



Analysis of Security Issues in the Resource-Rich Region of Papua, Indonesia

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Article Info

Article history:

Received February 3rd, 2026

Revised April 12th, 2026

Accepted April 22rd, 2026

Keyword:

Mining, Natural Resources, Poverty, Security, Tanah Papua.

ABSTRACT

Tanah Papua is a region with six provinces in eastern Indonesia that is very rich in natural resources such as gold, copper, natural gas, nickel, and vast tropical forests. However, this wealth is inversely proportional to the welfare of its people, who are still behind in terms of economy, health, and education. This study used a descriptive qualitative approach based on literature studies to analyze five dimensions of non-traditional security in Papua, namely human security, social security, environmental security, economic security, and health security. From the human security dimension, armed conflict between the authorities and separatist groups has caused many casualties and mass displacement, worsening the sense of security of civilians. Social security is also disrupted by transmigration, discrimination, and horizontal conflicts that trigger concerns about the loss of cultural identity and social cohesion. Meanwhile, environmental damage caused by large-scale mining and plantation activities has eliminated customary forests and damaged the ecosystem that supports the lives of local communities. In the economic sector, inequality is still evident, even though natural resources are abundant, poverty rates and prices of basic necessities remain high, especially in the interior. Indigenous peoples are more likely to become manual workers without certainty of welfare, while the main profits are enjoyed by large corporations. From a health perspective, Papua faces serious problems such as stunting, malaria, HIV/AIDS, and low immunization coverage, exacerbated by minimal access to basic health services. Through this comprehensive analysis, this study emphasizes that the security approach in Papua cannot only focus on the militaristic aspect. Instead, a development strategy and security policy that are inclusive, humane, and sustainable are needed so that Papua can escape the cycle of vulnerability towards justice and prosperity.



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1. INTRODUCTION

The Indonesian area of Papua Island, also known as Tanah Papua, is a region of Eastern Indonesia that is rich in natural resources¹ and biodiversity². Tanah Papua's natural wealth is dominated

¹ P. Acosta and M. D. Curt, "Understanding the Expansion of Oil Palm Cultivation: A Case-Study in Papua," *Journal of Cleaner Production* 219 (2019): 199–216, <https://doi.org/10.1016/j.jclepro.2019.02.029>.

² C. Parsch et al., "Papua at the Crossroads: A Plea for Systematic Conservation Planning in One of the Largest Remaining Areas of Tropical Rainforest," *Frontiers in Forests and Global Change* 5 (2022): Article 763131, <https://doi.org/10.3389/ffgc.2022.763131>.

by mining products, such as gold³, copper³, nickel⁴, oil⁵, and natural gas⁶. Even uranium, a raw material for nuclear can also be found in Tanah Papua⁷. In addition, Tanah Papua still maintains a large amount of primary forest, as much as 83% of its land area², which reaches around 411,000 km². Therefore, Tanah Papua is one of the largest remaining rainforest areas in the world⁸, which is also home to more than 602 bird species, with an endemism rate of 52%, the highest in Indonesia⁹. This natural wealth and biodiversity make Papua a strategic area, both from a national economic and regional geopolitical perspective.

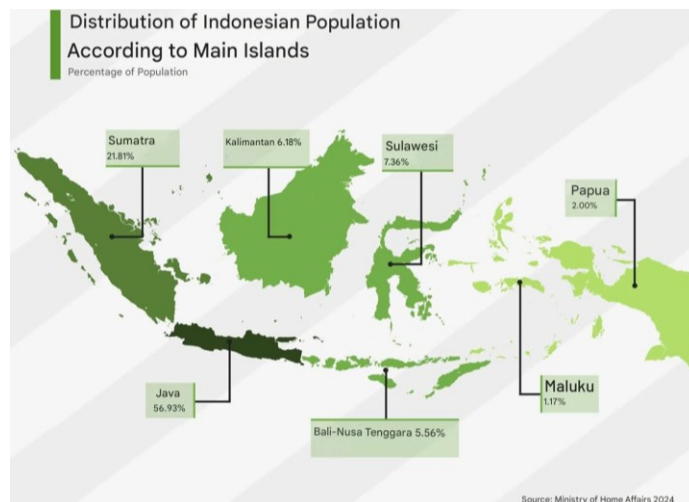


Figure 1. Distribution of Indonesian Population According to Main Islands¹⁰

According to Figure 1, Tanah Papua region has only 2% of the total population in Indonesia, or 5,649,552 people¹⁰, and includes 254 different tribes¹¹. The population in Papua is considered small, despite covering almost 20% of the total land mass of Indonesia, given also that the total population of Indonesia is about 281 million people¹². The population in this region is spread across six provinces. Referring to the Law on the Expansion of the Papua Region, Indonesia, in accordance with Law 14/2022 (South Papua), Law 15/2022 (Central Papua), Law 16/2022 (Papua Mountains), and Law 29/2022 (Southwest Papua), there are a total of six provinces in the Papua region¹³. The four new provinces mentioned earlier are the expansions of two previously existing provinces, namely Papua Province and West Papua Province. The expansion of these provinces is intended to accelerate equitable development. The detailed division of provinces in Papua can be seen in Figure 2.

³ H. Hidayatulloh et al., "The Intricate Justice of Poverty: A Case of The Land of Gold in Papua Indonesia," *Journal of Indonesian Legal Studies* 7, no. 2 (2022): 557–584, <https://doi.org/10.15294/jils.v7i2.58030>.

⁴ M. J. Nasution et al., "The Impact of Increasing Nickel Production on Forest and Environment in Indonesia: A Review," *Jurnal Sylva Lestari* 12, no. 3 (2024): 549–579, <https://doi.org/10.23960/jsl.v12i3.847>.

⁵ J. V. C. Howes, "Future Petroleum Production from Indonesia and Papua New Guinea," *AAPG Bulletin* 83, no. 12 (1999): n.p., <https://doi.org/10.1306/E4FD46F7-1732-11D7-8645000102C1865D>.

⁶ S. Kartohardjono and H. Fadilah, "Marginal Oil and Gas Field Development Using Stranded and Flaring Gas," *Edelweiss Applied Science and Technology* 8, no. 6 (2024): 7327–7365, <https://doi.org/10.55214/25768484.v8i6.3586>.

⁷ H. Syaeful et al., "Uranium Exploration, Deposit and Resources: The Key of Nuclear Power Plant Development Program in Indonesia," *Journal of Physics: Conference Series* 2048 (2021): Article 012003, <https://doi.org/10.1088/1742-6596/2048/1/012003>.

⁸ D. Gaveau et al., "Forest Loss in Indonesian New Guinea (2001–2019): Trends, Drivers and Outlook," *Biological Conservation* 261 (2021): Article 109225, <https://doi.org/10.1016/j.biocon.2021.109225>.

⁹ S. Tabbal and L. Nurrani, "Distribution of Avifauna in Aketajawe Lolobata National Park Based on Zone and Land Cover Typology," *Journal of Asian Biodiversity* 3, no. 1 (2016): 25–38, <http://doi.org/10.20886/jwas.v3i1.891>.

¹⁰ Ministry of Home Affairs of the Republic of Indonesia, *Tabel Data—Dataset 1102*, accessed June 9, 2025, <https://e-database.kemendagri.go.id/kemendagri/dataset/1102/tabel-data>.

¹¹ E. H. Rumansra, "Local Wisdom at Systems of Ownership, Utilization, Conflict Resolution Customary Land in Papua, Indonesia," *International Journal of Sciences: Basic and Applied Research (IJSBAR)* 23, no. 2 (2015): 19–31, <https://gssr.org/index.php/JournalOfBasicAndApplied/article/view/4272>.

¹² Central Statistics Agency (BPS), *Mid-Year Population (Thousand People)*, accessed June 9, 2025, <https://www.bps.go.id/en/statistics-table/2/MTk3NSMy/mid-year-population--thousand-people-.html>.

¹³ United Nations Group of Experts on Geographical Names (UNGEGN), *Standardization of Geographical Names in Indonesia: Toponymic Guidelines for Map and Other Editors for International Use*, 3rd Session, New York, 2023, https://unstats.un.org/unsd/ungegn/sessions/3rd_session_2023/documents/GEGN.2_2023_50_CRP.50_revised.pdf.

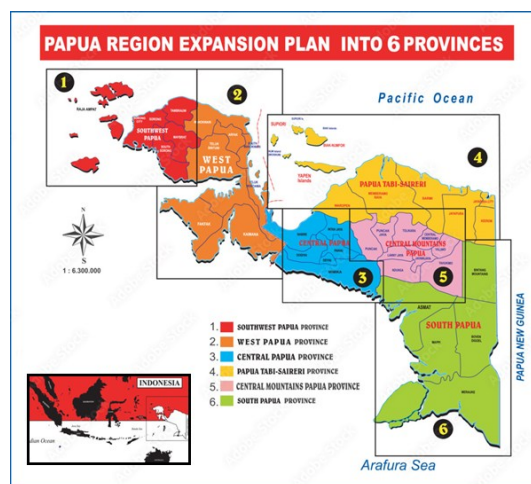


Figure 2. Six Provinces in Papua, Indonesia¹⁴

Due to its abundant natural resources and small population, residents of Tanah Papua should be able to live in prosperity. However, a big irony arises when the reality of Papuan people's welfare does not reflect the potential of this natural wealth. Papua is still classified as one of the regions with the highest level of poverty¹⁵, having the lowest school life expectancy¹⁶, high conflict tendencies¹⁷, lowest average incomes¹⁸, and lowest basic child vaccination in Indonesia¹⁸. Moreover, health care and education level in Tanah Papua are among the lowest in the Asia-Pacific region, with HIV/AIDS at epidemic levels and education highly inequitable¹⁹.

