THE FATE OF INDONESIA FOREST ON THE BRINK OF COLLAPSE

"Early year notes for 2024 during critical times of determining the fate of Indonesia's forests"

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Reflecting on the portrait of the state of Indonesia's forests, deforestation in 2017-2021 with an average rate of 2.54 million ha per year, or equivalent to 6 times the size of a football field per minute, has brought Indonesia to the brink of the climate crisis. This means that Indonesia's forests are not in good condition. The massive destruction of forest resources occurs in almost every region.

For example, Kalimantan region still shows an average deforestation rate of 1.11 million ha per year, followed by Papua with 556 thousand ha per year, Sumatra with 428 thousand ha per year, Sulawesi with 290 thousand ha per year, Maluku with 89 thousand ha per year, Bali Nusa with 38 thousand ha per year, and Java with 22 thousand ha per year. The apparently massive damage to Indonesia's forests has been revealed by increasingly advanced remote sensing technology, which is able to calculate forest damage in more detail [1].[1]

Deforestation is a change in natural forest cover to non-natural forest. Natural forest is a forest that is not created by humans and is not in the form of a plantation or a forest plantation. The deforested areas were originally natural resources in the form of mangrove ecosystems, peat ecosystems, karst ecosystems, lowland forests and highland forests, including forests in coastal areas and small islands. The loss of forest cover is always accompanied by the loss of the forest's functions. Those functions include as a microclimate regulator, provide food for local/indigenous communities, water and soil conservation, areas of high conservation value, biodiversity, potential medicine, source of food and nutrition, source of energy, and the value of cultural history, even as a source of knowledge that has not been recorded.

The potraits of Natural forest in East Kalimantan Province, Mahkam Ulu District

[1] https://www.hindawi.com/journals/ijfr/2023/7970664/

THE REAL THREAT

OF CLIMATE CHANGE IN SMALL ISLANDS

Climate change is not only a problem for future generations, but it is already happening today. 2023 is set to be the hottest year ever recorded (WMO). The rate of global average rise of sea level in the last ten years (2013–2022) is more than double the rate of sea level rise in the first decade of the satellite records (1993–2002).

According to a WHO analysis that considers various health indicators, climate change is predicted to cause an additional 250,000 deaths per year in the next few decades. Small islands and the people who live in them are the most vulnerable people affected by the climate crisis.

Indonesia is one of the largest archipelagic countries in the world. It has more than 17,000 islands, and around 98% are small islands. The management of small islands in Indonesia still uses a natural resource extraction approach. There are around 874 thousand ha, or 13% of the total land area of small islands, that have been burdened by natural resource extraction industry concessions, which are logging concessions for approximately 310 thousand ha, mining concessions for 245 thousand ha, plantation forests for 94 thousand ha, plantations for 194 thousand ha, and overlapped areas of around 30 thousand ha.

Extractive industrial activities have been shown to have negative impacts on both the environment and people who live on small islands. FWI recorded that in 2017-2021, the average deforestation rate on small islands reached 79 thousand ha per year, or equivalent to 3 percent of the national deforestation rate. The presence of extractive industries on small islands is stimulated by the policies that support them and the weak protection of unique ecosystems on small islands.

The Aerial Pictures of Mining Industries in Manoram Island, Raja Ampat District

The FWI study revealed a number of issues with the management of small islands in Indonesia, including an unclear operational definition of small islands, the sectoral management of small islands (between ministries and institutions), and the lack of data and information about small islands.

Indonesia is an archipelagic country; hence, its forests are on islands. The forests are spread over large and small islands. The current forest management paradigm in Indonesia shows that forests in Indonesia are located on one large expanse of land. This is reflected in the policies regarding forest areas and the spatial planning. In practice, it fails to consider the geographical conditions of an archipelagic country. One example is that the government's constant claim that Indonesia's rainforest is one of the largest in the world. This claim may be true for its sum total. But in fact, the forests are located on a few islands.

We always claim that our forests are still very large. However, there are islands or areas that experiencing environmental crisis due to deforestation. Therefore, it is not surprising that the islands of Java, Kalimantan, and Sumatra are always hit by ecological disasters. The government always claims to reduce deforestation. But this claim becomes irrelevant if it turns out that most of that deforestation only occurs in a few areas.

