

Brief Paper

# Nickel Mining: Destroyer of Halmahera's Forests and The Surrounding Small Islands



Five years ago, before nickel mining in Indonesia was given the "red carpet", Halmahera was a peaceful, cool place with good environmental quality to fulfill people's basic right to live a better life. In contrast, at the end of September 2023, after the Weda Bay Industrial Park (IWIP) complex was built, which has cost at least 11 billion USD, various problems emerged such as environmental crises, pollution, damage to natural resources, loss of forests and biodiversity habitats, and the living space of indigenous tribes were taken away. Now, the industrial complex that stretches about 9 kilometers requires at least up to 300 thousand tons of nickel per year which are divided into 30 Rotary Klein Electric Furnace (RKEF) smelters. Of course, this has consequences for the availability of forest and land areas in Halmahera.

In aggregate, Halmahera and its surrounding small islands have been encumbered by 201,000 hectares of nickel mining licenses divided into 43 concessions. Nearly 90% or around 180,000 hectares are located in protected and production forest areas. Mining has exclusivity even though its very existence threatens natural forests and the existence of indigenous peoples and local communities. Although Halmahera and its surrounding small islands are known to have the highest diversity of flora and even vegetation types in the world[1].

# “The Red Carpet“ of Nickle Mining

The consequences of nickel downstreaming in Indonesia have significant impacts on forests and the living space of indigenous peoples and local communities. Mining policies are given discretion without area restrictions and even ease in licensing.

## No limitation on mining concession area

Mining businesses including nickel that are connected to the downstream or smelter industry are free to obtain approval and conduct mining operations in all areas or regions. The Minister, in this case, the Ministry of Environment and Forestry, has the right to grant approval for the use of forest areas to mining companies without having to consider the adequacy of forest area in one watershed, in one forest area function, even including small islands. This is as regulated in Permen LHK Number 7 of 2021 (article 372) as a derivative policy of the Job Creation Law. The nickel mining business is like a National Strategic Project, all issues related to social and environmental interests caused by an impact can be put aside as long as the project can run and does not hamper investment. In general, mining not connected to the downstream industry and not PSN is limited to a maximum of 10%.

## Centralized Licensing Without Regional Control

Apart from the MoEF providing regional resources for nickel mining, regulations on the mining industry are under the authority of the Ministry of Energy and Mineral Resources (ESDM). Since 2020, when all licensing authority was withdrawn to the central government, the Ministry of Energy and Mineral Resources has over power to manage mining licenses in Indonesia. At least recorded after 2020, it manages thousands of mining licenses that have caused many environmental problems. ESDM handles all issues related to mineral and coal management ranging from licensing, supervision, environmental impact, and law enforcement. This has caused overlapping licenses in forest and land governance. There is even no room for local governments to determine that mining licenses are revoked even though they are proven to destroy forests and harm surrounding communities.

The difficulty in unraveling licensing issues is part of how ESDM protects mining business companies that have contributed most of the state's income. ESDM needs to protect businesses that generate a lot of income for the state through various instruments such as ease of bureaucracy and smooth business. So the policies issued then benefit the interests of a few people more than saving the lives of the wider community.

The concept of Regulatory Capture (Reg Capture) is a phenomenon that occurs when a state agency established to act in the public interest, instead prioritizes the commercial or political interests of a special interest group and dominates an industry or sector where the agency is located. When the regulation is issued, the interests of the company or political group are prioritized or favored over the interests of society[i].

# “The Red Carpet“ of Nickle Mining

## Administrative Sanctions for Forest Destroyers

The issue of environmental protection can be relegated to the back burner, even for mining companies that were previously fined Rp 10 billion and sentenced to 5 years in prison for not having a Borrow-to-Use Forest Area Permit (IPPKH). After the Job Creation Law, companies destroying forests without permits will only be subject to administrative sanctions in the form of fines (Articles 36 and 37 of the Job Creation Law). The law, which is actually the realization of the stipulation of government regulations in lieu of law number 2 of 2022 concerning job creation, is the main entrance to ease investment in Indonesia, including the mining sector.

Even worse, derivative regulations of the UUCK such as PP 22/2021 also allow mines to dispose (dumping) B3 waste into environmental media such as the sea as long as they get approval from the central government. Mining business activities are regulated in such a way that there is minimal public control. Civil society involvement is limited in the preparation of AMDAL in the Job Creation Law. Whereas the process of community involvement in AMDAL and environmental permits is needed to carry out checks and balances to ensure the implementation of community rights and obligations in the field of environmental protection and management, as well as to realize the implementation of a transparent, effective, accountable and quality environmental permit process.