On top of developmental challenge, Tanah Papua faces a complex and multidimensional security issues. Security issues in this region are not only limited to military strategies or armed conflict, but also involve broader and more humane dimensions. Therefore, a non-traditional security approach is relevant to analyze the dynamics of Papua comprehensively. The security aspects that are currently quite crucial in Tanah Papua are human security, societal security, environmental security, economic security, and health security.

By considering these five dimensions of security, this study seeks to provide a broader and deeper understanding of security issues in Papua. This approach also seeks to transcend the prevailing narrative that is overly centred on military and violent strategies, by emphasizing the importance of protecting human rights, environmental sustainability, indigenous peoples' participation, and equitable development. Through a comprehensive analysis, it is anticipated that this research can become a literature study to guide and help formulate fairer, more inclusive, and sustainable policies for the future of Papua and the people of Papua as an integral part of the Unitary State of the Republic of Indonesia.

2. RESEARCH METHODS

This study used a descriptive qualitative approach, with a library research type. This approach was used to gain an in-depth understanding of various security issues in the Papua region, Indonesia, with a focus on six main dimensions, namely Papua's natural resource wealth, human security, societal security, environmental security, economic security, and health security. Qualitative research allowed researchers to explore social and political phenomena contextually, as well as explore the meaning and interpretation contained in various sources of information²⁰.

¹⁴ Adobe Stock, *Vector Map of Papua in the Plan to Expand into 6 Provinces (Outline)*, <https://stock.adobe.com/tw/images/vector-map-of-papua-in-the-plan-to-expand-into-6-provinces-outline/535370183>.

¹⁵ D. B. Kambuaya and D. M. K. P. Kambuaya, "The Effectiveness of Community Poverty Reduction Programmes in the Province of Papua, Indonesia," *Social Science and Humanities Journal* 8, no. 10 (2024): 5224–5235, <https://doi.org/10.18535/sshj.v8i10.1377>.

¹⁶ F. S. Agustus et al., "Strengthening the Papua Steering Committee Strategy: Reducing Instability for Accelerated Development in Papua, Indonesia," *Social Sciences & Humanities Open* 11 (2025): 101413, <https://doi.org/10.1016/j.ssaho.2025.101413>.

¹⁷ K. Sollis et al., "Migrant Status and the Wellbeing Gap: The Case of an Ethnically Diverse, High-Conflict Area in Indonesia," *Journal of Happiness Studies* 24 (2023): 1781–1811, <https://doi.org/10.1007/s10902-023-00659-x>.

¹⁸ B. Anderson, *Papua's Insecurity: State Failure in the Indonesian Periphery* (Honolulu: East-West Center, 2015), <https://scholarspace.manoa.hawaii.edu/bitstream/10125/37598/1/ps073-1.pdf>.

¹⁹ N. Baird, "The Universal Periodic Review and West Papua: Beyond Invisibility?" *International Journal on Minority and Group Rights* 32, no. 1 (2024): 24–60, <https://doi.org/10.1163/15718115-bja10158>.

²⁰ W. M. Lim, "What Is Qualitative Research? An Overview and Guidelines," *Australasian Marketing Journal* 33, no. 2 (2024): 199–229, <https://doi.org/10.1177/14413582241264619>.

A. Data Source

The data in this study were obtained from secondary sources available online, including:

- 1) Scientific journal articles and proceeding papers from databases such as Web of Science (WoS), Scopus, Google Scholar, JSTOR, ResearchGate, Dimensions, and SINTA.
- 2) Reports from international organizations such as UNDP, WHO, and Human Rights Watch.
- 3) Reports from Indonesian government institutions such as Bappenas, Ministry of Home Affairs, Central Statistics Agency (BPS), Ministry of Health, Ministry of Energy and Natural Resources, and Komnas HAM.
- 4) Relevant laws and regulations, including the law on the establishment of the province in Papua.
- 5) News and articles from credible mass media such as Kompas, Detik, Merdeka, Jubi, Antara News, BBC Indonesia, and Al Jazeera.
- 6) Publications from non-governmental organizations (NGOs) working on human rights, environmental, and development issues in Papua.

B. Data Collection Technique

The data collection technique was conducted through a systematic online literature search using two languages, English and Indonesian. Each source obtained had been selected based on the criteria of relevance, credibility, and recency. The sources used are from academic or institutional authority published within the last 10 years, except for legal documents or historical archives that had been fundamental for this research. To ensure the validity of the data, the researcher applied source triangulation by comparing and confirming information from various types of sources (academic, government, media, NGOs). In addition, the researcher used a critical approach to source bias, considering the publication context, institutional background, and the purpose of the document or article being analyzed.

C. Data Analysis Technique

This study used the content analysis method to systematically examine secondary data. The analysis was conducted through several stages as follows:

- 1) Data Coding: The main categories used in the coding process included Papua's natural resource wealth, human security, societal security, environmental security, economic security, and health security.
- 2) Data Reduction: Irrelevant or duplicate information was eliminated, while the data that remains within the bound of this research is retained and analyzed further.
- 3) Thematic Interpretation: In this stage, the researcher interpreted the data by connecting the security dimension and the existence of Papua's natural resources, and how the interaction between the two affected social and political conditions in the region.
- 4) Conclusions: In the last stage, the researcher compiled all the findings based on thematic patterns and main narratives that emerged from the results of document analysis, which were later used as the basis for arguments in the discussion.

3. RESULTS AND DISCUSSION

Security issues in Papua cannot be separated from the complex and dynamic framework of local realities. Social inequality, pressure on indigenous peoples' rights, exploitation of natural resources, and development gaps have created a multi-layered and interconnected security landscape. In this context, a traditional security approach is no longer sufficient if viewed only from a militaristic or national defense perspective. Instead, a multidimensional approach that includes human, societal, environmental, economic, health, and natural resources aspects is important to understand the conditions in Papua.

The discussion in this chapter will explore six main dimensions that lie at the center of this research, namely the Papua's natural resource wealth, human security, societal security, environmental security, economic security, and health security. Each dimension is dissected to reveal how the inequality in resource management and the weak protection of basic community rights contribute to the ongoing situation of vulnerability.

A. Papua's Natural Resource Wealth

Papua's natural wealth is immense and encompasses several sectors. However, instead of becoming a blessing for the entire local community to achieve prosperity, it often becomes a source of tension.

The distribution of resource extraction is still a major issue, where most of the benefits are only felt by large companies (foreign and domestic) and national political elites, not the surrounding community. The unequal distribution of profits invested in the development of Papua has also resulted in limited skilled human resources on the island²¹. Some vital sources of wealth in Papua can be analyzed in the five major projects that currently exist, including Grasberg Mining, Tangguh LNG Terminal, oil exploitation and production in Southwest Papua and West Papua, Nickel Project in Raja Ampat, and Merauke Integrated Food and Energy Estate (MIFEE).

1) *Grasberg Mining*

The Grasberg Mine, located in Mimika Regency, Central Papua, is one of the largest gold and copper mines in the world²². As of December 31, 2023, PT Freeport Indonesia still recorded a massive gold reserve of around 23.9 million ounces and copper reserves of around 29 billion pounds or around 13.15 billion kg²³. The Grasberg concession area is very large, reaching tens of thousands of hectares, including open pit and underground mines.

Grasberg's historical production has been very high during 1990–2019 period, where the Grasberg open pit mine has produced more than 27 billion pounds of copper and 46 million ounces of gold. After the open pit reserves were exhausted in 2019, Freeport Indonesia switched to mining underground reserves. In 2022, Freeport produced about 1.6 billion pounds of copper and 1.6 million ounces of gold through the Grasberg underground mine. Its economic value is very large; according to data from Freeport Indonesia, revenue from the Grasberg underground mine reaches about 4 billion USD per year²⁴.

Economically, the Grasberg mine depicted in Figure 3 should have a significant impact on regional and national economic development. Investment in underground mining development since the early 2000s has reached tens of billions of US dollars, and mining processing facilities (such as the copper smelter in Manyar, Gresik) continued to be built with billions of dollars of investment. Freeport's imports of copper ore processed domestically are linked to the supply of raw materials for value-added downstream products. Freeport (PTFI) was once reported to contribute around 37.5% to Papua's GRDP and almost 91% of Mimika Regency's GRDP in 2019²⁵.