ENERGY TRANSITION VS DEFORESTATION

Energy transition is a term that is being widely discussed around the world as a response to the climate crisis on earth. As a country rich in energy resources, the energy transition policy in Indonesia seems to be "stuttering" and has not yet maximized the potential that exists in each region. The top-to-bottom energy transition policy seems unwilling to maximize the distribution of existing potential energy. Regions are forced to carry out the energy transition by following directions from the central government. This has an impact on an unseemly energy transition in regions that is not in accordance with the needs, energy sources, and geographical and socio-cultural conditions. In fact, the energy transition in Indonesia has the tendency to cause deforestation. Or in another sense, solving environmental problems by generating new ones.

Deforestation in The Area of PT Hijau Arta Nusa Jambi Province

FORESTS FALL VICTIM TO COAL CONVERSION

One of the government's initiatives in the energy transition is the development of Energy Plantation Forests (Hutan Tanaman Energi or HTE), which is also stated in the Minister of Environment and Forestry Regulation Number 62 of 2019. The development of HTE is aimed at producing wood biomass. Biomass is produced by cutting trees. Those woods are converted into sawdust, wood chips, or wood pellets and then used as a coal mixture in Steam Power Plants (PLTU), or what is known as co-firing. With a composition of a 5-10 percent[2] ratio of wood biomass and coal for the mixture, they are burned in 52 PLTUs in Indonesia. The plan for the future is already made, which is at least one biomass power plant (PLTBm) for every province that will use full wood biomass as final energy or full-firing.

The energy transition through the use of wood biomass is very likely to be a new cause of deforestation in Indonesia. Most of the 45 million cubic meters of wood produced from plantation forests have their own markets. In order to meet the need for 10.2 million tons of wood for 52 PLTUs, land with a minimum area of 500 thousand ha[3] is needed. It makes it very possible that natural forests will be sacrificed again.

The Ministry of Environment and Forestry (MoEF) has currently allocated state forest areas for HTE concessions either through the issuance of new PBPH-HT (Forest Utilization Business Permit for Forest Plantation), transformation of permit types through multi-business forestry schemes, partnerships, or social forestry. Not less than 31 permits in Indonesia have been allocated for HTE development. In fact, from 2017 to 2021, 55 thousand ha of deforestation have been detected in those 31 permit areas. This occurs as a result of land clearing by these companies to plant trees for wood biomass production. On top of that, there are still 420 thousand hectares of natural forests that could potentially disappear from these concession areas. The results of FWI observation at several HTE construction sites show that the deforested natural forests were important ecosystems for the habitat of Sumatran Tigers, Sumatran Elephants, as well as the living space of indigenous communities.

Aerial Picture of Biomassa Plantation

[2] In the RUPTL document, State Electricity Company (Persero) is committed to implementing a wood biomass burning mix (co-firing) of up to 10 percent.

[3] https://www.forestdigest.com/detail/2061/cofiring-biomassa

NICKEL INDUSTRY: LUXURY IN THE CITY, MISERY IN THE VILLAGE

The government has provided a "red carpet" for the development of the nickel mining industry in Indonesia by facilitating easy licensing. An industry that is predicted to be able to provide clean energy for electric vehicles. The rapid nickel downstream program is also increasingly threatening the existence of natural forests and the living spaces of indigenous peoples and local communities. Nickel mining business permits that are linked to the downstream industry are not required to obtain approval. They also can carry out mining operations in all areas.

This “red carpet” seems to violate all environmental regulations. This is supported by the Job Creation Law and its derivative regulations. In Minister of Environment and Forestry Regulation Number 7 of 2021 (article 372), for example, there is a quota of 10% of the maximum functional forest area that can be utilized in approvals for mineral and coal mining activities. However, point 10 of the Article explains that the 10% limit does not apply for mining permits that carry out downstream projects and National Strategic Projects (Proyek Strategis Nasional).

