International Journal Social and Political Sciences
(I J S P S)
e-ISSN: 3089-5936 p-ISSN: 3089-5987
Vol 3, No 2 August (2025): Page no: 95-113
Available online at
https://journal.austrodemika.org/index.php/ijsps

Contesting WTO Authority: Indonesia's Framing Strategy for Economic Sovereignty in Nickel

Putri Fitratunnisah[1], Imas Ananta Efendi[2], Wahyu Dwi Pambagyo[3], Ahmad Sahide[4]

[1,2,3,4]Universitas Muhammadiyah Yogyakarta, Yogyakarta, Indonesia

Corresponding Author: pfitratunnisah@gmail.com[1]

https://doi.org/10.69812/ijsps.v3i2.258

Article Info

Article History

Received:
April 20, 2026
Revised:
August 20, 2026
Accepted:
August 31, 2026

Abstract:
This study examines how Indonesia preserved policy autonomy amid international legal pressure arising from the World Trade Organization (WTO) dispute DS592 during 2020–2023. It focuses on the government's use of issue-framing strategies to justify the nickel export ban and challenge the WTO's authority over domestic policy choices. Employing a descriptive-analytical qualitative approach, the study draws on publicly available WTO materials, including the WT/DS592/R Panel Report, written submissions, oral arguments, and supporting proceedings documents, alongside national regulations and official government policy statements issued between 2020 and 2023. The corpus was analyzed using NVivo 12 Plus through thematic coding to identify recurring lexical patterns, conceptual co-occurrences, and narrative structures underpinning claims of policy legitimacy. Interpretation was informed by constructivist international relations theory, strategic action theory, and Entman's framing framework. The findings reveal competing narratives advanced by Indonesia, the European Union, and the WTO Panel. Indonesia relied on four defensive frames justice, sovereignty, conservation, and development to present its export restrictions as legitimate policy measures. By contrast, the Panel prioritized rule-based assessments of compliance, thereby limiting the relevance accorded to arguments extending beyond trade obligations. Although Indonesia suffered a legal defeat in the dispute, it continued to maintain the policy in practice, supported by domestic constituencies and market diversification. These findings suggest that adverse legal rulings do not automatically extinguish a state's capacity to exercise economic sovereignty within the wider contemporary international trade governance system.

Keyword: Contesting, Framing Strategy, Economic, Sovereignty

INTRODUCTION

The growing importance of nickel in energy-transition manufacturing has transformed debates about mineral processing into disputes over industrial power, environmental responsibility, and the distribution of benefits along global value chains. Indonesia is simultaneously a major source of nickel ore, a rapidly expanding site for

smelting investment, and a state seeking a larger position in the manufacture of high-value products. Its government has presented restrictions on raw-material exports as instruments for moving beyond commodity dependence. Trading partners, however, may understand the same restrictions as barriers to market access and predictable international supply. The resulting disagreement is not reducible to a technical choice between protectionism and liberalization: it also concerns whose account of legitimate development is persuasive within a legal institution primarily organized around trade obligations (Warburton, 2024; Wijaya & Sinclair, 2025; Han et al., 2024).

The background to the present dispute stretches across successive changes in Indonesia's mining policy. Statutory requirements for domestic processing preceded the decision to stop exports of nickel ore, and regulatory implementation passed through periods of adjustment before restrictions were fully applied in 2020. The government associated these measures with processing investment, jobs, industrial upgrading, and control over strategic resources. Export-dependent firms and importing economies experienced them as a change in the conditions governing access to ore. The same policy consequently generated sharply different public narratives, each constructed around a different reference point: domestic value capture, stable supply, resource stewardship, or conformity with international trading rules.

On 22 November 2019 the European Union requested consultations at the World Trade Organization concerning measures relating to Indonesian raw materials. The panel was established on 22 February 2021; its report was circulated on 30 November 2022. Indonesia notified an appeal on 8 December 2022 while the WTO Appellate Body was not functioning. These dates are central to the interpretation of the case. The report contains adverse findings about the measures under GATT Article XI:1, but it was not adopted as a final report through ordinary dispute settlement. Continuing implementation of a national policy during an appeal cannot, without further analysis, be taken as either a definitive legal victory or a definitive legally binding loss (Dewi & Azzahra, 2022; Zaki et al., 2023; Hopewell, 2024).

The official record identifies two principal measures before the panel: the export prohibition for nickel ore and a domestic processing requirement that restricted sales for export. Indonesia argued, among other matters, that the measures were covered by Article XI:2(a), addressing temporary measures to prevent or relieve critical shortages of essential products, and alternatively defended them under Article XX(d), relating to measures necessary to secure compliance with domestic laws or regulations. The panel did not treat the general conservation exception in Article XX(g) as the operative defense to be decided in this dispute. Separating those provisions matters because a conservation narrative may be politically compelling without satisfying the particular legal conditions actually examined by adjudicators.

A framing perspective reveals why parties with access to much of the same factual background arrive at incompatible descriptions of the policy problem. Indonesia's public case privileges sovereign control, downstream employment, mineral stewardship, and fairer access to value added. The European Union emphasizes predictable market access and restrictions on exports. A legal panel, bound to interpret specific provisions and evidence, cannot simply choose whichever narrative offers the broader moral vision. It must classify the measure, identify applicable obligations or exceptions, and determine whether the litigating parties establish the facts required by those provisions. Framing therefore operates in an institutional setting where persuasion is constrained by legal categories and evidentiary burdens. International political economy provides a complementary explanation. A government may succeed in attracting smelting

investment through export restrictions but remain dependent on foreign technology, imported capital, coal-generated power, or a concentrated set of commercial partners. Conversely, a legal challenge may fail to induce immediate regulatory change while still affecting the costs, risks, and diplomatic relationships surrounding a policy. Scholars of the Indonesian nickel economy therefore warn against treating export revenue, industrial investment, national control, and broad social welfare as interchangeable outcomes. The benefits and burdens of downstreaming must be evaluated across owners, workers, communities, ecosystems, and sectors rather than compressed into a single success narrative (Winanti & Diprose, 2020; Camba et al., 2020; Wijaya & Jones, 2026).

The research gap emerges at the intersection of law, public policy, and communication. A substantial literature addresses WTO legality, mineral nationalism, and the development of nickel-based manufacturing. A separate literature explains how public actors define contested issues and organize arguments around values and interests. Fewer analyses connect the particular clauses examined in DS592 with the ways Indonesia attempted to translate an economic sovereignty narrative into a persuasive evidentiary case. The more demanding question is not simply which framing vocabulary appeared most often, but why particular forms of evidence were capable—or incapable—of answering the questions that the panel had legal authority to ask.