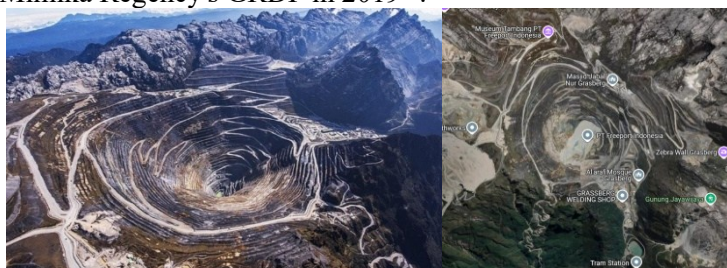


Figure 3. Grasberg Mining in Mimika Regency, Central Papua²⁶

2) *Tangguh LNG Terminal*

The Tangguh LNG terminal is the largest liquefied natural gas (LNG) processing facility in Indonesia, located in Teluk Bintuni, West Papua²⁷. Tangguh LNG is managed by an international consortium led by BP (British Petroleum) from the United Kingdom. BP as the main operator has around 40.22% of shares in this project²⁸. The Tangguh gas field began production in 2009 through two

²¹ F. Z. Fauzi, et al., "The Direction of Papua Development: Is A New Autonomous Region the Answer?" *Policy & Governance Review* 7, no. 1 (2023): 1–20, <https://doi.org/10.30589/pgr.v7i1.609>.

²² L. E. Susanti, "Economic Law Creation Beautiful Global Indonesia," *Jurnal Bestuur* 7, no. 1 (2019): 47–53, <https://jurnal.uns.ac.id/bestuur/article/view/42701/27520>.

²³ Freeport-McMoRan, "Indonesia," accessed June 10, 2025, <https://www.fcx.com/operations/indonesia#:~:text=PT%20Freeport%20Indonesia%20.and%20the%20largest%20gold%20reserve.>

²⁴ Freeport-McMoRan, "Grasberg Open Pit," accessed June 10, 2025, <https://www.fcx.com/operations/indonesia#:~:text=Grasberg%20open%20pit,period%20from%201990%20through%202019.>

²⁵ Kompas, "Masa Depan Grasberg, Tambang Freeport di Papua (The Future of Grasberg, Freeport Mine in Papua)," *Kompas*, Accessed June 10, 2025, <https://money.kompas.com/read/2024/09/18/151148826/masa-depan-grasberg-tambang-freeport-di-papua>.

²⁶ Mining Journal "Freeport Seeks Indonesia Approval for Copper Concentrate Exports," *Mining Journal*, accessed June 6, 2025, <https://www.mining-journal.com/base-metals/news-analysis/4401564/freeport-seeks-indonesia-approval-copper-concentrate-exports>.

²⁷ OGI, "BP Starts Full Commercial Operation of Expanded Tangguh LNG Plant," *Oil & Gas Journal*, accessed June 9, 2025, <https://www.ogi.com/pipelines-transportation/lng/article/14300440/bp-starts-full-commercial-operation-of-expanded-tangguh-lng-plant>.

²⁸ Antara News, "Pengembangan Kilang LNG Tangguh Train 3 Penting demi Kedaulatan Energi (The Development of Tangguh LNG Train 3 Is Crucial for Energy Sovereignty)," *Antara News*, accessed June 7, 2025, <https://www.antaranews.com/berita/3850572/pengembangan-kilang-lng-tangguh-train-3-penting-demi-kedaulatan-energi>.

initial production lines (trains) with a total capacity of around 7.6 million tonnes of LNG per year²⁹. In 2023, this terminal facility will be further expanded through the addition of Train 3, bringing the total capacity to 11.4 million tonnes of LNG per year³⁰. The investment value is very large because the construction of Train 3 involves capital expenditure of around USD 4.83 billion (equivalent to Rp72.45 trillion). Thus, Tangguh Train 3 is now the largest LNG plant in Indonesia, producing up to 11.4 million tons of LNG annually³¹.

Economically, the Tangguh LNG terminal is the main supplier of domestic and export energy needs for Indonesia. The Tangguh LNG terminal, seen in Figure 4, was once said to contribute more than 35% of Indonesia's LNG production capacity²⁸. In addition to providing foreign exchange, this project also absorbs thousands of local and national workers, as well as increasing infrastructure development in Teluk Bintuni area.³²



Figure 4. Tangguh LNG Terminal in Teluk Bintuni Regency, West Papua³³

3) Oil Extraction and Production in Southwest Papua and West Papua

Papua also has great potential in the conventional oil exploration and production sector³⁴. The drilling of the Buah Merah exploration well (BMR-001) in Sorong Regency, Southwest Papua province is one example. This exploration well is targeted to find crude oil reserves in the Kais Formation with an estimated reserves of around 11.22 million barrels of oil³⁵.

Another area with a big potential is the Bobara Block in West Papua province, managed by Petronas (Malaysia's national oil and gas company), which has an area of around 8,444 km² and is estimated to hold reserves of up to 6.8 billion barrels of oil equivalent (BOE). These reserves are highlighted due to its potential in contributing to Indonesia's energy production and, which in turn increase national energy security³⁶.

The oil exploration project in Papua is not only supported by foreign companies, but also by domestic companies such as Pertamina Hulu Energi, which is actively conducting seismic surveys and exploration drilling. In addition, oil processing is handed over to Pertamina Refinery Unit VII Kasim in Sorong. Thus, the extraction of oil in Papua is likely to generate revenues for the region.

²⁹ Ministry of Energy and Mineral Resources (ESDM), "Pembangunan Tangguh LNG Plant Selesai Tahun 2009 (Construction of the Tangguh LNG Plant Completed in 2009)," *Ministry of Energy and Mineral Resources (ESDM)*, accessed June 8, 2025, <https://www.esdm.go.id/media-center/arsip-berita/pembangunan-tangguh-lng-plant-selesai-tahun-2009>.

³⁰ BP, "BP Kirimkan Kargo LNG Pertama dari Fasilitas Proyek Pengembangan Tangguh (BP Sends First LNG Cargo from Tangguh Expansion Project)," *BP Indonesia*, accessed June 7, 2025, https://www.bp.com/id_id/indonesia/home/berita/siaran-pers/bp-kirimkan-kargo-lng-pertama-dari-fasilitas-proyek-pengembangan-tangguh.html.

³¹ Ministry of Energy and Mineral Resources (ESDM), "Resmikan Proyek Tangguh Train 3, Presiden Sekaligus Groundbreaking Proyek CCUS Ubadari, Blue Ammonia, dan Lapangan Gas Alam Asap Kido Merah (President Inaugurates Tangguh Train 3 Project and Breaks Ground on CCUS, Blue Ammonia, and Asap Kido Merah Gas Fields)," *Ministry of Energy and Mineral Resources (ESDM)*, accessed June 7, 2025, <https://www.esdm.go.id/media-center/arsip-berita/resmikan-proyek-tangguh-train-3-presiden-sekaligus-groundbreaking-proyek-ccus-ubadari-blue-ammonia-dan-lapangan-gas-alam-asap-kido-merah>.

³² D. Sunarjanto et al., "Manfaat Ekonomi dan Lingkungan dari Kegiatan Migas Teluk Bintuni, Propinsi Papua Barat (The Benefit of Economic and Environmental Oil and Gas Activity in Bintuni Gulf, West Papua)," *Lembaran Publikasi Minyak dan Gas Bumi* 51, no. 3 (2017): 1–7, <https://journal.lemigas.esdm.go.id/index.php/LPMGB/article/view/24/21>.

³³ BP, "Tangguh LNG," *BP Indonesia*, accessed June 9, 2025, https://www.bp.com/en_id/indonesia/home/who-we-are/tangguh-lng.html.

³⁴ PTTEP Indonesia, "East Papua Exploration Play," *PTTEP Indonesia*, accessed June 9, 2025, https://www.pttep-indonesia.co.id/upload/files/publication/East_Papua_Exploration_Play_LOWRES.pdf.

³⁵ Ruang Energi, *Good News dari SKK Migas: Pamalu Sukses Tajak BMR-001 di Papua Barat Daya (Good News from SKK Migas: Pamalu Successfully Drills BMR-001 in Southwest West Papua)*, accessed June 9, 2025, <https://www.ruangenergi.com/good-news-dari-skk-migas-pamalu-sukses-tajak-bmr-001-di-papua-barat-daya/#:~:text=Pengeboran%20sumur%20eksplorasi%20ini%20dimaksudkan,22%20MMBO.>

³⁶ Detik Finance, "Petronas Mau Bawa Raksasa Migas Prancis Balik Garap Harta Karun di RI (Petronas Plans to Bring French Oil Giant Back to Explore Treasures in Indonesia)," *Detik Finance*, accessed June 9, 2025, <https://finance.detik.com/energi/d-7923755/petronas-mau-bawa-raksasa-migas-prancis-balik-garap-harta-karun-di-ri>.



Figure 5. Pertamina Refinery Unit VII Kasim in Sorong regency, Southwest Papua³⁷

4) Nickel Project in Raja Ampat

Gag Island area in Raja Ampat regency, Southwest Papua province, which can be seen in Figure 6., has been turned into high-value nickel mines³⁸. PT Gag Nickel Raja Ampat is recorded to have a mining concession of around 13,136 hectares on Gag Island³⁹. Based on Gag Nickel company data as of December 2018, Gag Nickel's total nickel ore reserves were around 47.76 million wet metric tons (wmt), consisting of 39.54 million wmt of saprolite and 8.22 million wmt of limonite⁴⁰. Moreover, Gag Nickel's nickel resources reach more than 314 million wmt, which indicates long-term prospects. If the reserves are fully processed, the economic value will be very large considering the high nickel content and market price of nickel.

The development of the nickel industry in Gag Island, as well as other nickel mines and refineries in Morowali and Halmahera, cannot be separated from the increasing global demand of batteries for electric vehicle (EV), which makes Indonesia the world's leading nickel producer with about 60% of global production share⁴¹.