In national aggregate, the total area of nickel Mining Business Permits (Izin Usaha Pertambangan or IUP) currently reaches almost 850 thousand ha. These areas are concentrated around the islands of Sulawesi and Halmahera, as well as the surrounding small islands, which are known to have a diversity of flora and even the highest vegetation diversity in the world.[4] Over the last 10 years, deforestation due to nickel mining has reached 65 thousand ha. The intensification of nickel mining and downstream projects raises the concern that deforestation will increase in the upcoming years, considering there are almost 550 thousand ha of natural forest in the nickel mining concession areas.

For example, deforestation at the mining companies supplying IWIP (Indonesia Weda Bay Industrial Park) in Central Halmahera has damaged at least 4 watersheds in the region, namely Gemaf, Sagea, Waleh, and Kobe sub-watershed. FWI analysis from January 2021 to September 2023 shows that the nickel mining concession has caused 5,780 ha of deforestation. Forest clearing during the 2021-2023 period (the last 2 years) is considered to be more massive compared to the 2017-2021 analysis period.

Apart from deforestation, nickel mining also causes many other problems, such as waste pollution, violations of human rights and the living spaces of indigenous and local communities, and threats to the biodiversity of both flora and fauna in the mining area and surroundings. Through Government Regulation Number 22 of 2021, mining companies are allowed to dump B3 waste into the environment, such as the sea, as long as they get approval from the central government. As a result, the waters around the mining area are polluted in both the river and the sea, as happened in Halmahera.[5]

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

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

Aerial Picture of weda Bay Industrial Area

One of the reasons for nickel production is the development of an electric car ecosystem, which is predicted to be an environmentally friendly means of transportation. On the other hand, apart from causing deforestation, the majority of electricity generation to support the nickel industry also comes from fossil energy, which is coal. The nickel industry's massive growth will actually lead to high emissions instead of reducing them.

The potraits of Sagea River on 29 August 2023

The New Capital of Nusantara:

DEVELOPMENT OF “FOREST CITY” THAT SACRIFICE “FOREST”

The information asymmetry of the transfer of the New Capital of Nusantara, known as IKN, is shown by the gap in public knowledge about how IKN will be built. A narrative that seems to be covered up about the situation of forest and land control in IKN, which is actually an area that has been occupied by corporations that destroy natural resources. East Kalimantan Province as the IKN's selected area, currently has 63 percent of its territory controlled by large corporations. And what is clear is that the development of IKN will definitely have consequences for the carrying capacity of the province.

IKN has the dream of becoming a forest city, a smart city and a city for the world. Unfortunately, not many people understand how IKN will actually be built. FWI (2023) stated that more than 50 percent of the area in IKN has been controlled by corporations. In fact, around 47 thousand ha are overlapped areas for many concessions, such as HPH (forest concession), HTI (Industrial Plantation Forest), plantation and mining concessions. Mining concessions have been recorded for destroying forests and land, and leaving at least 94 abandoned mining pits in the IKN area.[6]

The contradictory concept and implementation of IKN development have led to many land speculators who "blindly" cleared forests and lands. It was recorded that at least around 17 thousand ha of the environment was damaged within the IKN area and the coast of Balikpapan Bay, which were mangrove ecosystems, gardens, and wildlife corridor forests.

Aerial Pictures of the Construction of the Indonesian Capital Government Center (IKN)

6 Jatamnas 2023 notes

IKN has sacrificed environmental damage for the benefit of ports, toll roads, and airports. In the name of development, the total deforestation of natural forest that has occurred within the IKN area has reached 2 thousand ha. The development of toll roads has even destroyed wildlife habitat and cut off the roaming routes of proboscis monkeys (Nasalis larvatus), that according to research data by Toleac (2021), only 3,379 individuals remain.

The IKN megaproject is a massive urbanization that is not only destroying the living space of indigenous communities and biodiversity in East Kalimantan but also encouraging the destruction of natural resources in the surrounding provinces and other islands. The IKN development has proven to stimulate domestic mining production to meet iron and steel needs of up to 9.5 million tons. In fact, the massive C quarries that occur in Sulawesi Island are also to meet the needs of IKN's buildings and road infrastructure. Moreover, the needs of energy and food for IKN development must be examined for its principles of justice and sustainability.