The source manuscript reports a bibliometric mapping of 176 Scopus-indexed articles and NVivo coding across six frames. However, the search protocol, underlying corpus, codebook, and intercoder records were not supplied. Accordingly, this revision retains those findings as author-reported evidence rather than independently reproduced results. Official WTO records are used separately to verify chronology, treaty provisions, and legal conclusions. This separation preserves the original research architecture while making the limits of replicability explicit.

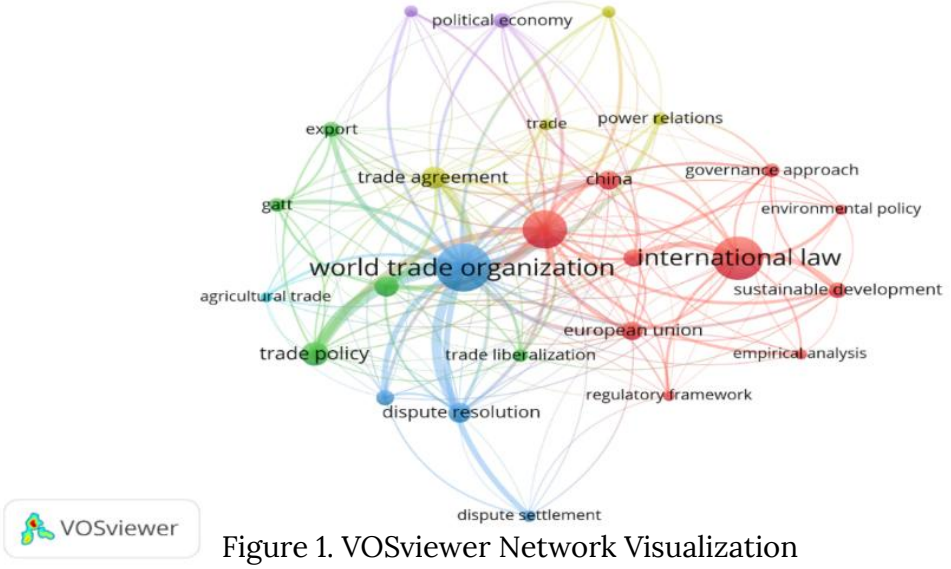


Figure 1. VOSviewer Network Visualization
Source: Author, 2026

The VOSviewer network situates the nickel dispute among energy transition, WTO law, and industrial-policy themes. Term proximity reflects a specified mapping procedure, not causation. Such visualization can guide literature selection, but cannot independently demonstrate institutional bias, treaty interpretation, or the effect of trade restrictions. Those propositions require examination of official reasoning, submitted evidence, and transparent bibliometric procedures.

Three questions guide the present analysis. First, what competing frames did Indonesia and the European Union employ to characterize the nickel export restrictions and their implications? Second, how did the panel's reading of Articles XI:1, XI:2(a), and XX(d) distinguish legally decisive evidence from broader developmental and environmental claims? Third, what does the relationship between narrative contestation, an appeal lodged into a nonfunctioning appellate process, and continuing industrial development reveal about the meaning of economic sovereignty? The objective is explanatory rather than advocative: the study considers Indonesia's developmental ambitions seriously while applying the same evidentiary scrutiny to statements concerning trade legality, environmental protection, and domestic welfare.

This article distinguishes narrative legitimacy, treaty-law justification, and achieved industrial outcomes. It treats the panel findings and Indonesia's pending appeal as procedurally distinct and outlines how legal submissions can be linked to verifiable development evidence. Economic sovereignty is therefore examined as regulatory discretion, institutional implementation capacity, and distribution of policy consequences. This approach connects the nickel dispute to debates over trade politicization, industrial-policy space, and the institutional allocation of environmental and economic costs (Dür et al., 2024; Cima & Esty, 2024; Sykes, 2024).

RESEARCH METHOD

This research adopts a descriptive-analytical qualitative design centered on comparative policy framing and documentary interpretation. The unit of analysis is a statement, paragraph, or legally relevant claim concerning Indonesia's nickel export prohibition and domestic processing requirement during the DS592 dispute. The study contrasts three discursive positions: government representations of the restrictions, the European Union's allegations about trade obligations, and the panel's published interpretation. A document-based design is appropriate because the central question concerns how the actors formulated justifications and how the panel addressed them, not whether particular officials privately intended every meaning that the documents might suggest.

The core documentary sources are the publicly accessible WTO case page and WT/DS592/R panel report, Indonesian regulations identified in that record, and the existing manuscript's summarized results. Official WTO materials are treated as the primary authority for the procedural chronology, the claims argued, and the defenses actually assessed. National legal instruments provide institutional context for the claimed objectives of processing and conservation. Peer-reviewed studies published between 2017 and 2026 are used to contextualize policy space, political economy, and environmental consequences; they do not replace the primary record when determining what the panel held. This separation reduces the risk of reproducing secondary accounts that inadvertently misstate the dispute's procedural status.

Data selection follows four criteria. Documents must identify the nickel export measures or their institutional context; be publicly traceable to an official repository, journal, or the original research file; contain information relevant to at least one comparison dimension; and fall within the specified policy and analytical period, with later scholarship used only to interpret developments or implications. The article does not present new interviews, participant observations, customs microdata, or a fresh bibliometric search. References to the source manuscript's NVivo counts are clearly labeled as previously reported findings, and their numerical precision is not independently endorsed in the absence of the coding files.

Analytically, each relevant text segment is examined through four framing questions: which condition is represented as the central problem, which actors or mechanisms are identified as its causes, which normative evaluation gives the claim significance, and which action is proposed as the appropriate response. These questions are applied across sovereignty, industrial development, conservation, distributive justice, market access, and rules-based compliance. The categories are not presumed to be mutually exclusive. A statement about nickel reserves can invoke both conservation and industrial strategy; similarly, a claim about market access may address predictable legal obligations and security of supply at the same time.

A second, legally structured reading distinguishes framing from adjudication. The first task is to identify whether a measure is classified as a prohibition or restriction affecting exports under Article XI:1. The next task is to examine whether Indonesia showed the requirements of Article XI:2(a), including an essential product, a temporary measure, and an imminent critical shortage. The final task is to follow the Article XX(d) inquiry concerning qualified domestic rules, contribution to securing compliance, restrictive effects, and reasonably available alternatives. The legal sequence is not substituted by a general impression that a policy is either environmentally worthy or economically protectionist (Bari et al., 2023; Van Damme, 2023; Miranda & Sánchez Miranda, 2023).