Nickel extraction activities in Gag Island and the Raja Ampat regency have raised public concerns, given Raja Ampat's location within the Pacific Coral Triangle—a region recognized as a global epicentre of marine biodiversity. A petition initiated by Greenpeace has gathered over 60,000 signatures under the hashtag #SaveRajaAmpat⁴². In response to increasing public pressure in June 2025, the Indonesian government revoked four out of five mining concessions in Raja Ampat, allowing only PT Gag Nickel—a subsidiary of PT Antam, owned by the Indonesian state investment fund Danantara—to continue operations. While Indonesian authorities claim Gag Island lies outside the boundaries of the Raja Ampat Geopark, Law No. 27/2007 stipulates that mining on 'small islands' should be restricted⁴³. Additionally, the legitimacy of ongoing mining activities on Gag Island is based on permits granted in 1998, which predate subsequent regulatory frameworks⁴⁴.

While nickel offers significant opportunities for export revenue, downstream development, and technology transfer that could boost Papua's economy, it can only deliver if managed transparently and with high regards to preserve the ecological and biodiversity wealth in Raja Ampat. Comparable to gold and copper, nickel extraction can potentially drive local economic transformation.

³⁷ Pertamina RU VII, "Personal website," accessed June 9, 2025, <https://www.kehatiruviiikasim.com/>.

³⁸ M. A. Ulat et al., "Analysis of the Social, Economic, and Ecological Impact of Mining Activities of PT. Gag Nickel on Society and Coral Reef Ecosystem in Gag Island, Raja Ampat District," *Formosa Journal of Multidisciplinary Research* 3, no. 10 (2024): 3731–3746, <https://doi.org/10.55927/fjmr.v3i10.11612>.

³⁹ Kompas, "Rekam Jejak PT Gag Nickel, Anak Usaha Antam Pemilik Tambang Raja Ampat (Track Record of PT Gag Nickel, a Subsidiary of Antam, Owner of Raja Ampat Mine)," accessed June 9, 2025, <https://money.kompas.com/read/2025/06/07/103850326/rekam-jejak-pt-gag-nikel-anak-usaha-antam-pemilik-tambang-raja-ampat?page=all>.

⁴⁰ Gag Nickel, "Aktifitas Kami (Our Activities)," accessed June 11, 2025, <https://gagnikel.com/aktifitas-kami/>.

⁴¹ BloombergNEF, "Indonesia Transition Factbook 2025," BloombergNEF, October 6, 2025, <https://about.bnef.com/insights/clean-energy/indonesia-transition-factbook-2025/>.

⁴² tanah.air. (2025, September 21). *Raja Ampat ecosystem under threat, Greenpeace says: Government must revoke PT Gag Nickel's temporary permit - tanahair.net*. <https://tanahair.net/raja-ampat-ecosystem-under-threat-greenpeace-says-government-must-revoke-pt-gag-nikels-temporary-permit/>

⁴³ Jong, H. N. (2025, June 10). Indonesia halts most nickel mining in Raja Ampat, but allows one controversial permit. *Conservation News*. <https://news.mongabay.com/2025/06/indonesia-halts-most-nickel-mining-in-raja-ampat-but-allows-one-controversial-permit/>

⁴⁴ *Usai Cabut 4 IUP Raja Ampat, Bahlil Sanggah Klaim Greenpeace—Energi*. (n.d.). Retrieved January 18, 2026, from <https://www.bloombergtechnoz.com/detail-news/73612/usai-cabut-4-iup-raja-ampat-bahlil-sanggah-klaim-greenpeace>



Figure 6. Nickel Mining in Gag Island, Raja Ampat regency, Southwest Papua⁴⁵

5) *Merauke Integrated Food and Energy Estate (MIFEE)*

The Merauke Integrated Food and Energy Estate (MIFEE) project is one of the largest agricultural and energy projects ever designed in Indonesia⁴⁶, which is in Merauke Regency, South Papua. The project, which began in 2010, includes the development of 1.2 million hectares of agricultural, plantation and bioenergy land, with an estimated investment value of USD 5 billion⁴⁷. MIFEE aims to make Merauke as a national food barn and center for agricultural-based energy production⁴⁸.

A number of large corporations are involved in this project, including national and multinational private companies operating in the food, palm oil, sugar cane, and biofuel sectors. MIFEE is divided into a number of development clusters designed to produce strategic commodities, especially palm oil plantations as shown in Figure 7. With the supporting infrastructure that continues to be built, this project is expected to be able to secure national food security while opening exports to foreign markets.



Figure 7. Palm Oil Plantation in MIFEE project in Merauke regency, South Papua⁴⁹

B. Human Security

The Papua region of Indonesia faces major challenges in achieving the Sustainable Development Goals (SDGs), specifically SDG 16, which emphasizes peace, justice and strong institutions as the foundation of sustainable development⁵⁰. Human security includes conditions in which individuals are free from the threat of physical violence, crime, and enjoy basic rights such as personal safety and adequate food⁵¹.

In Tanah Papua, this dimension is crucial given that the region has been facing a prolonged armed conflict between security forces and non-state armed groups, accompanied by violence against civilians. Papua's vast geography and inaccessible interior areas exacerbate the vulnerability of residents to violence and lack of access to protection. For example, throughout 2022 there were 87 violent incidents linked to Armed Criminal Groups (KKB) in Papua region, resulting in 43 fatalities (including 31

⁴⁵ Detik Finance, "Terungkap Sepak Terjang PT Gag Nickel yang Dituding Rusak Kawasan Raja Ampat (Revealed: PT Gag Nickel's Actions Allegedly Damaging Raja Ampat)," accessed June 11, 2025, <https://finance.detik.com/energi/d-7951770/terungkap-sepak-terjang-pt-gag-nikel-yang-dituding-rusak-kawasan-raja-ampat>.

⁴⁶ TAPOL, "An Agribusiness Attack in West Papua," accessed June 11, 2025, <https://tapol.org/sites/default/files/An%20Agribusiness%20Attack%20in%20West%20Papua.pdf>.

⁴⁷ Bina Desa. "MIFEE: Berkah atau Bencana bagi Rakyat Papua? (MIFEE: Blessing or Disaster for the People of Papua?)." Accessed June 11, 2025. <https://binadesa.org/wp-content/uploads/2013/08/MIFEE-Berkah-atau-Bencana-bagi-Rakyat-Papua.pdf#:~:text=Pemerintah%20melibatkan%2032%20investor%20yang,Bahkan%20dikabarkan>.

⁴⁸ K. Obidzinski et al., "Can Large Scale Land Acquisition for Agro-Development in Indonesia Be Managed Sustainably?" *Land Use Policy* 30, no. 1 (2013): 952–965, <https://doi.org/10.1016/j.landusepol.2012.06.018>.

⁴⁹ Jubi, "Luka MIFEE Belum Sembuh (MIFEE Wound Has Yet to Heal)," *Jubi*, accessed June 11, 2025, <https://jubi.id/animha/2024/luka-mifee-belum-semboh/>.

⁵⁰ E. Rudy and A. Adang Supriyadi, "Security Policy Transformation to Accelerate Achievement of Sustainable Development Goals (SDGs) in Papua," *Preprints* 2025, 2025012037, <https://doi.org/10.20944/preprints202501.2037.v1>.

⁵¹ Munich Personal RePEc Archive, "MPRA Paper No. 2478: Papua Road Map: Negotiating the Past, Improving the Present and Securing the Future," accessed June 11, 2025, <https://mpra.ub.uni-muenchen.de/2478/>.

civilians), and 51 people injured.⁵² This data illustrates the direct threat to the safety of the population, where ordinary citizens often become victims of shootings or armed conflict.

In the most recent case, Komnas HAM noted that until June 2024 there were 41 violent incidents in Papua, killing 32 people and injuring 21 others. From 53 victims in total, 28 of them were civilians⁵³. These statistics reflect the ongoing threat, with both civilians and security forces being targeted by gunfire. For example, the shooting of a civilian plane and helicopter in the Intan Jaya mountains that killed a foreign pilot in August 2024 and triggered an emergency evacuation shows how civilians and humanitarian workers are impacted by ongoing conflicts⁵⁴.

Moreover, the shooting incident of five students on May 23, 2025 in Dogiyai and the case of muggings in Trans-Papua highway, show the scale of violence that directly affects local communities⁵⁵. This data confirms that the threat of physical violence in Papua is evident and likely to increase, making the protection of civilians an urgent issue. Violence in the region also affects the safety of students in Tanah Papua, which could worsen the existing situation where the quality of school infrastructure and teacher qualifications in Tanah Papua are still below national average⁵⁶.

Apart from the non-state actors, security forces are also involved in incidents that disturb the community. One of them is the case of Mr. Yusak Sondegau, a farmer and village employee in Puncak Papua, who was shot dead by soldiers from the Cendrawasih Military Command in January 2024. The TNI (Indonesian National Army) defended the action by calling Yusak a pro-independence militia, but his family denied the accusation and stated that he was an ordinary village worker. This incident reflects the problem of excessive force and lack of accountability of the authorities, thus creating fear and distrust among residents. With the community often declaring themselves threatened by both parties (the authorities and armed groups), human security in Papua is vulnerable to disruption by structural violence and organized violence⁵⁷.

