a foundation for policy formulation, enabling policymakers to identify the most suitable legal forms and mechanisms for implementation. As a result, the law produced through this method tends to be more efficient and capable of delivering optimal economic outcomes [40].

The economic analysis of law approach positions law as an economic tool to achieve maximization of happiness through economic considerations, while still maintaining aspects of justice. In this framework, justice is seen as an economic standard built on three main elements, namely value, utility, and efficiency, all of which are based on the principle of human rationality [41]. In law, economic analysis of law does not only emphasize norm guarantees, but also applies economic principles in legal practice to ensure that regulations and policies are able to create incentives that encourage optimal and efficient economic behavior. The economic analysis of law approach also assesses whether a rule of law has reduced market distortions, increased productivity, and minimized transaction costs in various economic sectors. For example, in contract formation, the economic analysis of law approach helps evaluate the effectiveness of legal provisions in reducing uncertainty for the parties and ensuring that business agreements can run efficiently. Similarly, in the context of environmental law, economic analysis of law is used as a reference standard in assessing the extent to which

[37] Rajagukguk, 343.
[38] Denniagi, "Analisis Ke-Ekonomian Pemidanaan Tindak Pidana Pencucian Uang Dalam Undang-Undang Nomor 8 Tahun 2010 Tentang Pencegahan Dan Pemberantasan Tindak Pidana Pencucian Uang," 259–60.
[39] Choky Ramadhan, *Pengantar Analisis Ekonomi Dalam Kebijakan Pidana di Indonesia* (Jakarta: Institute for Criminal Justice Reform (ICJR), 2016), 21–24.
[40] Fajar Sugianto, *Economic Analysis of Law: Seri Analisis Ke-Ekonomian Tentang Hukum*, Revised, 1 (Jakarta: Kencana, 2014), 18.
[41] M. Ilham Wira Pratama, "Analisis Terhadap Sanksi Pidana Tindak Pidana Pencucian Uang (Perspektif Economic Analysis of Law)," *Indonesian Journal of Criminal Law and Criminology (IJCLC)* 3, no. 1 (March 30, 2022): 20, https://doi.org/10.18196/ijclc.v3i1.12343.

environmental policies are able to encourage companies to internalize the costs of negative externalities without hampering economic growth [42], such as carbon tax and carbon trading schemes.

Humans as rational maximizers tend to achieve goals and benefits that will be obtained through the most efficient ways [43]. Therefore, the economic analysis of law approach provides a foundation for policy makers in designing regulations that are not only legally fair, but also economically efficient to encourage economic growth and sustainability. Based on the ideas of Robert Cooter and Thomas Ullen, they offer three economic principles in law, namely: (1) optimization; (2) balance; and (3) efficiency [44]. Similarly, Richard Posner offers three principles of economic analysis of law which include: (1) value; (2) expediency; and (3) efficiency [45]. This research article will use Richard Posner's three principles because they are consistent with the focus of the research - although it will use ideas from other figures that are compatible.

First, the principle of "value" reflects optimal economic governance by considering the balance between the rights and obligations of the parties in a transaction or regulation. ***Second***, the concept of utility in economic studies has a meaning that is interpreted differently from legal studies. In economic studies, utility is used to distinguish uncertain costs from something certain, so that utility is interpreted as expected utility and produces risk analysis [46]. Meanwhile, in legal studies, the meaning of utility explained by many legal philosophers, one of which is Jeremy Bentham, is the happiness of legal benefits. Gustav Radbruch also emphasized that the ideal legal goals are justice, expediency, and legal certainty.

Third, the principle of efficiency should minimize transaction costs and avoid market distortions, thereby encouraging more productive and sustainable economic activity. This principle emphasizes that laws should be designed in such a way that they do not create excessive economic barriers and can allocate resources optimally. As explained by Cooter and Ulen, a product is classified as efficient if the quality, production capacity, and production capability are fixed, useful, and right on target [47]. Thus, the regulations applied must be able to create a balance between legal protection and economic flexibility, so that they not only provide legal certainty but also encourage innovation and

[42] Isyunanda, "Pemanfaatan Law and Economics Sebagai Metodologi Analisis Hukum Di Indonesia," 133.
[43] Fajar Sugianto, *Economic Approach to Law*, 2 (Jakarta: Kencana, 2013), 61.
[44] Robert Cooter and Thomas Ullen, *Law and Economics*, 5th ed. (Boston, London: Pearsons ltd, 2008), 13–15.
[45] Posner, *Economic Analysis of Law*, 12–13.
[46] Sugianto, *Economic Approach to Law*, 62.
[47] Cooter and Ullen, *Law and Economics*, 17.

sustainable investment.