The author-reported NVivo categories and counts are retained in Table 1 as part of the supplied study. These counts are not presented as independently reproduced findings: their interpretation requires the original document corpus, segmentation conventions, coding rules, and reliability records. Numerical dominance of a frame cannot establish that the panel adopted it, rejected it, or attached legal significance to it. Legal findings are therefore checked separately against the official report.

Reliability is pursued through source separation, a chronological check, and negative-case examination. Source separation gives priority to official records for procedural and legal assertions; chronological checking prevents an appeal from being confused with an adopted decision; negative-case examination actively searches for positions that complicate the preferred narrative, including evidence of unequal local benefits or environmental costs. The framework also distinguishes factual findings, contestable inferences, and proposed policy improvements. That distinction is important because an argument about the social merits of a measure is not automatically an argument that a specific treaty exception has been established.

This revision reinterprets the supplied research rather than claiming a new NVivo analysis. Neither the 176-item bibliometric database nor all original coding frequencies could be reproduced from the available files. For publication, the research team should deposit a document inventory, search strategy, coding protocol, and excerpts supporting frequency calculations. These materials would allow other researchers to assess robustness without changing the original qualitative design.

RESULTS AND DISCUSSION

1. Competing narratives and the boundaries of legal authority

The documentary comparison identifies a recurring contest over the appropriate starting point for interpreting Indonesia's measures. The government-oriented account begins with the history of raw-material dependence and argues that a domestic processing requirement makes industrial transformation possible. The European Union's account begins with restrictions on cross-border sales and asks whether the measure limits market access protected by the GATT. These approaches are not merely different

descriptions of identical facts. Each selects a criterion of relevance that determines which facts are made prominent and which are left in the background. The former highlights domestic production capacity and structural change; the latter foregrounds the consistency of a trade instrument with agreed legal rules.

Indonesia's sovereignty frame expresses an important political claim: a resource-rich country should possess meaningful discretion to decide how natural assets contribute to long-term public welfare. In this argument, stopping raw ore exports is represented as an attempt to interrupt a pattern in which value is captured primarily outside the producing country. The idea is more persuasive when linked to observable increases in skills, domestic sourcing, technological capability, and social benefit. It is less persuasive when sovereignty becomes a rhetorical substitute for proving these outcomes. The question is not whether a state possesses sovereign responsibilities, but how a specific measure operates within both domestic governance requirements and international commitments.

The European Union's counter-frame presents the same restriction as an intervention in established trade expectations. Its complaint turns a domestic industrial policy into a question about the meaning of an export prohibition, the conditions of the GATT exceptions, and the ability of a trading partner to purchase inputs. The institutional advantage of this formulation is that it maps directly onto treaty language. This does not mean every market-access argument is automatically correct or that developmental objectives are legally irrelevant. It does mean that a participant seeking an exception must connect each asserted public purpose to the elements of that exception, rather than expecting a broad moral appeal to override the adjudicative inquiry.

The panel's task was consequently narrower than the national discussion surrounding the policy. The report addressed the export ban and domestic processing requirement under Article XI:1; it considered the asserted temporary critical-shortage exception under Article XI:2(a); and it assessed the claimed justification under Article XX(d). This sequence limits what may be inferred from the outcome. The panel was not deciding whether Indonesia deserves economic transformation, whether green transition industries should exist, or whether every possible export-control measure would be unlawful. It was evaluating identified legal instruments, the submissions before it, and the proof offered for particular treaty defenses.

A distinction is therefore necessary between a politically unsuccessful frame and a legally unestablished defense. A sovereignty argument may resonate with the domestic public and remain central to an industrial program even when it fails to satisfy the panel's treaty-specific evidentiary test. Likewise, a market-access position may prevail within an unadopted panel report without resolving the broader issue of how the benefits of critical-mineral industrialization should be shared. The DS592 chronology makes this distinction unavoidable, since Indonesia appealed the panel report into an institutional setting where appellate review had become nonfunctional (Gonzalez Arreaza, 2017; Hopewell, 2024; Lestari et al., 2024).

2. Lexical Framing, Nvivo Evidence, and the Interpretive Limits of Word Clouds

The original manuscript describes two contrasting lexical clusters. Indonesian mining-law material emphasizes words associated with minerals, the national economy, state control, and management. The European Union and panel materials emphasize obligations, restrictions, legal classification, and raw materials. Such differences are consistent with the contrast between an ownership-and-development story and a legality-and-market-access story. Yet the interpretation requires care. A word is not a

fully specified claim; the occurrence of "state," for example, could support descriptions of ownership, administrative competence, or the text of a legal obligation. The relationship among words, speakers, and paragraphs must be read before a coder assigns substantive meaning.



Figure 2. Original Nvivo Word Cloud of Terms In Indonesian Mining Regulations
Source: Author, 2026

The regulatory word cloud can assist in locating the language of sovereign control. It gives visible prominence to "mineral" and "coal," alongside national and administrative vocabulary. This pattern accords with the public function of mining legislation, which must define resources and the institutions empowered to regulate them. Nevertheless, the visual prominence of a term can also reflect document length, repetition of a statutory formula, or the preprocessing settings used for a word-frequency query. No causal claim should be based on font size in the word cloud alone. Better evidence comes from coded passages that connect the term to an explicit position about the export restriction and its claimed developmental consequences.

The European Union and panel corpus similarly contains terms directly related to legal duties. This is unsurprising in a record composed partly of legal submissions and adjudicative reasoning. A court's use of the word "obligation" cannot by itself prove hostility to sovereignty; it may merely reflect the legal task assigned to it. To establish that an interpretation systematically excluded a relevant argument, a researcher would need to identify the specific argument, the treaty rule under which it was advanced, the response given, and the alternative legal reasoning that might have been available. Otherwise, a lexical difference risks being mistaken for proof of institutional bias.

Comparison of the two word clouds is useful as a prompt for closer qualitative reading, not a substitute for it. The original source reports six frames and several frequencies, including a relatively prominent sovereignty frame in Indonesian submissions and a prominent free-trade frame in the European Union material. Their denominators, coder instructions, and complete quotations are not in the supplied files. A responsible interpretation therefore identifies them as author-reported descriptive counts. It avoids transforming them into a statistically tested finding or an independently verified measure of panel preference. The legal record is instead the place to verify whether a particular provision was invoked and why the panel accepted or rejected an argument.