Armed violence has triggered a humanitarian crisis in Papua, marked by population displacement. For example, in 2024–2025, thousands of residents in Nduga, Yahukimo, Puncak Papua, and Maybrat Regencies chose to flee their villages to avoid conflict⁵⁸. The Ministry of Law and Human Rights has observed the refugee camps in Nduga and Maybrat and they are also planning to go to Intan Jaya and Puncak Papua⁵⁹. This refugee phenomenon indicates a threat to the personal security and basic well-being of residents: in addition to losing their homes, refugees face the risk of food insecurity, lack of health care and access to education while in refugee camps. Thus, armed violence on the ground has led to violations of residents' rights and urges the need for humanitarian intervention to restore human security in Papua.

Based on the explanation of the cases related to human security above, the dimension of human security in Papua is dominated by the threat of physical violence and human rights violations. A high number of fatalities (dozens of people per period) were found due to gunfire from the KKB and the authorities. The disruption of the conflict also caused waves of refugees from time to time. The main challenge is to create a safe situation for civilians, ensure a transparent resolution of cases of violence, and integrate stabilization efforts with the restoration of victims' rights. Without thorough handling of

⁵² Kompas, "2022, Sebanyak 31 Warga dan 12 Anggota TNI-Polri Gugur Akibat Ulah KKB (In 2022, 31 Civilians and 12 TNI-Police Members Killed by Armed Criminal Group)," accessed June 11, 2025, <https://regional.kompas.com/read/2022/12/31/182828478/2022-sebanyak-31-warga-dan-12-anggota-tni-polri-gugur-akibat-ulah-kkb>.

⁵³ Kompas, "Komnas HAM: 41 Kasus Kekerasan Terjadi di Papua hingga Juni 2024, 53 Orang Jadi Korban," accessed June 9, 2025, <https://regional.kompas.com/read/2024/06/04/050000878/komnas-ham--41-kasus-kekerasan-terjadi-di-papua-hingga-juni-2024-53-orang#:~:text=luka%2C%22%20kata%20dia>.

⁵⁴ Al Jazeera, "Rebels in Indonesia's Papua Kill New Zealand Pilot in Second Plane Attack," *Al Jazeera*, accessed June 11, 2025, <https://www.aljazeera.com/news/2024/8/6/rebels-in-indonesias-papua-kill-new-zealand-pilot-in-second-plane-attack>.

⁵⁵ Human Rights Monitor, "Indonesian Security Forces Shoot Five Minors in Kimupugi Village, Dogiyai Regency," accessed June 11, 2025, <https://humanrightsmonitor.org/case/indonesian-security-forces-shoot-five-minors-in-kimupugi-village-dogiyai-regency/>.

⁵⁶ Bappeda Papua, "Pendidikan Papua: Menuju Pemerataan dan Kualitas Pendidikan yang Inklusif (Papua Education: Toward Equitable and Inclusive Quality Education)," accessed June 11, 2025, <https://bappeda.papua.go.id/file/Paper%20Pendidikan%20Papua1.pdf#:~:text=kondisi%20geografis%20yang%20sangat%20beragam,yang%20layak%20bagi%20seluruh%20masyarakat>.

⁵⁷ KontraS, "Data Kekerasan Papua 2024: Seorang Warga Sipil, Yusak Sondegau, Ditembak (2024 Papua Violence Data: Civilian Yusak Sondegau Shot)," accessed June 11, 2025, <https://backup10juni.kontras.org/data-kekerasan-papua-2024/#:~:text=Seorang%20sipil%2C%20Yusak%20Sondegau>.

⁵⁸ Richard Chauvel, "Governance and the Cycle of Violence in Papua: The Nduga Crisis," *Asia-Pacific Journal* 17, no. 2 (2019): e5, <https://doi.org/10.1017/S1557466019015018>.

⁵⁹ Antara News, "Kementerian HAM Serius Urus Pengungsi Akibat Konflik di Papua (Ministry of Human Rights Committed to Handling Refugees from Papua Conflict)," *Antara News*, accessed June 11, 2025, <https://www.antaranews.com/berita/4876293/kementerian-ham-serius-urus-pengungsi-akibat-konflik-di-papua>.

the conflict and fulfilment of the basic needs of refugees, the vulnerability of residents towards violence and insecurity will continue as the main threat to human security in Tanah Papua.

C. Societal Security

Societal security is concerned with the continuity of a community's identity, cohesion and protection against the threat of social assimilation or disintegration based on cultural, religious, or ethnic factors. In general, the term security here means a condition in which important factors related to a group are guaranteed, and in that situation, survival is an important part⁶⁰. In Papua, threats to societal security arise from demographic and political dynamics that trigger tensions between groups. One of the main issues is transmigration and government programs that are seen as accelerating the entry of immigrants into the Papua region.⁶¹ An example, in November 2024, a group of Papuan students and youth in Bali held a demonstration to reject the transmigration plan, voicing concerns about “genocide” and the elimination of Papuan culture and traditions.⁶² Many Papuans said if they were worried that the addition of immigrants from outside Papua would overshadow the existence of Papuans and trigger horizontal clashes between groups⁶³. This confirms the feeling that Papuan cultural identity is under threat, as well as the anxiety that central government economic-political policies could suppress the customary and socio-economic rights of indigenous people.

Another problem is socio-diversity discrimination. The 2024 Human Rights Watch report highlights the structural inequality experienced by Papuans. The central government has been pushing for the relocation of tens of thousands of non-Papuans through the transmigration program. These newcomers often seize the customary land of indigenous people and displace them from existing jobs. This phenomenon has caused Papuans to feel like minorities in their own land, with their livelihoods being transferred to immigrants. Furthermore, there are concerns over the growing gap in public services in Papua. For example, there are fewer health and education facilities in the interior of Papua than in other areas, with immigrants having a better access to social assistance and opportunities. This situation widens the social gap between communities, shakes community solidarity, and can trigger tensions if indigenous groups view public policies and services as unfair. These examples show how socio-economic inequality and demographic policies can weaken the cohesion of Papuan society and endanger its societal security⁶⁴.

Social unrest is also a direct threat. The riot incident in Wamena, Jayawijaya Regency, February 2023 is a tragic example. A hoax issue related to child kidnapping (in this case, immigrants from the Batak tribe, North Sumatra, who were slandered) triggered a mob attack that resulted in ten people killed, with more than 30 injured (including soldiers, police, and civilians). Dozens of houses and buildings were burned. This incident shows how fragile the social situation is, with rumours that can easily ignite fear and anger, which in turn threatens societal security. Chaos like this, even if only momentary, causes deep social trauma and erodes the sense of security between residents. It also shows the low level of trust between groups, residents are quickly suspicious of “outsiders” and choose to commit violence themselves. This case is a reminder that social differences and widespread assumptions can also trigger social rifts and violence between groups in Papua.⁶⁵

Another aspect that raises concerns is the formation of the new autonomous region (DOB) of Papua into 6 provinces. Although seen as an opportunity for development, many Papuans view it sceptically, because they are worried that it will open the flow of newcomers from outside Papua. The expansion process is often accompanied by the provision of budgets and projects that attract workers from outside. This expansionist policy can further marginalize ethnic Papuans⁵⁸, and cause fear among indigenous people to losing territories and cultural identity. If this social inequality is not addressed, then societal

⁶⁰ S. Paul, “Societal Security,” in *The Palgrave Encyclopedia of Global Security Studies*, ed. S. N. Romaniuk and P. N. Marton (Cham: Palgrave Macmillan, 2023), https://doi.org/10.1007/978-3-319-74319-6_359.

⁶¹ *Indonesia Business Post*, “Transmigration Not a Solution to Papua Problems: Activist,” *Indonesia Business Post*, accessed June 11, 2025, <https://indonesiabusinesspost.com/3034/Politics/transmigration-not-a-solution-to-papua-problems-activist>.

⁶² *Detik*, “Warga Papua Demo Tolak Program Transmigrasi, Takut Tersingkir Warga Pendetang (Papuan Residents Protest to Reject Transmigration Program, Fear Displacement),” accessed June 11, 2025, <https://www.detik.com/bali/berita/d-7629840/warga-papua-demo-tolak-program-transmigrasi-takut-tersingkir-warga-pendetang>.

⁶³ *Islands Business*, “Papuans Worry about New Plan to Revive Transmigration,” accessed June 11, 2025, <https://islandsbusiness.com/news-break/west-papua-3/>.

⁶⁴ Human Rights Watch, “Indonesia: Racism, Discrimination Against Indigenous Papuans,” accessed June 6, 2025, <https://www.hrw.org/news/2024/09/18/indonesia-racism-discrimination-against-indigenous-papuans>.

⁶⁵ *Detik*, “Ricuh di Wamena, 10 Orang Tewas, 32 Orang Luka-luka (Riot in Wamena, 10 Killed, 32 Injured),” accessed June 9, 2025, <https://www.detik.com/bali/berita/d-6586702/ricuh-di-wamena-10-orang-tewas-32-orang-luka-luka>.

security is vulnerable to any forms of disruption; ethnic tensions or mass protests can occur when indigenous people feel left out of policy formulation that should include them.