In the context of Indonesia's nickel downstreaming policy, the economic analysis of law approach is highly relevant for assessing the effectiveness of the legal framework that governs value enhancement of mining commodities. This downstreaming policy, as outlined in Law No. 3 of 2020 amending Law No. 4 of 2009 on Mineral and Coal Mining along with its implementing regulations, aims to generate greater economic value domestically by promoting the development of smelting facilities. The existence of a state that actually carries out direct management of natural resources through nickel downstreaming, the state gets greater direct benefits from natural resource management. With direct management, it is ensured that all profits obtained will enter into state profits which will indirectly bring great benefits to the people [48]. However, from the perspective of legal economics, the fundamental question is: "*has the regulation been able to create economic efficiency, provide optimal behavioral incentives, and reduce social costs and market distortions?*"

The principle of value as asserted by Richard A. Posner requires that a legal policy must be able to balance between the benefits of the national economy and the burden borne by business actors. In practice, the downstream policy creates a change in the structure of the nickel market from an export-oriented raw material to a domestic processing and refining industry. However, this transition does not necessarily benefit all parties. For national businesses that do not yet have technological capabilities and capital, this policy actually creates a high cost burden in the construction of smelter facilities, which is juridically a condition for continuing a mining business license ("IUP"). In addition, the scheme to force the construction of smelters is not accompanied by sufficient fiscal incentives or guarantees of project economics, resulting in an imbalance between legal obligations and the economic carrying capacity of business actors.

In terms of expediency, the law should encourage the fair and efficient redistribution of economic benefits. In the context of nickel downstreaming, the existence of smelters that are mostly controlled by foreign companies or joint ventures with foreign entities such as China has the potential to create a concentration of added value in only a handful of dominant actors. This market capture phenomenon can actually weaken the spirit of downstreaming as a national development tool if it is not accompanied by a policy design that distributes economic benefits inclusively in the country, especially to local communities around the mine and small industry players. This is where the role of economic analysis of law can identify how the legal framework can be directed to maximize utility not only from a macroeconomic perspective, but also in terms of social

[48] Husna TR, "Adopsi Prinsip Permanent Sovereignty over Natural Resources (PSNR) Migas," 469.

justice and equitable distribution of benefits. In other words, the law should encourage socially efficient outcomes, not just private economic gain.

The principle of efficiency is also crucial in assessing the success of the nickel downstreaming policy. This is because many literatures explain that economic efficiency is the basic and most distinctive principle of economic analysis of law. One of the main criticisms in the implementation of downstreaming is the smelter's dependence on coal-fired power plants ("PLTU" captive), which are considered economically inefficient in the long run and create negative externalities in the form of pollution and high carbon emissions. The social costs of this dirty energy use are not internalized into the smelter's economic calculations, as there is no carbon tax or other limiting instrument that reflects environmental costs. This shows an imbalance between the legal certainty of investment and ecological efficiency in the long run. In fact, according to economic analysis of law, such distortions should be minimized through careful legal instruments, such as a cap and trade system or carbon pricing that allows the industry to continue to grow while still considering social costs.

Another juridical aspect that needs to be criticized from the perspective of economic analysis of law is the tendency of inconsistency in the implementation of regulations, for example downstream policies that change or open exceptions for certain entities. This inconsistency creates legal uncertainty that has an impact on increasing transaction costs in long-term investment. For example, some companies receive export relaxation even though they have not completed the construction of a smelter, while others remain strictly bound to the export ban. This inconsistency violates the principles of efficiency and fairness in law, and undermines the credibility of the regulatory system itself.

Thus, the economic analysis of law approach to nickel downstreaming policy reveals that the law must not only be a tool to drive industrialization, but must also be designed by considering the efficiency of resource allocation, reducing social costs, and creating the right incentives for economic actors including micro-enterprises. This means that the success of nickel downstreaming is not simply judged by the increasing volume of ferronickel or nickel matte exports, but also by the extent to which the law succeeds in creating an economic ecosystem that is fair to the wider community, efficient, and sustainable. It would be very unfair if the revenue from nickel downstreaming is allocated entirely to the income of investors and the state alone, but there is no economic impact on local communities and the wider community.