Figure 3. Original Nvivo Word Cloud of WTO Panel-Related Terminology
Source: Author, 2026

This distinction also protects an important insight in the study: the value of framing analysis lies in examining how a claim becomes institutionally intelligible. A general declaration of resource ownership can attract political support, while a narrowly drafted submission must show how identified legal elements are satisfied. An industrial objective expressed as "value addition" might be reformulated for a legal setting as an assertion about an essential product, a temporary supply problem, or compliance with domestic conservation rules. Each reformulation introduces a burden to present corresponding facts. Success depends on the evidentiary bridge, not simply on a choice of emotionally compelling words.

3. Six Competing Frames in The Original Coding Matrix

The original comparative matrix organizes the contest into four Indonesian frames sovereignty, industrial development, environmental conservation, and justice and two European Union frames free trade and a rules-based order. This organization remains conceptually informative because it identifies the distinct purposes that actors wished the panel and broader audiences to recognize. Its author-reported counts are retained rather than reconstructed. The narrative analysis below corrects one important issue: where the original table associates the conservation discussion with Article XX(g), the official panel record instead identifies Article XX(d) as the provision examined. The cell-level wording is preserved as source material, but the legal reading in this revision follows the official record.

Table 1. Original Comparative Frame Analysis of Indonesia And The European Union In DS592

Frame	Owner	NVivo Frequency	Dominant Term	Key Quotes	Reasoning Panel
Sovereignty (PSNR)	IDR	47 references	minerals, national, state, management	"Minerals and coal... are controlled by the state for the greatest welfare of the people" (Law 3/2020 Article 4(1)	"PSNR must be consistent with WTO obligations" (para 7.137)

Frame	Owner	NVivo Frequency	Dominant Term	Key Quotes	Reasoning Panel
				Law Number 3 of 2020	
Economic Development	IDR	34 references	downstream, value-added, industrialization, employment	"Strategic pivot to transform economy from raw material exports (10-15% value retention) to processed products (85-90%)" (Annex B-2)	"Indonesia has not demonstrated nickel ore is essential within Article XI:2(a)" (para 7.102)
Environmental Conservation	IDR	28 references	conservation, exhaustible, sustainable, ecosystem	"Mineral and Coal Conservation Efforts" (Law No. 3/2020 Article 96(c)) Law No. 3 of 2020; Invocation of Article XX(g) GATT	"Indonesia failed to provide metrics on ecosystem impact or substantial relationship" (para 7.147)
Distributive Justice	IDR	19 references	equity, Asymmetry, NIEO, primary commodity dependence	"Correct asymmetry in global trade where developing countries trapped as low-value raw material suppliers" (Annex B-2)	not mentioned in the panel
Free Trade/Market Access	EU	62 references	European Union, obligations, raw materials, restrictions	"Quantitative restriction under XI:1"; "Violation of legal obligations" (EU written submission)	"The Panel finds export ban inconsistent with Article XI:1" (para 7.158)
Rule-Based Order	EU	41 references	legal, compliance, rule-based, inconsistent	"Indonesia must comply with Article XI:1 obligations regardless of development status" (EU submission)	"Harmonious interpretation requires sovereignty exercise consistently with WTO obligations" (para 7.137)

Source: Author, 2026

The sovereignty frame treats Indonesia's mineral reserves as a strategic public asset rather than a mere trade commodity. Its proposed remedy is to maintain national authority over the circumstances of resource processing. This is a legitimate public-

policy question, but sovereignty has more than one dimension. Formal ownership rights do not guarantee that the country captures processing rents, selects technologies independently, or reduces exposure to concentrated foreign investment. A stronger analysis would distinguish state rulemaking powers, domestic productive capabilities, and the distribution of economic control. These dimensions can move in different directions: legal regulatory discretion can increase while industrial dependence on external capital or specialized technology also expands.

The development frame emphasizes the transition from low-value exports toward higher value industrial outputs. It links the export ban to the creation of smelters, employment, and manufacturing capabilities. This logic is supported by significant changes in Indonesian processing activity, but it should be evaluated at multiple levels. Growth in stainless-steel exports is not equivalent to developing a complete battery supply chain, and a rise in gross exports is not a direct measure of domestic value added. Manufacturing linkages, firm ownership, imports of inputs, local skill formation, and the geographic distribution of jobs all affect whether the policy advances broad-based economic transformation (Khalil & Broughel, 2025; Asyono et al., 2026; Firmanto et al., 2026).

The conservation frame can make a different case for intervention. Nickel is a finite mineral, and rapid extraction and processing have measurable environmental effects. A coherent environmental argument would identify the specific harm addressed by the restriction, establish how the chosen measure changes extraction or consumption behavior, and compare its effects with less trade-restrictive alternatives. The DS592 panel assessed Indonesia's attempt to justify the measures as necessary to secure compliance with domestic law under Article XX(d). It found that the proposed measures were highly restrictive and that the demonstrated connection to compliance was insufficient. The legal problem was thus a particular evidentiary and necessity analysis, not a definitive finding that environmental protection can never justify trade measures.

The justice frame raises the historical disparity between economies that export raw commodities and those that command advanced processing technology, branding, finance, and distribution. The argument invites adjudicators and policymakers to consider whether formally symmetrical rules can perpetuate unequal industrial opportunities. Yet questions of equity have to be distinguished from the panel's legal mandate. A failure to discuss every moral claim at length cannot, on its own, establish deliberate prejudice; a panel may decline to reach an issue because it is not an operative element of the asserted defense. Institutional critique becomes more compelling when it demonstrates a clear mismatch between a properly raised legal question and the reasoning used to dispose of it.

The European Union's free-trade and rules-based frames rely on the benefits of predictable obligations, access to raw inputs, and limits on unilateral restrictions. These frames explain why the exporter's industrial objective may be perceived as imposing costs on foreign producers and consumers. Their own limitations should also be examined. A market-access argument may overlook environmental externalities in extraction regions or assume that any producer can secure a fair share of value through unrestricted trade alone. A rules-based argument must furthermore account for the legitimacy of agreed exceptions and for the difficulty of resolving appeals during the Appellate Body impasse. Both sides have incentives to select evidence that fits their institutional position.

Taken together, the six frames show that policy legitimacy has several audiences. Domestic citizens may prioritize employment, regional development, and environmental protection. International investors may prioritize regulatory predictability and supply

security. WTO adjudicators assess the treaty language and the record submitted to them. An argument capable of traveling across these audiences must disclose its assumptions rather than assume that resonance in one arena proves validity in another. This is why evidence design becomes part of the framing strategy itself: figures about jobs, resource depletion, or emissions should be connected to a clearly specified legal claim and evaluated against plausible alternatives.