Societal security in Papua could be exacerbated by identity issues which threatens social cohesion. There is tension due to demographic policies that are considered detrimental to indigenous communities⁶⁶, causes socio-economic inequality⁵⁸ and horizontal conflict as seen in Wamena⁵⁹. In essence, the threat to societal security arises from the sense of threat to the culture and welfare felt by the Papuan community. The challenge is to build inclusive policies that respect customary rights and prevent social polarization so that community cohesion is maintained amidst ethnic differences and interests.

D. Environmental Security

Environmental security is related to the protection of ecosystems, natural resources, and the environmental conditions of local communities⁶⁷. In Tanah Papua, known for its rich tropical rainforests and biodiversity, this dimension is very important. Threats to environmental security arise from resource exploitation activities that damage nature and impact the lives of residents.

Large-scale nickel mining activities in the Raja Ampat area, Southwest Papua, have sparked protests from residents, including bishops⁶⁸. Greenpeace analysis adds that mining has destroyed more than 500 hectares of tropical forest on several islands in Raja Ampat⁶⁹. This damage has the potential to reduce the quality of the local climate, threatening the livelihoods of fishermen and indigenous people who have long preserved the environment. Local residents consider this situation as imperialism, where only a few parties benefit while the damage is experienced by many⁶³. The Raja Ampat case highlights how large-scale mining activities have caused environmental crises such as marine forest degradation, pollution, and loss of biodiversity, thus threatening the ecological resilience of the Papuan people⁷⁰.

Another example is environmental damage caused by Freeport mining waste in Mimika which has created piles of tailings that seep into the sea and damage the coast⁷¹. Betahita's report stated that almost the entire coast of Mimika was exposed to Freeport's tailings, which eliminated the Ajikwa River estuary and the surrounding small islands. The local head of the agency reported that Piriri and Bidadari islands had disappeared, while other islands were threatened with sinking. This pollution not only destroyed marine habitats but also had an impact on public health; residents were concerned about the increasing number of respiratory diseases caused by tailings dust. The Freeport case emphasized that mega-scale mining exploitation can cause coastal erosion, water pollution, and disrupt the livelihoods of local fishermen. This situation has caused social-ecological unrest and demands serious attention from the government for environmental restoration⁷².

Apart from mining, the development of palm oil plantations also threatens the ecosystem and indigenous community rights⁷³. Indonesian government recorded more than 1.5 million hectares of palm oil and pulpwood plantation permits in Papua, most of which are converted from rainforests. Betahita's study found that the ecological damage caused by palm oil expansion far outweighs the economic benefits that might be generated. Indigenous communities that previously lived off the rainforest through hunting, planting cassava, collecting sago, have now lost their livelihoods and customary lands. Many of them end up becoming daily labourers on plantations, with no guarantee of

⁶⁶ *Herald.id*, "Usir Warga Non-Papua, OPM: Nyawa Anda Ditanggung Sendiri Jika Tidak Mengindahkan (OPM Tells Non-Papuan Residents to Leave: 'Your Life's on You')." accessed June 5, 2025, <https://herald.id/2025/06/07/usir-warga-non-papua-opm-nyawa-anda-ditanggung-sendiri-jika-tidak-mengindahkan/amp/>.

⁶⁷ D. Belluck et al., "Environmental Security, Critical Infrastructure and Risk Assessment: Definitions and Current Trends," in *Environmental Security and Environmental Management: The Role of Risk Assessment*, edited by B. Morel and I. Linkov, *NATO Security Through Science Series*, vol. 5 (Dordrecht: Springer, 2006), https://doi.org/10.1007/1-4020-3893-3_01.

⁶⁸ *Kompas.id*, "Bahkan Uskup di Papua Pun Geram atas Kerusakan Alam Raja Ampat (Even the Bishop in Papua Is Angry About the Damage to Raja Ampat's Nature)," accessed June 10, 2025, <https://www.kompas.id/artikel/bahkan-uskup-di-papua-pun-geram-atas-kerusakan-alam-raja-ampat>.

⁶⁹ Reuters, "Indonesia Revokes Nickel Ore Mining Permits in Raja Ampat after Protest," accessed June 10, 2025, <https://www.reuters.com/sustainability/indonesia-revokes-nickel-ore-mining-permits-raja-ampat-after-protest-2025-06-10/>

⁷⁰ *Greenpeace Southeast Asia*, "Full and Permanent Protection for Raja Ampat," accessed June 10, 2025, <https://www.greenpeace.org/southeastasia/story/67009/full-and-permanent-protection-for-raja-ampat/>.

⁷¹ K. Kum, "Impact of Mining Exploration PT. Freeport Indonesia against Inter-Ethnic Conflict in Mimika Regency, Papua Province," *IJSES* 5, no. 9 (2021): 1–5, <https://ijses.com/wp-content/uploads/2021/09/100-IJSES-V5N8.pdf>.

⁷² *Betahita Institute*, "Kerusakan Lingkungan Akibat Aktivitas Freeport Jadi Sorotan DPR (Environmental Damage Caused by Freeport Activities Becomes DPR Focus)," accessed June 10, 2025, <https://betahita.id/news/detail/8622/kerusakan-lingkungan-akibat-aktivitas-freeport-jadi-sorotan-dpr-html>.

⁷³ A. Andrianto, et al., "The Impacts of Oil Palm Plantations on Forests and People in Papua: A Case Study from Boven Digoel District," Center for International Forestry Research (CIFOR), 2014, <https://doi.org/10.17528/cifor/005349>.

a decent wage or land ownership. This situation not only causes the loss of forest and irreversible environmental damage, but also threatening the welfare of indigenous communities. As a result, local food security and culture are also disrupted, they become dependent on imports of food supplies and lose their economic independence. The expansion of palm oil plantation in Papua illustrates how changes in the ecological landscape through deforestation directly impacts the environmental security and threatens the socio-economic sustainability of Papuan communities⁷⁴.

The impacts of climate change and natural disasters also belong to environmental security. Exposure to extreme natural disasters is increasingly evident in Papua. In August 2024, the Dogiyai River overflowed due to consecutive heavy rains, causing flash floods that killed four people and swept away one resident. Such flash floods damaged agricultural land, village infrastructure, and residents' homes. Difficult access and the lack of an early warning system further worsened the disaster. This incident reflects how environmental vulnerabilities caused by deforestation in the upper reaches of rivers can increase the risk of disasters. Indigenous communities that depend on the stability of nature are now forced to face threats of ecological disaster that are increasingly difficult to anticipate. Therefore, environmental security in Papua requires a protection of the ecosystem from destruction and increased disaster mitigation due to climate change⁷⁵.

Overall, environmental security in Papua is threatened by aggressive exploitation of natural resources through mining and plantations and the immanent increase in risks of natural disasters. As seen in the destruction of the Raja Ampat forest by nickel mining, coastal pollution from Freeport waste, and the loss of customary forests for palm plantations, these extractive activities have caused ecosystem degradation that threatens the livelihoods and health of the population. Ecological imbalances pose dual challenges, environmental and social losses. Addressing these challenges requires sustainable natural resource management, environmental law enforcement, and restoration programs, to ensure that Tanah Papua remains ecologically safe and its people can continue to live on a preserved nature.

E. Economic Security

Economic security is the protection of essential values—survival, sovereign independence, and economic prosperity—from external threats, including disruption of supplies of essential commodities, outflow of advanced technology, lack of job opportunities, uneven development, and excessive dependence on other countries⁷⁶. Tanah Papua, despite being rich in natural resources, still experiences high economic disparities. BPS data recorded the poverty rate in this region above 20% in 2024. Meanwhile, Papua Pegunungan province is the province with the highest percentage of poverty in Indonesia, standing at 29.66%, almost three times as much as the national average⁷⁷. The high poverty rate indicates that a significant portion of the Papuan population does not meet basic living standards. The difficult geographical conditions add to the economic burden, where the price of basic goods in the interior of Papua is much more expensive than the national average due to distribution costs. A report by a Merdeka reporter showed that 5 kg of rice in the interior of Papua was sold for Rp200,000—around three to four times the price on Java. Cooking oil, eggs, and instant noodles were also sold for two to three times the average price⁷⁸. These high prices directly erode people's purchasing power because food expenditure can absorb a large portion of household income. As a result, the level of poverty and food security in Papua remains vulnerable. The logistical challenge and inadequate infrastructure posed economic threats on Papuans. Rather than requiring Papuans to depend on imported products, the Indonesian government should support their ability to be self-sufficient by encouraging traditional local practices and locally sourced food.

Limited employment opportunities are another problem. Even though there are large investments in mining and plantations, indigenous Papuans are often disproportionately disadvantaged. In a case

⁷⁴ *Betahita Institute*, “Besarnya Rugi dari Untung Ekspansi Sawit di Tanah Papua (Heavy Losses from the Gains of Palm Oil Expansion in Papua),” accessed June 10, 2025, <https://betahita.id/news/detail/10561/besar-rugi-dari-untung-ekspansi-sawit-di-tanah-papua.html>.

⁷⁵ *Detik*, “Banjir Bandang Landa Dogiyai Papua Tengah, 4 Orang Tewas (Flash Flood Hits Central Dogiyai Papua, 4 Dead),” accessed June 10, 2025, <https://news.detik.com/berita/d-7475396/banjir-bandang-landa-dogiyai-papua-tengah-4-orang-tewas>.