Moreover, if the nickel downstream industry is associated with the impact of ecological damage, then the issue has a strong relevance to the economic analysis of law approach. This approach can be used to assess not only the effectiveness of legal policies in

regulating industrial activities, but also the extent to which these policies are able to encourage the accountability of business actors for the negative impacts caused to the environment. In the context of environmental disputes, the application of economic analysis of law has an important contribution, especially in calculating the amount of proportional compensation, both for affected victims and for long-term environmental recovery efforts. It needs to be remembered that nickel downstreaming still uses captive power plants sourced from coal, massive deforestation, and ecological impacts that damage the environment [49], so that adverse impacts on the environment and public health are inevitable. By using the economic analysis of law approach, when there is a case in court, the judge does not only consider the formal aspects of the law, but also takes into account the values of efficiency, usefulness, and economic justice holistically [50].

Furthermore, economic analysis of environmental law can help formulate a more appropriate and measurable compensation framework by considering the economic value of the damage caused, the cost of restoration, and the potential loss of environmental benefits for future generations. This is especially important when faced with the complexity of environmental cases resulting from nickel industry activities that often take place on a large scale and have systemic impacts. Thus, economic analysis of law is not only an evaluative tool for the effectiveness of regulations, but also a normative basis for the government and judges (if included in the litigation process) to provide decisions that are able to answer the needs of substantive justice, provide legal certainty, and encourage environmental sustainability through rational incentives and disincentives.

4. Conclusion

Indonesia's nickel downstreaming policy serves as an embodiment of state sovereignty over natural resources, rooted in the concepts of “Permanent Sovereignty over Natural Resources” (PSNR), resource nationalism, and the principle of state control as enshrined in Article 33 of the 1945 Constitution of the Republic of Indonesia. Despite this assertion of sovereignty, the policy has not fully upheld the principles of social justice and environmental sustainability, as it has led to significant ecological degradation and an uneven distribution of economic benefits among the population. Consequently, the realization of economic and social justice remains limited. From the standpoint of

[49] Zaman, “IMPLEMENTASI ECONOMIC ANALYSIS OF LAW DALAM PENGATURAN HILIRISISASI INDONESIA,” 41.
[50] Prim Haryadi, “Pengembangan Hukum Lingkungan Hidup Melalui Penegakan Hukum Perdata Di Indonesia,” *Jurnal Konstitusi* 14, no. 1 (July 24, 2017): 146, https://doi.org/10.31078/jk1416.

economic analysis of law, the policy has indeed contributed considerable added value to the national economy. Nevertheless, its implementation has fallen short in generating legal incentives that are efficient, equitable, and environmentally responsible, and it has failed to ensure the internalization of negative externalities arising from industrial activities. This calls for a fundamental redesign of the legal framework to align with the principles of efficiency, value, and utility, which are essential to sustainable development. Additionally, the government must demonstrate a strong legal commitment to enforce regulations consistently in order to fulfill its constitutional obligation to manage natural resources—particularly nickel—for the greatest welfare of the people, as mandated by Article 33.

Refrences

Asshiddiqie, Jimly. *Konstitusi Ekonomi*. Jakarta: Kompas Media Nusantara, 2016.

———. *Konstitusi Keadilan Sosial: Serial Gagasan Konstitusi Sosial Negara Kesejahteraan Sosial Indonesia*. Jakarta: Kompas, 2019.

Atmasasmita, Romli, and Kodrat Wibowo. *Analisis Ekonomi Mikro Tentang Hukum Pidana Indonesia*. Jakarta: Kencana, 2016.

Baskoro, Aji. "ESG Dan Tata Kelola Hilirisasi Critical Minerals: Mampukah Infrastruktur Hukum Indonesia Menjamin Keberlanjutan Dan Keadilan?" *Jurnal Rechts Vinding: Media Pembinaan Hukum Nasional* 14, no. 1 (May 15, 2025): 61–82. https://doi.org/10.33331/rechtsvinding.v14i1.2069.

Cooter, Robert, and Thomas Ullen. *Law and Economics*. 5th ed. Boston, London: Pearsons ltd, 2008.

Denniagi, Erma. "Analisis Ke-Ekonomian Pemidanaan Tindak Pidana Pencucian Uang Dalam Undang-Undang Nomor 8 Tahun 2010 Tentang Pencegahan Dan Pemberantasan Tindak Pidana Pencucian Uang." *Lex Renaissance* 6, no. 2 (October 26, 2021): 246–64. https://doi.org/10.20885/JLR.vol6.iss2.art3.