4. Why The Panel Did Not Accept the Asserted Exceptions

The first part of the legal analysis concerned Article XI:1. The panel treated the export prohibition as a measure that directly prevented the export of nickel ore. It also determined that a domestic processing rule could affect export sales because ore must be processed into another product before it can leave the country. Thus a regulation framed domestically as an industrial requirement could be classified internationally as a restriction on the sale for export of the unprocessed product. This reasoning demonstrates why the geographic location of a regulation is not decisive. The operational effect on trade may be relevant even when the measure applies formally to firms inside the exporting state.

Indonesia relied on Article XI:2(a), which provides for a specified category of temporary export restrictions intended to prevent or relieve critical shortages of essential products. The panel examined the constituent conditions rather than accepting the general proposition that industrialization is nationally important. It found that Indonesia had not established the necessary essential-product characterization, temporary nature, or imminent critical shortage as framed by the provision. Statements about potential future uses in the battery sector were not equivalent to evidence of a critical shortage at the relevant time. Similarly, a policy remaining in place through years of regulatory change was difficult to characterize as temporary merely because officials described its broader objective as developmental.

The shortage analysis illustrates the difference between industrial demand and treaty-specific scarcity. It may be economically rational for a government to reserve supplies for emerging downstream processors even without an imminent shortage in the ordinary sense. Article XI:2(a), however, asks whether the circumstances meet its defined conditions, not whether a protected industry would prefer lower-cost inputs. Evidence about reserves, projected demand, available alternatives, and a transparent end date could help test the claim more rigorously. It would not guarantee a favorable legal result, but it would make the policy design and defense more responsive to the actual legal requirements.

The panel then examined Article XX(d), a different defense from the conservation exception frequently discussed in public commentary. Its inquiry concerned whether the contested trade measures were necessary to secure compliance with identified domestic laws or regulations consistent with the GATT framework. The panel recognized that a domestic provision on sustainable mining and mineral resource management possessed the relevant normative character. Nevertheless, it concluded that the restrictions did not make a demonstrated material contribution to securing compliance and that a reasonably available, less trade-restrictive export authorization system had been identified. This was a judgment about necessity and alternatives, not a rejection of all sustainable resource management purposes (Bari et al., 2023; Zaki et al., 2023; Cima & Esty, 2024).

The comparison between the chosen restriction and an export authorization system suggests how alternative-measure analysis can inform regulatory improvement. If a government can document the same conservation or monitoring objective through

traceable licenses, output reporting, independent audits, and sanctions for violations, the policy may become more transparent without surrendering its basic stewardship goals. Such an approach also generates administrative data with which environmental compliance can be tested. The argument is not that licensing would automatically solve every economic or ecological challenge. It is that an evidence-generating regulatory system may provide a more proportionate link between a stated public objective and a treaty-compatible implementation choice.

The panel report was circulated on 30 November 2022 and appealed by Indonesia on 8 December 2022. The nonfunctioning WTO Appellate Body prevented the ordinary adoption process from concluding. This creates a distinction between an adverse panel analysis and an adopted final legal outcome. Appellate paralysis may expand the practical scope for maintaining contested industrial measures, but does not establish their compatibility with GATT obligations. The dispute consequently illustrates how legal assessment, procedural finality, and national policy implementation can diverge (Hopewell, 2024; Miranda & Sánchez Miranda, 2023; Van Damme, 2023).

5. Developmental capacity, industrial ownership, and unequal gains

The industrial-policy dimension raises a question that a formal GATT inquiry does not answer: what happened to the domestic economy while the challenged measures were implemented? Indonesia attracted extensive processing investments and expanded its position in global nickel production and stainless-steel manufacturing. These changes support the claim that export restrictions can alter incentives along an industrial value chain. However, the structure of the resulting sector matters. Industrial parks may be technologically sophisticated yet import considerable equipment, finance, managerial expertise, and intermediate components. National export totals conceal these linkages unless domestic value addition and ownership are separately measured. An evaluation of sovereignty therefore needs sectoral and firm-level information, not merely growth rates.

Research on Indonesia's nickel boom documents the importance of Chinese investment and the concentration of large-scale processing facilities. One interpretation emphasizes the state's success in attracting capital that might otherwise have purchased ore without building smelters locally. Another stresses that the concentration of ownership can produce enclave characteristics, with limited connections to the wider domestic economy and uneven distribution of local benefits. Both may be true in different respects. A policy can secure the location of industrial activity without simultaneously transferring technological control or a proportionate share of profits to locally owned enterprises. The distinction matters when development is offered as the principal normative justification for trade restrictions (Camba et al., 2022; Warburton, 2024; Wijaya & Jones, 2026).

The battery sector makes the issue especially clear. Nickel-based electric-vehicle manufacturing requires a complicated sequence from ore extraction and refining through intermediate battery chemicals, cell production, integrated assembly, and market development. The existence of smelters is not proof that the entire sequence has been built domestically. Existing studies find substantial progress in stainless-steel output but more uneven outcomes in the transition toward higher-value battery manufacture. If the objective of the export ban is comprehensive technological upgrading, evaluation should track linkages to domestic suppliers, workforce training, research capacity, patents, and the local availability of high-purity inputs. Each indicator addresses a distinct element of industrial sovereignty.

Investment partnerships also entail geopolitical choices. Indonesia has sought to avoid rigid dependence on a single major power while attracting overseas finance, technology, and markets. Nickel industrialization illustrates the limits of that ambition when supply chains are embedded in networks dominated by particular international investors. Diversification may be announced as a diplomatic goal even while project finance and operational knowledge remain concentrated. The result is not necessarily a failure of national strategy: alternative industrial options may have been limited. It does show that the government's framing of autonomy requires a transparent account of the trade-offs it has accepted. Economic sovereignty should mean the capacity to choose among viable alternatives, not simply the continued existence of a policy instrument.

A more informative assessment would compare at least four dimensions of downstreaming performance. The first is industrial depth, measured by the share of production proceeding into more complex domestic stages. The second is domestic capture of returns, assessed through wages, taxes, royalties, procurement, and profit distribution. The third is resilience, including concentration of customers, finance, electricity sources, and technology providers. The fourth is social legitimacy, reflecting meaningful participation by mining-affected communities and enforceable safeguards. The dimensions may move in different directions, requiring a balanced assessment rather than an undifferentiated verdict of success or failure.