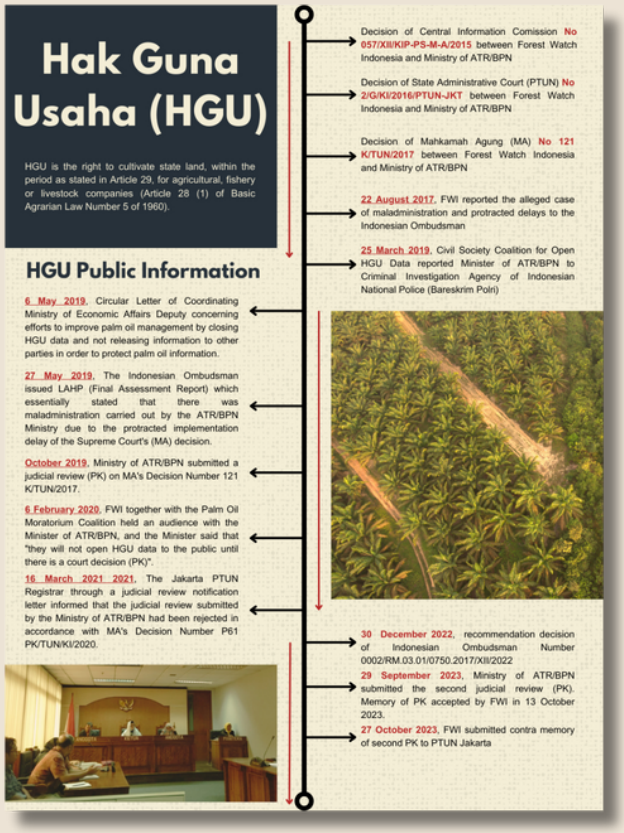
BACKSLIDING ON INFORMATION DISCLOSURE

"INFORMATION DISCLOSURE ON HGU: GOVERNMENT'S DISOBEDIENCE OF LAW"

Law Number 14 of 2008 concerning Public Information Disclosure (PID) still leaves many problems, especially in its implementation. This is proven by the high level of information disputes submitted by information applicants to public bodies.

Quite a few disputes have to be resolved through adjudication mediation at the level of Central Information Commission, State Administrative Court (PTUN), cassation at the Supreme Court, and even at the Judicial Review stage. Fifteen years after the PID Law, there are still many public bodies that are not aware of the importance of public information disclosure, one of which is the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN), which controls the Hak Guna Usaha/HGU (right to cultivate state land).

In December 2023, just in time for the eighth anniversary of the public victory in the public information dispute case related to HGU documents, there was a very embarrassing situation that cannot be found anywhere else in the world. The ministry of ATR/BPN has consciously and deliberately disobeyed the law against a court decision.[7]



It is ironic that the government continues to say that "Indonesia is a rule-of-law country" and encourages people to obey the law and not take the law into their own hands. It is the state apparatus that does not comply with the law. So don't be surprised if the laws in this country are blunt upward and sharp downward. And don't be surprised if many people don't comply with the law if the state apparatus set an example for disobeying the law.

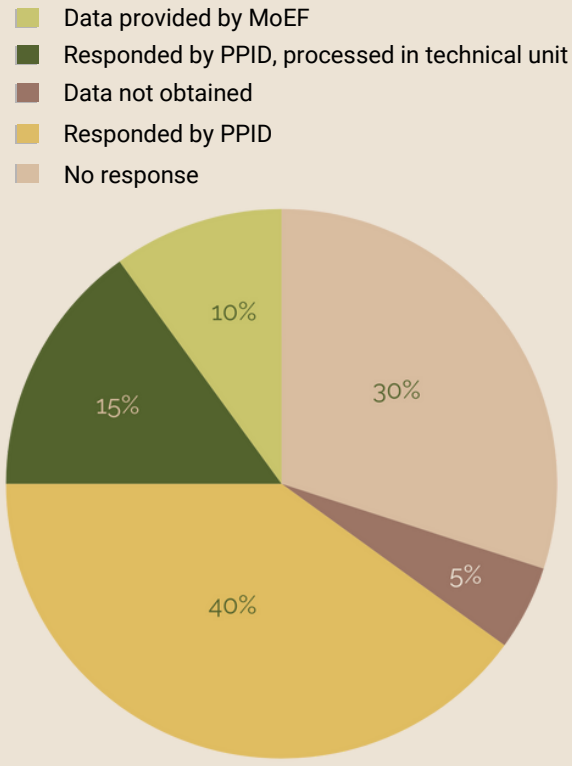
[7] https://fwi.or.id/kementrian-atr-bpn-kembali-ajukan-pk-ke-2/