⁷⁶ N. Yuzue and T. Sekiyama, “Defining Economic Security through Literature Review,” *Frontiers in Political Science* 7 (2025): Article 1501986, <https://doi.org/10.3389/fpos.2025.1501986>.

⁷⁷ *Jubi*, “BPS: Tingkat Kemiskinan Naik di 5 Provinsi Tertinggi – Papua Pegunungan (BPS: Poverty Rate Rises in 5 Provinces – Papua Pegunungan Tops the List),” accessed June 11, 2025, <https://jubi.id/nasional-internasional/2025/bps-tingkat-kemiskinan-naik-di-5-provinsi-tertinggi-papua-pegunungan/>.

⁷⁸ *Merdeka.com*, “Harga Sembako di Pedalaman Papua Bikin Tepuk Jidat: Ini Rinciannya (Staple Food Prices in Papua Hinterland Cause Surprise: Here's the Details),” accessed June 11, 2025, <https://www.merdeka.com/trending/harga-sembako-di-pedalaman-papua-bikin-tepuk-jidat-ini-rinciannya.html?page=3>.

study of palm plantation expansion in South Sorong, the locals were only working on daily wages and rarely got managerial position or received a share in business ownership⁶⁹. Daily wages without long-term welfare guarantees could cause instability. Similarly, in the mining industry—for example, at Freeport—there is a demand for workers, and some opportunities are available to Papuans. However, Papuans are typically employed in manual labor roles, whereas managerial positions are predominantly held by non-Papuans. This pattern creates economic inequality while exploitation of natural resources are taking place on their soil. Economic security is threatened when natural resources are exploited without improvements in community welfare, leading to social unrest and possible conflict.

The role of ambitious national government projects also affect economic conditions. The emergence of new provinces and infrastructure development programs are often disappointing because the benefits are not evenly felt. Although the government claims that the nationally-initiated program reduces poverty, the community's ability to access economic services is still minimal. The difficulty of the land road network was a concrete example, as in 2023 several sections of the Trans-Papua road that connects Jayapura and Wamena were temporarily closed to repair severe damage⁷⁹. The closure of extensive sections of roads, even for maintenance purposes, underscores the critical role of transportation infrastructure to the local economy. Prolonged road closures impede the distribution of goods, slow agricultural and commercial activity, and restrict labor mobility. These conditions contribute to increased economic isolation in interior regions and heighten local dissatisfaction regarding unmet development expectations. Ongoing infrastructure instability further compounds the economic vulnerability of Papuans, who remain highly dependent on land and sea logistics routes that are susceptible to disruption.

Papua's economic security is torn by structural poverty, inequality in the distribution of resource benefits, and weak public infrastructure. BPS data shows high extreme poverty rates⁸⁰ and food prices are soaring especially in remote areas⁸¹, indicating a large economic gap. On the other hand, large industrial projects have not fully improved the welfare of indigenous people, partly because these projects only provide temporary jobs⁶⁹. Job insecurity and rising living costs consistently undermine people's economic stability. Key challenges include enhancing economic conditions through infrastructure development, improving market access, empowering local economies in major projects, and safeguarding vulnerable groups to ensure that Papua's resource wealth genuinely benefits its population's welfare.

F. Health Security

Health security is related to public health⁸², which means that the community has adequate access to health services and is protected from the threat of disease. In Papua, several key health indicators are still concerning. The prevalence of chronic malnutrition (stunting) among Papuan children is still high. The Indonesian Nutritional Status Survey (2021–2023) shows that the average stunting rate in the Papua region is almost 30%, the provinces with the worst stunting rates are Central Papua province at 39.4%, Papua Pegunungan province at 37.3%, and Southwest Papua at 31%⁸³. This stunting figure far exceeds the WHO threshold (20%)⁸⁴ and the national average (21.5%)⁸⁵. This means that around one in four children in Papua experience malnutrition. Stunting is associated to long-term impacts, such as cognitive impairment and low productivity. Factors that cause malnutrition are inadequate family nutrition and lack of access to quality food, a situation that is also exacerbated by poverty and regional isolation. This condition threatens the long-term health security of future Papuan population. Efforts

⁷⁹ Kompas, "Trans-Papua Ruas Jayapura–Wamena (Trans-Papua Section Jayapura–Wamena)," accessed June 11, 2025, <https://www.kompas.id/label/trans-papua-ruas-jayapura-wamena>.

⁸⁰ Kompas, "Cek Fakta: Benarkah IPM di Papua Meningkat dan Kemiskinan Menurun? (Fact Check: Has HDI Increased and Poverty Decreased in Papua?)," accessed June 11, 2025, <https://www.kompas.com/cekfakta/read/2024/07/26/183600182/cek-fakta--benarkah-ipm-di-papua-meningkat-dan-kemiskinan-menurun-?page=all>.

⁸¹ M. Nurhasan et al., "Toward a Sustainable Food System in West Papua, Indonesia: Exploring the Links Between Dietary Transition, Food Security, and Forests," *Frontiers in Sustainable Food Systems* 5 (2022): Article 789186, <https://doi.org/10.3389/fsufs.2021.789186>.

⁸² William Aldis, "Health Security as a Public Health Concept: A Critical Analysis," *Health Policy and Planning* 23, no. 6 (November 2008): 369–75, <https://doi.org/10.1093/heapol/czn030>.

⁸³ GoodStats.id, "10 Provinsi dengan Angka Stunting Tertinggi yang Layak Jadi Prioritas MBG (10 Provinces with Highest Stunting Rates Deserving MBG Priority)," accessed June 11, 2025, <https://data.goodstats.id/statistic/10-provinsi-dengan-angka-stunting-tertinggi-ini-layak-jadi-prioritas-mbg-yQ4XC#>.

⁸⁴ World Health Organization, "Nutrition Landscape Information System Help," accessed June 11, 2025, <https://apps.who.int/nutrition/landscape/help.aspx?menu=0&helpid=391&lang=EN>.

⁸⁵ Ministry of Health (Indonesia), "Gizi: Basic Facts (Nutrition: Basic Facts)," accessed June 11, 2025, https://repository.badankebijakan.kemkes.go.id/id/eprint/5530/1/06%20factsheet%20Gizi%20SKI_English.pdf.

are being sped up through resorting to local foods—such as sago, cassava, fish—that are rich in nutrition⁸⁶. Consistent provision of maternal-child nutrition and the provision of health care services are also needed.

Furthermore, the threat of sexually transmitted diseases is still prominent, specifically HIV/AIDS⁸⁷. By the end of 2024, the accumulated number of HIV/AIDS cases in Papua Province reached 21,129 people⁸⁸, Central Papua Province 22,868 cases⁸⁹, West Papua Province 3,561 cases⁹⁰, and Papua Mountains Province 8,340 cases⁹¹. Meanwhile, official data from South Papua Province is still limited, but in Merauke Regency (South Papua) 2,902 cases were recorded as of September 2024⁹². The province of Southwest Papua has also not released data for the entire region, but the Sorong Health Service recorded 4,016 cumulative cases until December 2024⁹³. Thus, the total number of HIV/AIDS cases in Papua has reached tens of thousands, many cases occurring due to a lack of education for the community.

On the other hand, Papua is still the epicenter of malaria in Indonesia. In 2024, there were 229,786 positive cases of malaria reported in Papua, up from 163,993 cases in 2023. This data means that around 90% of Indonesia's malaria cases come from Papua, even though Papua only accounts 2% of the national population⁹⁴. Malaria remains prevalent in Papua due to limited health services in remote areas, low public awareness, and environmental factors like stagnant water that promote mosquito breeding. This tropical disease is life-threatening, especially for remote residents and children. The ambition to eliminate malaria by 2030 seems far-fetched, as a research in 2024 in Mimika found that the number of cases per 1,000 residents reached 493⁹⁵. Without an integrated treatment system—through treatment, prevention and public education—public health security continues to be disrupted by the rampant malaria in Tanah Papua.

Another indicator that threatens health security is the high maternal and infant mortality rate⁹⁶. Papua is recorded as the province with the highest maternal mortality rate in Indonesia with 565 deaths per 100,000 live births in 2020⁹⁷. This number is striking and far exceeds 2030 SDGs target (less than 70 mortality per 100,000 births). High maternal mortality may be resulting from limited quality pregnancy care, few health facilities in remote areas, and high teenage pregnancy rates. These cases often occur during childbirth or the postpartum period due to complications that could have been

⁸⁶ Antara News, “Ikhtiar Turunkan Stunting di Papua dengan Optimalisasi Pangan Lokal (Efforts to Reduce Stunting in Papua by Optimizing Local Food),” accessed June 11, 2025, <https://www.antaranews.com/berita/4426537/ikhtiar-turunkan-stunting-di-papua-dengan-optimalisasi-pangan-lokal>.

⁸⁷ E. I. Sianturi et al., “Daily Struggle to Take Antiretrovirals: A Qualitative Study in Papuans Living with HIV and Their Healthcare Providers,” *BMJ Open* 10, no. 9 (September 28, 2020): e036832, <https://doi.org/10.1136/bmjopen-2020-036832>.