Industrial policy also needs temporal evaluation. Immediate processing investment may generate visible output before the slow development of local engineering capacity, supporting services, and environmental institutions. A short-run change in export composition cannot resolve the long-run question of productive transformation. Conversely, an industry that initially depends on external technology may acquire greater domestic capabilities if policy incentives reward knowledge transfer and supplier development. The appropriate test is whether the policy contains mechanisms for moving from foreign-financed facilities toward broader national learning, and whether these mechanisms can be monitored. Legal flexibility without such implementation capacity delivers only an incomplete form of developmental policy space (Khalil & Broughel, 2025; Asyono et al., 2026; Tilley, 2026).

6. Sustainability Claims and The Environmental Evidence Problem

The environmental consequences of mineral upgrading complicate narratives that equate downstream processing with the clean-energy transition. Nickel may be used in low-carbon technologies, but the extraction and refining of laterite ore require large quantities of energy, chemicals, water, and land. The local impacts depend on production technology and the energy system that supplies processing plants. Coal-based electricity can increase emissions associated with refined nickel, while high-pressure acid leaching creates different chemical and waste-management challenges. These effects do not demonstrate that battery manufacturing should be abandoned. They do mean that a conservation claim must incorporate the full environmental footprint of the policy rather than assuming that proximity to an electric-vehicle supply chain establishes sustainability.

Recent life-cycle and land-footprint studies provide tools for assessing the environmental side of downstreaming. Their contribution is methodological as well as empirical: they specify a production boundary, a functional unit, and measurable categories of impact. Climate effects, land conversion, water use, and pollution can be assessed systematically if the operating data are available. Yet the trade measure itself must be distinguished from the production process. A ban may relocate refining, alter

investment, or accelerate extraction in ways that affect environmental outcomes in different directions. Evaluation therefore requires a comparison against a credible counterfactual rather than an inference based only on the announcement of an industrial policy (Wahyono et al., 2024; Kinanti et al., 2026; Heijlen & Duhayon, 2024).

The distributive geography of environmental harm is equally significant. Communities near mines, industrial parks, and power facilities encounter impacts that are not necessarily experienced by the firms or distant consumers gaining from refined metals. Loss of fishing grounds, reduced agricultural productivity, competition over water, and weak consultation can undermine local acceptance even when national exports increase. The political legitimacy of industrial sovereignty is therefore linked to environmental justice. Public support depends not only on whether the state claims control over minerals, but also on whether affected residents have access to information, remedies, compensation, and influence over decisions that reshape their livelihoods (Hudayana et al., 2020; Erb et al., 2021; Kadir et al., 2026).

The Article XX(d) analysis provides an institutional lesson. Environmental objectives need an administratively verifiable connection to the challenged measure, especially when a government claims that a particular trade restriction is necessary. A robust legal and policy file could include a mapped inventory of mining permits, extraction and processing flows, greenhouse-gas accounting, independently tested water-quality indicators, and enforcement actions. It could also compare alternative interventions, such as licensing conditions, differentiated production standards, domestic consumption safeguards, and facility-level reporting. None of these instruments alone guarantees favorable trade treatment. Together, however, they transform a general sustainability statement into a proposition that can be investigated by regulators and adjudicators.

Two linked errors should be avoided. The first is to describe an export ban as necessarily environmentally beneficial because it is enacted under a resource-conservation narrative. The second is to dismiss national development aims simply because some processing facilities impose environmental costs. The empirical question is comparative: does a given policy configuration improve domestic value creation while meeting measurable ecological and social thresholds, relative to plausible alternatives? System-dynamics and comparative mineral-policy research indicate that outcomes can differ across minerals and industrial stages. The best regulatory design may accordingly combine targeted restrictions, licensing, monitoring, technological requirements, and enforceable rehabilitation rather than rely on a uniform restriction in every setting (Wasesa et al., 2026; Han et al., 2024; Firmanto et al., 2026).

7. Framing, institutional power, and the danger of premature conclusions

The dispute has sometimes been represented as a contest in which a powerful European actor defines universal norms while a resource-rich developing state tries to defend its policy autonomy. Such an interpretation raises important questions about institutional inequality, but it requires evidence beyond the fact that the panel found the contested measures inconsistent with Article XI:1. An assertion of adjudicative bias should identify a pattern of differential treatment, a legally relevant argument that was ignored or inconsistently applied, or disparities in how evidentiary requirements were implemented. Without this additional step, critical analysis risks confusing an outcome unfavorable to a developing country with proof that the outcome was produced by structural prejudice. The broader WTO crisis is relevant because the legitimacy of adjudication depends on procedures being both authoritative and sufficiently accepted

by members. Disagreement over appellate interpretation, the duration of proceedings, and limits on judicial review has undermined the system's capacity to complete disputes. This institutional situation gives strategic significance to procedural acts, including an appeal that prevents ordinary adoption. It does not eliminate the need for legal argument. Instead, it makes the distinction between reasoned findings, binding outcomes, political leverage, and actual regulatory change especially important. The DS592 case illustrates how each of these processes can follow a different trajectory even while policy implementation continues.

Framing theory helps explain how actors use that ambiguity. Indonesia can present continued downstreaming as evidence of resilient sovereignty, while the European Union can cite the panel's adverse conclusions as a legal vindication. Neither formulation is complete without reference to the appealed status of the report and the industrial evidence. The analytical task is to reconstruct what each claim leaves out. A competent public account should state that the panel found inconsistencies and rejected the asserted exceptions, that the case was appealed, and that the later development of the industry raises independent questions about domestic value capture and sustainability. Legal, rhetorical, and economic assessments should not be collapsed into a single label.

International discussion also increasingly connects trade restrictions with the security of supply for technologies required by climate policy. The European Union's concerns are partly economic and partly strategic; Indonesia's objectives combine industrial transformation, fiscal incentives, and geopolitical positioning. This shared strategic context suggests that both sides may use the language of sustainable development while prioritizing different parts of the supply chain. A balanced analysis should ask which costs are counted, which benefits are visible, and whose policy goals receive institutional protection. This question is especially important when claims about green production are made on behalf of communities that have limited opportunities to participate in industrial planning (Fikru et al., 2024; Brown et al., 2024; Moon et al., 2025).

8. Lessons from adjacent policy domains and the limits of cross-sector analogies

Three articles in the International Journal of Social and Political Sciences provide complementary context for domestic governance rather than direct evidence about DS592. Jordy examines the Morowali nickel-processing complex, showing how downstream development connects government, investors, workers, and surrounding communities. Yudithia and colleagues identify institutional and regulatory barriers affecting investment governance at BP Batam. Simbolon and colleagues conceptualize subnational governments as intermediaries between local development interests and foreign-policy processes. Together, these studies suggest that international economic strategies must be evaluated through domestic institutions, territorial consequences, and coordination across governance levels. They do not independently establish how WTO adjudicators evaluated Indonesian arguments (Jordy, 2025; Yudithia et al., 2024; Simbolon et al., 2026).