Dwi Qurbani, Indah. "Politik Hukum Pengelolaan Minyak dan Gas Bumi di Indonesia." *Arena Hukum* 5, no. 2 (August 1, 2012): 115–21. https://doi.org/10.21776/ub.arenahukum.2012.00502.5.

Farawansa, Syukron Mahal, and Elfrida Ratnawati Gultom. "Diagnosis Of Nickel Industry Downstreaming Policy In Export Restriction Towards Increasing Economic Added Value In Indonesia." *Jurnal Legalitas* 17, no. 1 (April 28, 2024): 1–16. https://doi.org/10.33756/jelta.v17i1.19688.

Gümplová, Petra. "Sovereignty over Natural Resources – A Normative Reinterpretation." *Global Constitutionalism* 9, no. 1 (March 2020): 7–37. https://doi.org/10.1017/S2045381719000224.

Hadi, Fikri, and Ristawati Rosa. "Pemindahan Ibu Kota Indonesia Dan Kekuasaan Presiden Dalam Perspektif Konstitusi." *Jurnal Konstitusi* 17, no. 3 (2020): 530–37.

Haryadi, Prim. "Pengembangan Hukum Lingkungan Hidup Melalui Penegakan Hukum Perdata Di Indonesia." *Jurnal Konstitusi* 14, no. 1 (July 24, 2017): 124–49. https://doi.org/10.31078/jk1416.

Hayati, Tri. "Hak Penguasaan Negara terhadap Sumber Daya Alam dan Implikasinya terhadap Bentuk Pengusahaan Pertambangan." *Jurnal Hukum & Pembangunan* 49, no. 3 (2019): 768. https://doi.org/10.21143/jhp.vol49.no3.2199.

Heffron, Raphael J. "The Role of Justice in Developing Critical Minerals." *The Extractive Industries and Society* 7, no. 3 (2020): 855–63. https://doi.org/10.1016/j.exis.2020.06.018.

Husna TR, Cut Asmaul. "Adopsi Prinsip Permanent Sovereignty over Natural Resources (PSNR) Migas." *Jurnal Hukum & Pembangunan* 46, no. 4 (December 30, 2016): 454–88. https://doi.org/10.21143/jhp.vol46.no2.74.

Isyunanda, Kristianus Pramudito. "Pemanfaatan Law and Economics Sebagai Metodologi Analisis Hukum Di Indonesia." *Mimbar Hukum* 34, no. 1 (June 30, 2022): 125–60. https://doi.org/10.22146/mh.v34i1.2063.

Kementerian ESDM. "Bijih Nikel Tidak Boleh Diekspor Lagi per Januari 2020," 2019. esdm.go.id/id/media-center/arsip-berita/bijih-nikel-tidak-boleh-diekspor-lagi-per-januari-2020.

Krustiyati, Atik, and Gita Venolita Valentina Gea. "The Paradox of Downstream Mining Industry Development in Indonesia: Analysis and Challenges." *Sriwijaya Law Review* 7, no. 2 (July 31, 2023): 335–49. https://doi.org/10.28946/slrev.Vol7.Iss2.2734.pp335-349.

Liputan6.com. "Jokowi Larang Ekspor Mineral Mentah Dan Batu Bara, Eropa Hingga Jepang Meradang," 2022. https://www.liputan6.com/bisnis/read/4870420/jokowi-larang-ekspor-mineral-mentah-dan-batu-bara-eropa-hingga-jepang-meradang.

Mahfud MD. *Demokrasi Dan Konstitusi Di Indonesia: Studi Tentang Interaksi Politik Dan Kehidupan Ketatanegaraan*. 2nd ed. Jakarta: Rineka Cipta, 2003.

Marzuki, Peter Mahmud. *Penelitian Hukum: Edisi Revisi*. 13th ed. Jakarta: Prenada Media, 2017.

Muhlizi, Arfan Faiz. "Penataan Regulasi dalam Mendukung Pembangunan Ekonomi Nasional." *Jurnal Rechts Vinding: Media Pembinaan Hukum Nasional* 6, no. 3 (2017): 349–68. https://doi.org/10.33331/rechtsvinding.v6i3.191.

Notess, Laura, Peter Veit, Iliana Monterroso, Andiko, Emmanuel Sulle, Anne M. Larson, Anne-Sophie Gindroz, Julia Quaedvlieg, and Andrew Williams. "Community Land Formalization and Company Land Acquisition Procedures: A Review of 33 Procedures in 15 Countries." *Land Use Policy*, Land governance and tenure security at scale, 110 (November 1, 2021): 104461. https://doi.org/10.1016/j.landusepol.2020.104461.