BACK AND FORTH OF INFORMATION DISCLOSURE IN THE MOEF

Since FWI won a lawsuit at the State Administrative Court (PTUN) in 2016 over forestry documents, the MoEF has begun making improvements to information requests. As a form of commitment carried out in accordance with the mandate of Article 13 of Law Number 14 of 2008, MoEF has established an Information and Documentation Management Officer (PPID) through the Decree of the Minister of Environment and Forestry Number: SK. 185/MENLHK/SETJEN/HMS.3/4/2017.

In realizing this information transparency, MoEF also created and updated information systems related to forest products. One of them is the Sustainable Production Forest Management Information System (SIPHPL), which has been integrated with several systems, namely the Forest Product Administration Information System (SIPUHH), the Online Non-Tax State Revenue System (SIMPONI), the Industrial Raw Material Receipt Plan Information System (SIRPBBI), Electronic Monitoring and Evaluation (e-MONEV), and the Timber Legality Information System (SILK). During 2017-2023 period, MoEF made several changes regarding SIPHPL. At the beginning of its launch, this information system could be accessed by the public to obtain various detailed data and information, including compiled data for each province, such as licensing and log production documents for each company from each permit and type of log (phpl.menlhk.go.id).

MoEF claimed that this system is a proof of the government's seriousness in increasing transparency and accountability, cutting bureaucracy, improving cost efficiency, and building a conducive forestry business climate. However, in its development, public access to forestry information has entered a gloomy period. This was seen at the end of 2021 when one of the KLHK websites provided data that should be available at all times and became a reference for forest monitors, namely phpl.menlhk.go.id, was changed to phl.menlhk.go.id. Not only has the domain name changed, but the information or data presented has also changed. The public can no longer access licensing documents and previous wood production information. The public can only access aggregate information.



With the innovations currently being implemented in the information system at the MoEF, apart from having to have an account to enter the system, the public must also obtain approval from the MoEF to be able to access the data. Public accounts are not accommodated in the system. The information provided has become aggregated and is unable to accommodate the information needs of the public who wish to participate in forestry administration.

In addition to the information system provided, the public can also access information through direct requests. Fast, cheap, and easy service has not yet happened based on FWI's experience in accessing information directly. During 2021-2023 period, of the 20 information requests submitted, only 2 were provided with data. Meanwhile, 3 requests were responded to as still in process, and 6 requests were not even responded to at all. FWI had to resend another letter requesting information. The average time span that FWI had to go through to obtain information took more than 2 months. With such access to public information, the control or supervision that can be carried out by the public will be increasingly minimal and will create room for corruption and unsustainable forest and land management.

The implementation of information disclosure by public bodies should aim to encourage better change. The developments, innovations, and celebrations regarding information disclosure carried out by the government have actually moved away from the goals, such as innovation in information systems that can be accessed by the public, well presented data and information, and awards for public bodies that are considered transparent. Instead, these things only became a way to gain public impressions and recognition.

“PALUGADA”
MULTI-BUSINESS FORESTRY

In the forestry sector, in the past, we were familiar with the terms Logging Concession Right (HPH) and Industrial Plantation Forest (HTI). HPH is a permit given by the government to corporations to carry out natural forest logging activities.