These three studies address different empirical settings, so direct policy transfer would be inappropriate. Morowali's industrial political economy is closest to the present case, while BP Batam and subnational foreign-policy scholarship illuminate institutional coordination. Their shared contribution is an analytical question: do public agencies possess clear authority, reliable data, and mechanisms for representing affected constituencies? Applying those questions to nickel governance helps connect the

international dispute with domestic implementation without treating contextual scholarship as proof of WTO legal conclusions.

An implication for research design is to connect implementation records with international legal submissions without conflating their purposes. Records of licensing, ownership, supplier contracts, employment conditions, electricity use, and environmental compliance permit a more precise assessment of who benefits from downstreaming and who bears its costs. These records do not establish consistency with GATT provisions by themselves. Instead, an evidence inventory should identify the legal or policy proposition each dataset can test, its temporal coverage, limitations, and the institution responsible for verification. Such traceability would improve accountability and policy learning.

CONCLUSION

This study shows that Indonesia framed its nickel export restrictions through sovereignty, industrial development, environmental stewardship, and distributive justice, while the European Union emphasized market access and rules-based compliance. The WTO panel examined the export ban and domestic processing requirement under GATT Article XI:1, assessed the claimed critical-shortage exemption under Article XI:2(a), and considered the asserted Article XX(d) defense. The report circulated on 30 November 2022 and was appealed on 8 December 2022; its adverse reasoning should not be misrepresented as an adopted final judgment. The analytical value of the case lies in the gap between broad political legitimacy and the narrowly specified evidence needed to satisfy particular treaty provisions.

The original manuscript's NVivo frames, word clouds, and comparative table remain useful for identifying competing narratives, but their author-reported numerical results require verification against the underlying corpus. Industrial progress also needs independent assessment: expanding processing capacity does not automatically demonstrate inclusive economic sovereignty, technological independence, or ecological sustainability. Effective policy framing should therefore join legal analysis to measurable industrial, environmental, and distributive indicators. Future defenses of resource policies will be more credible when government agencies can demonstrate the contribution of a measure, address realistic alternatives, and make the underlying evidence publicly traceable.

ACKNOWLEDGEMENT

—

REFERENCES

Asyono, A. H., Samputra, P. L., & Djatmiko, H. (2026). Domestic structural transformation in a critical mineral economy: A multisectoral assessment of Indonesia's nickel downstreaming strategy. *Economies*, 14(4), Article 133. https://doi.org/10.3390/economies14040133

Auld, K., Del Savio, L., & Feris, L. (2025). An environmental agreement in a trade court: Is the WTO's Agreement on Fisheries Subsidies enforceable? World Trade Review, 24(1), 25–49. https://doi.org/10.1017/S1474745624000375

Bari, R. M., Trihastuti, N., & Hananto, P. W. H. (2023). Indonesia's nickel export restriction policy: Alternative on environmental approach for Article XI:1 GATT justification. *Journal of International Trade Law and Policy*, 22(1), 15–32. https://doi.org/10.1108/JITLP-07-2022-0026

Brown, D., Zhou, R., & Sadan, M. (2024). Critical minerals and rare earth elements in a planetary just transition: An interdisciplinary perspective. *The Extractive Industries and Society*, 19, Article 101510. https://doi.org/10.1016/j.exis.2024.101510

Camba, A., Lim, G., & Gallagher, K. P. (2022). Leading sector and dual economy: How Indonesia and Malaysia mobilised Chinese capital in mineral processing. *Third World Quarterly*, 43(10), 2375–2395. https://doi.org/10.1080/01436597.2022.2093180

Camba, A., Tritto, A., & Silaban, M. (2020). From the postwar era to intensified Chinese intervention: Variegated extractive regimes in the Philippines and Indonesia. *The Extractive Industries and Society*, 7(3), 1054–1065. https://doi.org/10.1016/j.exis.2020.07.008

Cima, E., & Esty, D. C. (2024). Making international trade work for sustainable development: Toward a new WTO framework for subsidies. *Journal of International Economic Law*, 27(1), 1–17. https://doi.org/10.1093/jiel/jgae008

Dewi, Y., & Azzahra, M. J. (2022). Re-examining Indonesia's nickel export ban: Does it violate the prohibition to quantitative restriction? Padjadjaran Journal of International Law, 6(2), 180–200. https://doi.org/10.23920/pjil.v6i2.797

Dür, A., Hamilton, S. M., & De Bièvre, D. (2024). Reacting to the politicization of trade policy. *Journal of European Public Policy*, 31(1), 1–19. https://doi.org/10.1080/13501763.2023.2258157

Erb, M., Mucek, A. E., & Robinson, K. (2021). Exploring a social geology approach in eastern Indonesia: What are mining territories? The Extractive Industries and Society, 8(1), 89–103. https://doi.org/10.1016/j.exis.2020.09.005

Fikru, M. G., Kilinc-Ata, N., & Belaïd, F. (2024). Climate policy stringency and trade in energy transition minerals: An analysis of response patterns. *Resources Policy*, 96, Article 105236. https://doi.org/10.1016/j.resourpol.2024.105236

Firmanto, A. B., Wibisono, D., Siallagan, M. P. S., Mubarok, M. Z., & Andariesta, D. T. (2026). Balancing economic impact and resource sustainability: A system dynamics evaluation of mineral downstreaming policies in Indonesia. *Resources Policy*, 121, Article 106015. https://doi.org/10.1016/j.resourpol.2026.106015

Gonzalez Arreaza, A. (2017). Natural resource sovereignty and economic development in the WTO in light of the recent case law involving raw materials and rare earths. *Review of European, Comparative & International Environmental Law*, 26(3), 266–275. https://doi.org/10.1111/reel.12209

Han, L., Chen, X. H., Wang, Y., & Hoang, Y. H. (2024). Examining the impact of mineral export controls on sustainable energy transition in the Global South. *Resources Policy*, Article 105289. https://doi.org/10.1016/j.resourpol.2024.105289

Heijlen, W., & Duhayon, C. (2024). An empirical estimate of the land footprint of nickel from laterite mining in Indonesia. *The Extractive Industries and Society*, 17, Article 101421. https://doi.org/10.1016/j.exis.2024.101421

Hopewell, K. (2024). The (surprise) return of development policy space in the multilateral trading system: What the WTO Appellate Body blockage means for the developmental state. *Review of International Political Economy*, 31(4), 1245–1270. https://doi.org/10.1080/09692290.2024.2303681