Posner, Richard A. *Economic Analysis of Law*. Boston, Toronto, London: Little, Brown and Company, 1986.

Prabowo, Hilmi. "Alternatif Penyelesaian Sengketa Larangan Ekspor Nikel Indonesia di WTO." *PROGRESIF: Jurnal Hukum* 18, no. 1 (June 30, 2024): 42–81. https://doi.org/10.33019/progresif.v18i1.4209.

Pratama, M. Ilham Wira. "Analisis Terhadap Sanksi Pidana Tindak Pidana Pencucian Uang (Perspektif Economic Analysis of Law)." *Indonesian Journal of Criminal Law and Criminology (IJCLC)* 3, no. 1 (March 30, 2022): 48–56. https://doi.org/10.18196/ijclc.v3i1.12343.

Pratiwi, Endang, Theo Negoro, and Hassanain Haykal. "Teori Utilitarianisme Jeremy Bentham: Tujuan Hukum Atau Metode Pengujian Produk Hukum?" *Jurnal Konstitusi* 19, no. 2 (2022): 268–93. https://doi.org/10.31078/jk1922.

Qurbani, Indah Dwi, Raphael J Heffron, and Arrial Thoriq Setyo Rifano. "Justice and Critical Mineral Development in Indonesia and Across ASEAN." *The Extractive Industries and Society* 8, no. 1 (2021): 355–62. https://doi.org/10.1016/j.exis.2020.11.017.

Rachman, Irfan Nur. "Politik Hukum Pengelolaan Sumber Daya Alam Menurut Pasal 33 UUD 1945." *Jurnal Konstitusi* 13, no. 1 (2016): 195–212. https://doi.org/10.31078/jk1319.

Rajagukguk, Erman. *Butir-Butir Hukum Ekonomi*. Jakarta: Lembaga Studi Hukum dan Ekonomi Fakultas Hukum Universitas Indonesia, 2011.

Ramadhan, Choky. *Pengantar Analisis Ekonomi Dalam Kebijakan Pidana di Indonesia*. Jakarta: Institute for Criminal Justice Reform (ICJR), 2016.

Redi, Ahmad. *Hukum Energi: Konsep, Sejarah, Asas, Dan Politik Hukum*. Depok: Rajawali Pers, 2020.

Santoso, Rizal Budi, Windy Dermawan, and Dwi Fauziansyah Moenardy. "Indonesia's Rational Choice in the Nickel Ore Export Ban Policy." *Cogent Social Sciences*, December 31, 2024. https://www.tandfonline.com/doi/abs/10.1080/23311886.2024.2400222.

Schrijver, Nico. *Sovereignty Over Natural Resources: Balancing Rights and Duties*. Cambridge: Cambridge University Press, 1997.

Soekanto, Soerjono and Sri Mamudji. *Penelitian Hukum Normatif: Suatu Tinjauan Singkat*. Jakarta: Rajawali Pers, 2012.

Sugianto, Fajar. *Economic Analysis of Law: Seri Analisis Ke-Ekonomian Tentang Hukum*. Revised. 1. Jakarta: Kencana, 2014.

———. *Economic Approach to Law*. 2. Jakarta: Kencana, 2013.

USGS. *Mineral Commodity Summaries 2024*. Virginia: USGS, 2024.

Warburton, Eve. "Resource Nationalism in Indonesia: Ownership Structures and Sectoral Variation in Mining and Palm Oil." *Journal of East Asian Studies* 17, no. 3 (November 2017): 285–312. https://doi.org/10.1017/jea.2017.13.

Wilson, Jeffrey D. "Understanding Resource Nationalism: Economic Dynamics and Political Institutions." *Contemporary Politics* 21, no. 4 (October 2, 2015): 399–416. https://doi.org/10.1080/13569775.2015.1013293.

Zaman, Muhamad Nafi Uz. "Implementasi Economic Analysis of Law Dalam Pengaturan Hilirisasi Indonesia: Antara Permanent Sovereignty over Natural Resources Dan Perdagangan Internasional." *Jurnal Rechts Vinding: Media Pembinaan Hukum Nasional* 14, no. 1 (May 15, 2025). https://doi.org/10.33331/rechtsvinding.v14i1.2044.