⁸⁸ Dinas Kesehatan Provinsi Papua, “Dinkes Papua Mencatat Sebanyak 11.644 Perempuan di Papua Terinfeksi Virus HIV/AIDS (Papua Health Office Records 11,644 Women Infected with HIV/AIDS),” accessed June 11, 2025, <https://dinkes.papua.go.id/dinkes-papua-mencatat-sebanyak-11-644-perempuan-di-papua-terinfeksi-virus-hiv-aids/>

⁸⁹ Antara News, “Pemprov Ungkap Tingginya HIV/AIDS di Tanah Papua, Capai 22.868 Kasus (Provincial Government Reveals High HIV/AIDS in Papua, Reaches 22,868 Cases),” accessed June 11, 2025, <https://www.antaranews.com/berita/4818961/pemprov-ungkap-tingginya-hiv-aids-di-tanah-papua-capai-22868-kasus>

⁹⁰ Antara News, “Dinkes Papua Barat: 508 Penderita HIV Jalani Pengobatan (West Papua Health Office: 508 HIV Patients Undergo Treatment),” accessed June 11, 2025, <https://papuabarut.antaranews.com/berita/55697/dinkes-papua-barat-508-penderita-hiv-jalani-pengobatan>.

⁹¹ Antara News, “Dinkes Jayawijaya Lakukan Penanganan HIV/AIDS di 18 Puskesmas (Jayawijaya Health Office Handles HIV/AIDS in 18 Health Centers),” accessed June 11, 2025, <https://papua.antaranews.com/berita/738429/dinkes-jayawijaya-lakukan-penanganan-hiv-aids-di-18-puskesmas>.

⁹² Cepas, “Miris, Ribuan Perempuan di Papua Positif HIV/AIDS (Sad: Thousands of Women in Papua Are HIV-Positive),” accessed June 11, 2025 <https://www.ceposonline.com/papua/1995891063/miris-ribuan-perempuan-di-papua-positif-hiv-aids>

⁹³ Merdeka.com. “11.644 Perempuan di Papua Terinfeksi HIV/AIDS, Dinkes Ungkap Penyebabnya (11,644 Women in Papua Infected with HIV/AIDS, Health Office Reveals the Cause),” *Merdeka.com*, April 4, 2025, <https://planet.merdeka.com/hot-news/11644-perempuan-di-papua-terinfeksi-hiv-aids-dinkes-papua-ungkap-penyebabnya-368254-mvk.html>

⁹⁴ Kompas, “Kasus Terus Meningkat, Perlu Kerja Lebih Keras Mengeliminasi Malaria di Papua (Cases Continue to Rise; Stronger Effort Needed to Eliminate Malaria in Papua),” accessed June 11, 2025, <https://www.kompas.id/artikel/kasus-terus-meningkat-perlu-kerja-lebih-keras-mengeliminasi-malaria-di-papua/amp>.

⁹⁵ SeputarPapua.com, “Kasus Malaria di Mimika Tertinggi di Papua Tengah, Nomor 2 di Indonesia (Malaria Cases in Mimika Highest in Central Papua, Second in Indonesia),” *SeputarPapua.com*, accessed June 11, 2025, <https://seputarpapua.com/view/kasus-malaria-di-mimika-tertinggi-di-papua-tengah-nomor-2-di-indonesia.html>.

⁹⁶ T. Saifudin et al., “Geographically Weighted Poisson Regression for Modeling the Number of Maternal Deaths in Papua Province,” *Jurnal Aplikasi Statistika & Komputasi Statistik* 16, no. 1 (2024): 32–42, <https://doi.org/10.34123/jurnalask.v16i1.598>.

⁹⁷ D. Laily et al., “The Correlation Between Parity and Residence With Maternal Mortality Due to Miscarriage and Abortion in Papua Province in 2020,” *Journal of Health Sciences* 18, no. 1 (2025): 12–18, <https://doi.org/10.33086/jhs.v18i01.6901>.

avoided, had there been adequate facilities⁹⁸. This failure to guarantee maternal and infant health is a failure of public health security.

The low community immunity also threatens public health. The immunization program in Tanah Papua shows minimal coverage⁹⁹. Before the provinces' expansion at the end of 2022, complete basic immunization coverage for children of 0–11 years was only around 51.8%, far below the national standard of 95%. As a result, in mid-2023, there was an extraordinary measles outbreak¹⁰⁰. Measles have emerged in three provinces, Papua, Central Papua, and Papua Mountains, with dozens of children testing positive for infection and several deaths reported, made possible by low MR immunization in several districts, with some areas have only reached 20% coverage¹⁰¹. This outbreak shows the fragility of the population's immunization status and the potential for other diseases such as diphtheria or polio to emerge if coverage is not increased. Low collective immunity poses the threat of an outbreak that could claim the lives of toddlers or vulnerable elderly people in various parts of Papua.

According to these findings, Tanah Papua's health security is still weak due to high malnutrition, rampant infectious diseases, high maternal mortality rates, and low child immunization coverage. This situation shows the lack of access to health services and the inability to break the cycle of disease amidst challenging geography. The challenge going forward is to expand the reach of health facilities such as health centers and medical personnel. Furthermore, improving nutrition and immunization education programs, and prioritizing maternal-child health programs are also very important. Without serious improvements, these health risk factors will continue to weaken life quality of the Papuan people and endanger the integrity of society in terms of health.

4. CONCLUSION

Based on the results of the study that has been conducted, it can be concluded that the security issue in Papua is complex and multidimensional. Although Papua has extraordinary natural wealth, the social and economic realities of its people show various forms of vulnerability that have not been addressed comprehensively. This study proves that the traditional security approach is not enough to answer the deeper roots of the problem.

This study shows that Tanah Papua, despite being rich in natural resources, remains in a highly vulnerable socio-economic and political condition. The human security dimension is still dominated by the threat of armed violence that claims lives, triggers displacement, and creates collective trauma in society. On the other hand, civilians are often trapped between two armed forces, such as state security forces and separatist groups, without adequate protection. This indicates the failure of the state to guarantee its people safety and security.

Societal security also faces major challenges. Transmigration, non-inclusive development, and structural discrimination make indigenous people feel marginalized in their own land. Tensions between groups, feeling of loss of cultural identity, and the emergence of horizontal conflicts such as the Wamena riots, show how fragile social cohesion is in Papua. Without an approach that respects the local wisdom and protects customary rights, Papua will continue to be in a vicious cycle of distrust towards the state.

On the environmental and economic security side, the massive exploitation of forests, mining, and customary lands has resulted in severe ecosystem degradation, the loss of traditional livelihoods, and increasing social inequality. Large projects such as Freeport, Tangguh LNG, and MIFEE have benefited large corporations more than local communities. Amidst the natural wealth, Tanah Papua has recorded extreme poverty rates and the highest prices for basic necessities in Indonesia. This reflects the failure of equitable and sustainable development.

⁹⁸ Kompas, "Angka Kematian Ibu di Papua Tertinggi di Indonesia (Maternal Mortality Rate in Papua Highest in Indonesia)," *Kompas Lestari*, February 23, 2024, accessed June 11, 2025, <https://lestari.kompas.com/read/2024/02/23/120000786/angka-kematian-ibu-di-papua-tertinggi-di-indonesia>.

⁹⁹ Aisyah D. N. et al., "Using an Electronic Immunization Registry (Aplikasi Sehat IndonesiaKu) in Indonesia: Cross-Sectional Study," *Interactive Journal of Medical Research* 14 (2025): e53849. <https://doi.org/10.2196/53849>

¹⁰⁰ BBC Indonesia, "Article on Papua Immunization/Campak," *BBC Indonesia*, accessed June 11, 2025, <https://www.bbc.com/indonesia/articles/c2x6jmmz7rko>.

¹⁰¹ Kompas, "Immunization Coverage Low Triggering Measles Cases in Three Papua Provinces," *Kompas.com*, accessed June 11, 2025, <https://www.kompas.id/baca/english/2023/07/04/en-cakupan-imunisasi-rendah-picu-kasus-campak-di-tiga-provinsi-wilayah-papua>.

In terms of health security, Tanah Papua is experiencing multiple threats, ranging from stunting, HIV/AIDS, malaria, to high maternal mortality. Limited access to basic health services exacerbates this condition.

Overall, traditional security approaches have proven inadequate to resolve Papua's problems. Therefore, a non-traditional approach based on human security that emphasizes social justice, inclusive development, protection of human rights, and environmental preservation needs to be used as the main framework in formulating future policies in Papua. Only in this way can Papua be brought towards true justice, peace, and prosperity.

Thus, the solution to the security issue in Papua can no longer rely solely on a power-based approach or physical development. A policy transformation is needed that is oriented towards human security: guaranteeing the rights of indigenous peoples, promoting social justice, and protecting the environment in a sustainable manner. Only through a holistic, inclusive, and a just approach, can Papua emerge from the cycle of conflict towards a peaceful, just, and prosperous future within the framework of the Unitary State of the Republic of Indonesia.

Our findings have shown that Papua's security challenges are deeply complex and multidimensional. Despite its rich natural resources, the region remains marked by social, economic, and political vulnerabilities that traditional security approaches have failed to address. Persistent threats include armed conflict, social marginalization, environmental degradation, and inadequate access to essential health and economic resources. These issues have resulted in widespread poverty, social tensions, and declining public health.

To achieve lasting peace and prosperity in Papua, a paradigm shift is required—from a focus solely on power and physical development to a human security approach that prioritizes social justice, inclusive development, protection of indigenous rights, and environmental sustainability. Only through holistic and just policies can Papua emerge as an integral part and prosperous region of Indonesia.

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