## No role for local government

Since its revision in 2020, Law No. 3 of 2020 on minerals and coal regulates many provisions that reduce the authority of local governments and community participation in areas/locations around mines. In addition to the authority of local governments being withdrawn to the center, such as local governments no longer having the power to revoke mining permits that commit violations in their area, this policy also does not provide channels for complaints by the community. In fact, as in many cases involving communities in the mining vicinity, if there is a rejection, it will usually lead to criminalization (Article 162: fines or crimes for those who refuse legal mining permits).

## Lack of Mine Pit Reclamation Obligation

The concessions provided by the policy of Law number 3 of 2020 concerning mineral and coal also cover aspects of environmental responsibility by mining companies, one of which is the obligation to reclaim mining pits. Article 99 paragraph 3 in the Minerba Law states that companies are only obliged to close mining pits based on the percentage determined by laws and regulations. As a result of this, jatam data in East Kalimantan recorded 40 victims (2011-2021) due to drowning in mining pits that were not reclaimed[i]. Mining companies that are proven to be negligent and do not carry out post-mining reclamation obligations are also guaranteed to be able to extend their license contracts for 2 times 10 years.

# Forests and Environmental Services that Must Be Sacrificed

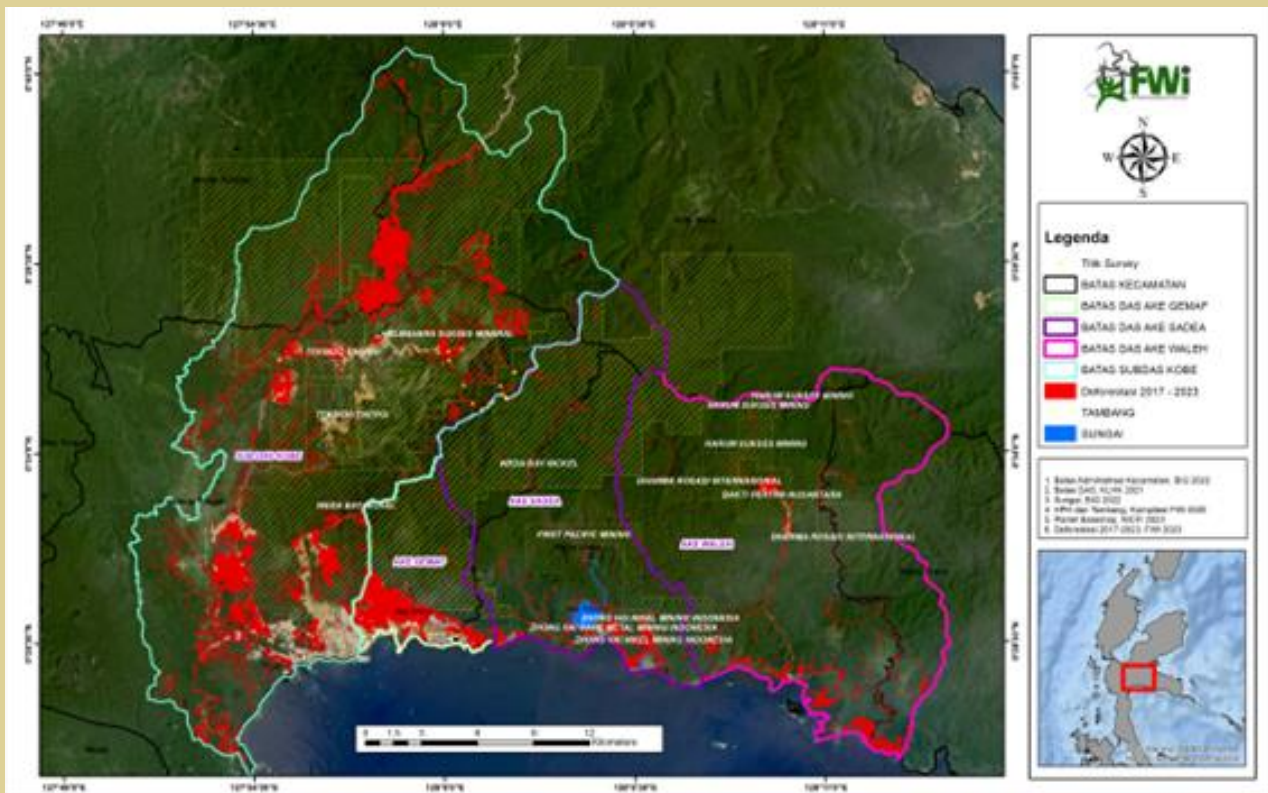
## Deforestation at IWIP Supply Mine

Deforestation by mining companies supplying IWIP in Central Halmahera has damaged at least 4 watersheds in the region, namely Gemaf, Sagea, Waleh, and Kobe Sub-Watershed. The results of an analysis conducted by FWI from January 2021 to September 2023 show that nickel mining activities have expanded deforestation by 392 hectares in the Sagea watershed area. Three other watersheds that also drain into Weda Bay also experienced the same thing. The Ake Gemaf watershed was deforested by 461 hectares, the Ake Waleh watershed by 636 hectares, and the most severe in the Ake Kobe sub-watershed by 4,291 hectares, bringing the total deforestation area in the four watersheds to 5,780 hectares (table 1).

Watershed	Forest Cover 2023	Deforestation 2021-2023	Other Landcover	Total
AKE GEMAF	3,443	461	1,005	4,909
AKE SAGEA	15.334,14	394,38	1.052,31	16.777,83
AKE WALEH	22,418	636	1,584	24,638
SUB-KOBE	29,886	4,291	10,896	45,073

Table 1. Forest Cover and Deforestation Data in four watersheds upstream of the PT IWIP complex