Meanwhile, HTI is a permit given by the government to clear land and plant fast-growing trees to be harvested within a certain cycle time. This term was also changed to IUPHHK-HA (Forest Product Utilization Business Permit in natural forests) as replacement for HPH, and IUPHHK-HT (Forest Product Utilization Business Permit for Forest Plantation) as replacement for HTI. Apart from that, there are also the terms IUPHHK-RE (Forest Product Utilization Business Permit for Ecosystem Restoration), IUPJLW (Business Permit for Utilization of Natural Tourism Environmental Services), and so on. Each of these permits has a different type of business. Currently, all these permits are combined into one PBPH (Forest Utilization Business Permit) with a multi-business forestry scheme. This means that all previous types of permits can now be carried out just by obtaining one PBPH permit. The more utilization potential in a permit area, the more utilization activities can be carried out by corporations. This mechanism has been regulated in the Minister of Environment and Forestry Regulation Number 8 of 2021.

This scheme is in line with the push of the Job Creation Law regarding increased investment and licensing facilities. Multi-business forestry provides the widest possible investment space for corporations to exploit forest areas. Moreover, MoEF will provide forest areas to meet various land needs for projects that require large areas of land. Multi-business is not a matter of how to build a natural resource protection system but rather how businesses in forest areas can exploit forests to the maximum. Furthermore, the ongoing activities in forest areas, including in overlapped permit areas between forestry concessions and other business activities such as plantations, agriculture, and mining, are claimed to be able to be resolved using a multi-business scheme.

Multi-business is seen as part of an effort to extend forest and land control by concessions, due to a continuous decline in business performance. This is in line with the decline of wood forest resources, especially from natural forests. This situation indirectly shows that forest utilization, especially natural forest timber harvesting, is not running as it should. Irresponsible harvesting practices have resulted in degraded and abandoned forests. Instead of restoration, forest degradation is the reason for generating new ideas for other forest use activities, such as wood plantations, biomass, bioenergy, tourism, environmental services, and even geothermal utilization. It depends on the potential that exists in the area. This also includes carbon trading for forests that are still in good condition.

WHO OWNS CARBON IN INDIGENOUS TERRITORIES?

Indigenous communities are closely related to their environment and natural resources. Massive land use change, especially in natural forests that change their form and function, is the main driver of climate change. This makes the indigenous communities that have been using forests as their living space more vulnerable and threatened.

All this time, indigenous peoples have always been struggling to promote living norms to preserve natural resources and biodiversity. They are actually the front guard that made a big contribution in fulfilling Indonesia's target to reduce Green House Gas (GHG) emissions by 29% by 2030 for climate crisis prevention. Even though they are at the forefront of preserving sustainability, their existence is increasingly threatened. Many attempts to plunder natural resources and change the function of forests have eliminated their rights.

Indigenous communities in Indonesia play a crucial role in protecting forests and mitigating climate change, preventing the release of greenhouse and gas emissions. A study by FWI, AMAN and BRWA on carbon dynamics in customary territories reveals an impressive potential for carbon storage. An average of 232.59 Mg per Ha of carbon stored in the customary territories equals 2.9 billion tons of potential carbon storage within 26.5 million[8] of their customary territories. It shows that every year, 77.5 million tons of CO2eg are absorbed by 26.5 million ha of indigenous forests in Indonesia. This contribution is equivalent to absorb around 8 times the emissions resulting from forest and land fires for in January to July 2023 period, or equivalent to absorb emissions from 16.8 million cars per year, or almost equivalent to the emissions from all cars in Indonesia in 2020. The study also shows that carbon emissions from indigenous territories tend to be lower compared to other areas. That is 97.54 tons CO2eq per Ha for indigenous territories and 109.11 tons CO2eq per Ha for non-indigenous territories.