Hudayana, B., Suharko, & Widyanta, A. B. (2020). Communal violence as a strategy for negotiation: Community responses to nickel mining industry in Central Sulawesi, Indonesia. *The Extractive Industries and Society*, 7(4), 1547–1556. https://doi.org/10.1016/j.exis.2020.08.012

Jordy, J. (2025). Untangling nickel downstreaming: A political economy analysis of Indonesia's Morowali Industrial Park. *International Journal of Social and Political Sciences*, 2(2), 150–161. https://doi.org/10.69812/ijsps.v2i2.136

Kadir, A., Amir, M., Hos, J., Dewa, M. J., & Suaib, E. (2026). Misaligned governance in Indonesia's nickel boom: Design and capacity failures in the Mandiodo Block. *Resources Policy*, Article 106018. https://doi.org/10.1016/j.resourpol.2026.106018

Khalil, S. B., & Broughel, A. (2025). Stainless success, battery lag: Evaluation of Indonesia's resource nationalism in nickel. *The Extractive Industries and Society*, 23, Article 101677. https://doi.org/10.1016/j.exis.2025.101677

Kinanti, N. L. D. W., Xu, K., Hu, Z., Cheng, Q., & Yu, D. (2026). Life cycle assessment of nickel laterite refining to battery materials intermediates in Indonesia: A case study. *Hydrometallurgy*, 242, Article 106712. https://doi.org/10.1016/j.hydromet.2026.106712

Kotilainen, J. M., Sairinen, R., Lehtimäki, H., & Mielonen, N. (2026). Multilevel governance under urgency: Developing battery industry in the EU. *Resources Policy*, 112, Article 105825. https://doi.org/10.1016/j.resourpol.2025.105825

Lee, J. (2025). Long-term relationship over litigation: Mediation in WTO dispute settlement proceedings. *World Trade Review*, 24(1), 50–74. https://doi.org/10.1017/S1474745624000417

Lestari, P. D., Ilmania, N. F., & Al-Haq, M. (2024). Legal reform of Indonesia's nickel export ban (Indonesia-Europe). *SASI*, 30(3), 287–299. https://doi.org/10.47268/sasi.v30i3.2295

Miranda, J., & Sánchez Miranda, M. (2023). Chronicle of a crisis foretold: How the WTO Appellate Body drove itself into a corner. *Journal of International Economic Law*, 26(3), 435–461. https://doi.org/10.1093/jiel/jgad023

Moon, J. W., Xun, S. Y., Chung, J., & Textoris, S. D. (2025). Assessment of critical minerals supply chain for the United States in perspective of trade restriction by foreign countries. *Resources Policy*, Article 105726. https://doi.org/10.1016/j.resourpol.2025.105726

Saka, U. M., Duzgun, S., & Bazilian, M. D. (2024). Analysis of world trade data with machine learning to enhance policies of mineral supply chain transparency. *Resources Policy*, 89, Article 104671. https://doi.org/10.1016/j.resourpol.2024.104671

Simbolon, G. N., Agustin, L., Sianturi, L. K., & Wahyuni, M. (2026). Local government as linkage actors: Domestic sources of foreign policy in the United States. *International Journal of Social and Political Sciences*, 3(1), 62–73. https://doi.org/10.69812/ijsps.v3i1.242

Sykes, A. O. (2024). The utility of appellate review at the WTO and its optimal structure. *Journal of International Economic Law*, 27(3), 424–440. https://doi.org/10.1093/jiel/jgae029

Tilley, L. (2026). Indonesian nickel sovereignty and global raced finance: The value of Element 28 in an age of transition. *Review of International Political Economy*. Advance online publication. https://doi.org/10.1080/09692290.2026.2642935

Tuljapurkar, S., & Zhang, R. (2025). Developing countries' participation in environmental services negotiations: What are the challenges and what should be done? World Trade Review, 24(2), 214–236. https://doi.org/10.1017/S1474745624000156

Van Damme, I. (2023). 25 years of law and practice at the WTO: Did the Appellate Body dig its own grave? Journal of International Economic Law, 26(1), 124–132. https://doi.org/10.1093/jiel/jgac067

Wahyono, Y., Sasongko, N. A., Trench, A., Anda, M., Hadiyanto, Aisyah, N., & Ariyanti, D. (2024). Assessing the impact of climate change and water scarcity of ferronickel production in Indonesia: A life cycle assessment approach. *Sustainable Energy Technologies and Assessments*, 67, Article 103835. https://doi.org/10.1016/j.seta.2024.103835

Warburton, E. (2024). Nationalist enclaves: Industrialising the critical mineral boom in Indonesia. *The Extractive Industries and Society*, 20, Article 101564. https://doi.org/10.1016/j.exis.2024.101564

Wasesa, M., Hidayat, T., Andariesta, D. T., Attazahri, A. K., Satritama, B., Wasesa, H. A., Zulhan, Z., Mubarok, M. Z., & Putro, U. S. (2026). Navigating trade policies and sustainability: A system dynamics analysis of Indonesia's nickel supply chain. *Resources Policy*, Article 105786. https://doi.org/10.1016/j.resourpol.2025.105786

Wijaya, T., & Jones, L. (2026). Indonesia, nickel, and the political economy of polyalignment in the Second Cold War. *Third World Quarterly*, 47(13), 2667–2686. https://doi.org/10.1080/01436597.2025.2465514

Wijaya, T., & Sinclair, L. (2025). An EV-fix for Indonesia: The green development-resource nationalist nexus. *Environmental Politics*, 34(2), 252–274. https://doi.org/10.1080/09644016.2024.2332129

Winanti, P. S., & Diprose, R. (2020). Reordering the extractive political settlement: Resource nationalism, domestic ownership and transnational bargains in Indonesia. *The Extractive Industries and Society*, 7(4), 1534–1546. https://doi.org/10.1016/j.exis.2020.08.015

Yudithia, Y., Yuniartoto, W., Suryahadi, S., Soares, A., & Dewi, L. K. C. (2024). SWOT-based governance assessment of BP Batam: Addressing institutional, regulatory, and investment barriers. *International Journal of Social and Political Sciences*, 2(1), 96–106. https://doi.org/10.69812/ijsps.v2i1.100

Zaki, M. R. S., Armanto, M. H., Albar, R. A. H., & Koos, S. (2023). Safeguarding sovereignty: Indonesia's solution to the raw materials case in WTO. *Indonesian Journal of International Law*, 20(4), 725–752. https://doi.org/10.17304/ijil.vol20.4.5