Forest clearing during the 2021-2023 period (the last 2 years) is considered more progressive when compared to the 2017-2021 analysis period. The average deforestation rate in the four watersheds in the 2021-2023 period is 2,890 ha/year. Whereas in the 2017-2021 period, the average deforestation rate was only 787.5 ha/year. The total deforestation that has occurred in the four watersheds reached 8,930 hectares from 2017-2023, of which 17% occurred in the upstream area.



Gambar 1. Peta Deforestasi di Empat DAS Provinsi Halmahera Tengah

Looking at the three major concessions that overlap with these watersheds, PT Weda Bay Nickel (PT WBN), PT Halmahera Sukses Mineral (PT WSM) and PT Tekindo Energi, FWI's analysis shows that at least 1476 ha of forest was deforested from 2017-2021 or around 68% of the total deforestation in the four watersheds, with 607.78 ha for PT HSM, 46.4 ha for PT Tekindo Energi and the largest 1,493 for PT WBN. FWI has not conducted further analysis on the total deforestation of these three companies until 2023.

# Impacts of Deforestation by Nickel Mine in Central Halmahera

In addition to removing natural forests, deforestation due to mining activities in Central Halmahera has also had an impact on flooding and river pollution, which began to occur in early 2023. Although this is also influenced by rainfall conditions in the upper watershed, the occurrence of turbidity in the river around Sagea has never happened before. Figure 2 shows that there are changes in the morphology of the river flow around mining in the Kobe Subwatershed in 2017-2023, which also borders the Sagea watershed (Figure 1)

It can be seen that in 2023, the stream in the Kobe Sub-watershed experienced a considerable sedimentation process. Sedimentation is closely related to forest loss, where deforestation triggers an increase in runoff due to the lack of infiltration area, which leads to an increase in erosion and sediment material (Zhao et al, 2022)[4]. Sediment particles carried by the flow will settle on the banks and riverbeds, increasing the risk of flooding in a location (Liu et al, 2022) [5]. During 2023, there were at least six flood events in the Sagea River, which are indicated to be closely related to mining activities. In addition, pollution of the Sagea River as a result of mining activities and the nickel downstream industry has exposed the coast and fisheries to toxic materials. Based on quality stone test data obtained by Kompas (2023) [6] in Weda Bay shows Chromium, Nickel and Copper levels that exceed the normal limits. 0.02 mg/L for Chromium (Quality Standard 0.005mg/L), 0.09 mg/L for Nickel (Quality Standard 0.05 mg/L) and 0.02 mg/L copper (Quality Standard 0.008 mg/L).