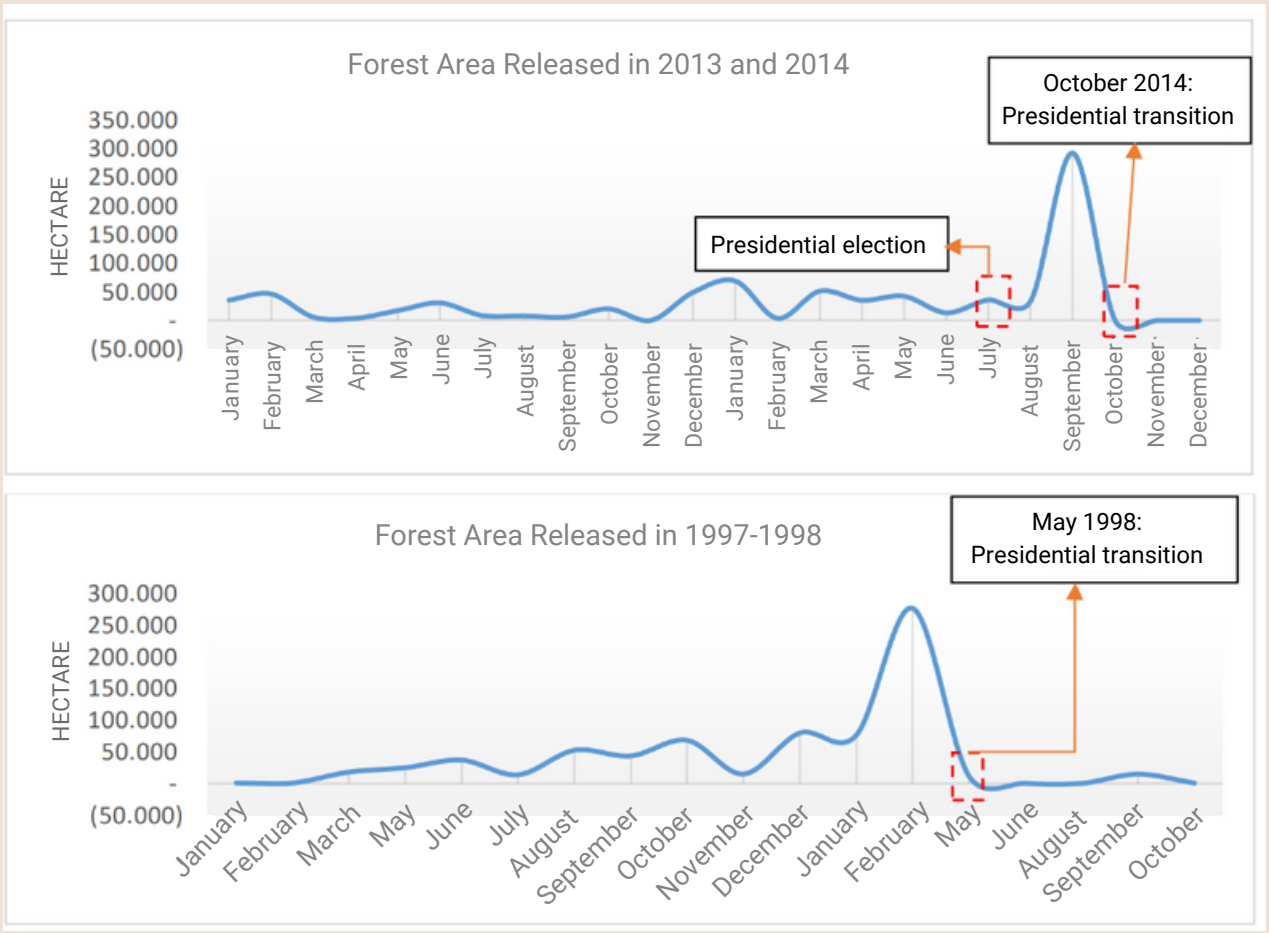
[8] BRWA, 2023

Unfortunately, amid the contribution of indigenous communities to climate change mitigation efforts, there are issues of uncertain tenure rights and the development of carbon project schemes that risk marginalizing indigenous communities. In fact, carbon is attached to forests, forests are attached to land, and land rights are attached to indigenous communities. Indigenous communities, which have been proven to make a real contribution to reduce greenhouse gas emissions, are actually threatened by a "carbon exchange" scheme that does not accommodate their rights. Therefore, concrete steps are needed to recognize and protect the rights and territories of indigenous peoples. One of them is passing the Indigenous Peoples Law. And with the recognition of their tenure rights, efforts to reduce emissions in Indonesia and even around the world will be more optimal.

BIG SALE OF LICENSE AT THE END OF THE REGIME

Forest and land "big sale" to corporations have started to become popular since the New Order, especially since the establishment of Foreign Investment Law Number 1 of 1967 and the Domestic Investment Law of 1968. Particularly, in forest areas controlled by the MoEF, there were previously known licenses such as HPH, HTI, IPK, IPPKH, etc. The types of licensing for the plantation sector were through the Palm Oil Plantation Permit (IUP Sawit) and HGU, as well as the Mining Business Permit (IUP). Since the implementation of the One Single Submission (OSS) policy, which was then strengthened through the Job Creation Law, all of the above permits have been combined into one business permit. This one permit is made as easy as possible to obtain, and its submissions can be made online via the OSS system.

The similarity that emerges is the rapid and massive issuance of new permits when the reign of a ruling regime ends until a new elected government is formed. We can see this during the final period of the transition from President Soeharto to Habibie. Three months (February 1998) before Suharto was overthrown in May 1998, 275 thousand ha of forest area was released, which was a significant increase compared to previous months. Likewise, during the transition period from President SBY to Jokowi, in September 2014 (2 months after the presidential election and 1 month before the presidential inauguration), 291 thousand ha of forest area was released. Most of the released forest areas were designated for palm oil plantation permits.



Graph of Forest Area Release Towards the Change of Government Regime Data

It's possible that similar events will happen again near the end of the current government regime. This was marked by the issuance of Presidential Regulation Number 70 of 2023, which regulates land allocation for investment management. This regulation implies that the government is intensively promoting forest resources. The Task Force formed through the presidential decree was tasked to search for and offer forest resources to investors.

Indonesia's territory of 56.5 million ha has now been handed over to corporations in various sectors. It is known that 27.9 million ha are in the forestry sector, 17.3 million ha in the plantation sector, 5.5 million ha in the mining sector, and around 5.7 million ha are in overlapped areas between concessions. It is well-known that the presence of these permits results in forest and environmental damage, and poses a threat to people's lives. The government does not seem to be taking this seriously, instead giving out a “red carpet” for new permits. Hopefully, the allegation that license transactions are part of political transactions during crucial periods of government transition is not true. The hope is that the current government will avoid making the same mistakes as the previous government.

“UNRELATED”
FOLU NET SINK
AND PREVENTION OF DEFORESTATION IN INDONESIA

Forest and other Land Use (FoLU) is a very important sector for Indonesia to reduce GHG emissions. 60% of the national emission reduction target is in this sector. Currently, the "net sink" approach is being used by Indonesia in carrying out its commitment to tackle climate change.

FoLU Net Sink 2030 is a condition to be achieved by 2030 through reducing GHG emissions from the forest and land sector with conditions where the carbon sequestration level is the same or higher than the emission.

However, this approach seems to show its other purpose, which is to deplete Indonesia's natural forests. The deforestation that occurs will be covered by claims of success in carrying out rehabilitation or reforestation activities. Some of which even sacrifice natural forests. For instance, this occurs in the context of plantation forest development. In the 2030 FoLU Net Sink Operational Plan document, to meet the 2030 net sink target requires the construction of new plantation forests of up to 6 million ha.

The development of the new plantation forests aims to supply the needs of industrial raw materials and biomass fuel in the co-firing policy. Based on projection analysis by FWI, in efforts to fulfill co-firing raw materials alone, there are around 4.65 million ha of natural forest that can be potentially converted. And with this, GHG emissions will be released into the air.

It can be seen, that in its essence, the FoLU net sink approach has nothing to do with efforts to reduce the rate of deforestation in Indonesia. This approach only shows Indonesia's commitment to achieve carbon neutrality by 2030. Deforestation in forested areas will continue to happen. To offset this, reforestation or rehabilitation activities are carried out in areas that are no longer forested. In this case, the important thing to remember is that Indonesia is an archipelagic country. The forests are scattered and fragmented on large and small islands. So that forest rehabilitation efforts on one island do not have a direct influence on environmental conditions on other islands. For example, if large-scale deforestation occurs in Maluku, then forest destruction and its impacts in that region cannot be covered by forest rehabilitation in Kalimantan, despites its larger area. In net sink terms, it's possible that the carbon absorption from rehabilitation in Kalimantan is more than the carbon emissions released from deforestation in Maluku. However, this does not eliminate the facts and environmental impacts in Maluku.

2024