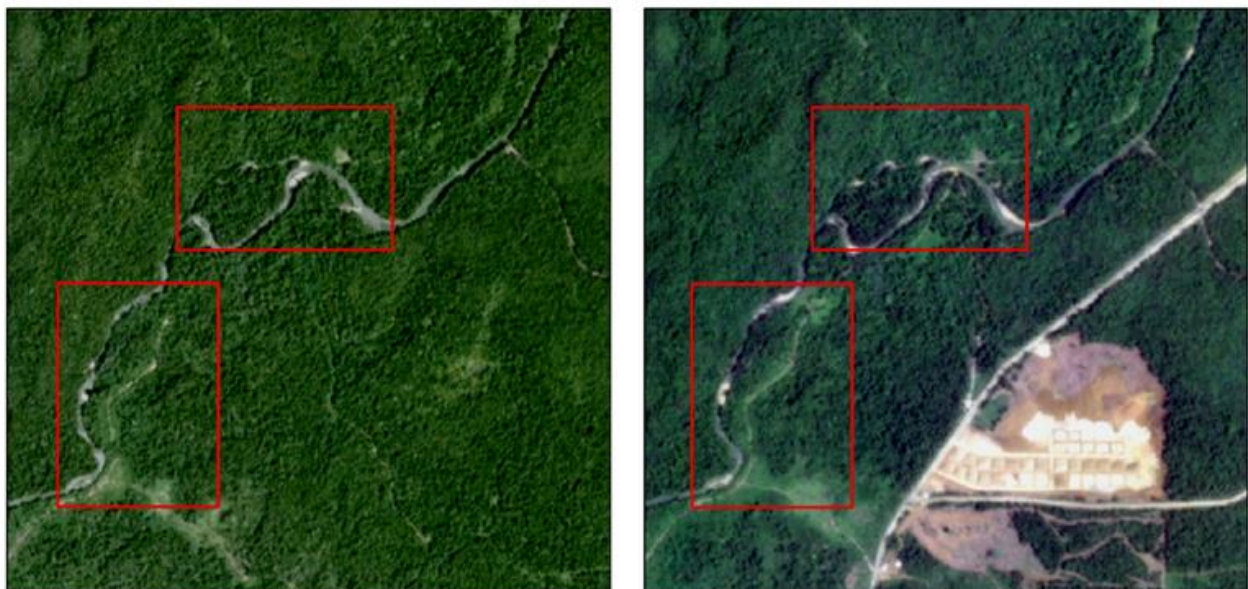


Figure 2 Sedimentation in Sub Kobe Watershed Stream Due To Mining Activities From Planet Basemaps 2017 (Left) 2023 (Right)

Forest Watch Indonesia's monitoring results at the end of September 2023 (figure 3) also prove that PT WBN's mining activities have indeed reached or are in the Sagea watershed area. Although data on the increase in sediment load and river siltation had not been successfully obtained during monitoring, the existing evidence of land clearing can support how the mining activities affect the increase in sedimentation in the watershed which leads to an increase in flooding events.

## The Loss of indigenous peoples' living spaces

As a result of the exclusivity of nickel mining in Halmahera and surrounding small islands, it has certainly excluded the living spaces of indigenous peoples who still depend on forest resources. The principles of FPIC, which are supposed to be safeguards for mining companies, are not fully implemented. Based on field reports, there is one identified indigenous community named Hongana Manyawa who are not willing to have their forests and places of life disturbed and destroyed by mining activities. There are allegations of human rights violations in nickel mining operations in Halmahera that have ignored the rights of indigenous peoples as indigenous people.

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Figure 2 Forest Watch Indonesia Monitoring Results at PT WBN and PT HSM. (i) Sagea tributary in the Sagea sub-watershed (ii) PT HSM Cendana pit (iii) PT WBN mining camp location

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# Recommendation

Seeing how powerful policies in the mining sector, especially nickel that can practically use the entire region without exception, we think it is necessary to start rethinking preventive measures so that the damage caused by the rapid nickel industry in Indonesia can be reduced, namely by:

- 1** Conducting an environmental audit of the practices of nickel mining companies in Halmahera and surrounding small islands.
- 2** Reviewing policies in the forestry sector that provide unlimited freedom for nickel mining companies that have consequences for the existence of forest resources, especially for the protection of small islands.
- 3** Strengthen the role and authority of local governments in licensing governance and environmental monitoring of mining licenses.
- 4** Increasing the role of public participation in the process of permit issuance, AMDAL preparation, and environmental permits, so as to ensure the implementation of community rights and obligations in the field of environmental protection and management, and realize the

[1] Steenis 1948; Balgooy 1976 dalam tulisan Edi Mirmanto : Jurnal Biologi Indonesia 6 (3): 341-351 tahun 2010

[2] <https://rpc.cfainstitute.org/en/policy/positions/regulatory-capture>

[3] <https://www.mongabay.co.id/2021/11/05/sejak-2011-sudah-40-nyawa-melayang-di-lubang-tambang-batubara-kaltim/>

[4] <https://doi.org/10.1016/j.catena.2019.104284>

[5] <https://doi.org/10.1016/j.catena.2022.106503>

[6] <https://www.kompas.id/baca/nusantara/2023/11/10/penambangan-nikel-di-halmahera-terus-merusak-eksplorasi-diminta-berhenti>

