



Madani

**MADANI'S UPDATE**

**DEFORESTATION, FOREST MORATORIUM,  
FOREST FIRE, SOCIAL FORESTRY,  
AND UPDATED NDC**

**MAY 2020**



# Madani's Update

Updates on policies relating to forest, peatland, palm oil, and climate change in Indonesia

## *Deforestation, Forest Moratorium, Forest Fire, Social Forestry, and Updated NDC*

**May 2020**

### Contents

Indonesia's Deforestation Rate 2019 .....	2
Indicative Map of Permanent Forest Moratorium (PIPPIB) 2020 .....	9
Forest Fire 2019 Analysis .....	9
Social Forestry Realization May 2019.....	10
Updated Nationally Determined Contribution (NDC) 2020 .....	11
References .....	14

## Indonesia's Deforestation Rate 2019

In April 23, the Government of Indonesia announced the country's net<sup>1</sup> deforestation rate in the period of 2018-2019, which is **462.4 thousand hectares** - both inside and outside the forest zone.<sup>2</sup> According to the Ministry of Environment and Forestry (MoEF), the largest deforestation in Indonesia occurred in natural forests classified as "secondary forests" (162.8 thousand hectares), the majority of which (55.7 percent or 90.5 thousand hectares) occurred in forest zone, which falls under the auspices of the Ministry, while 44.3 percent or 72.2 thousand hectares occurred outside forest zone which falls under the auspices of the Ministry of Agraria and Spatial Planning or the regional government. In Indonesia, secondary forests are not protected by the permanent forest moratorium policy from new large-scale permits, unless already existing in legally protected conservation and protection areas. According to Madani's spatial analysis, in 2018 there are approximately **9.5 million hectares** of natural forests outside five types of existing permits/concessions<sup>3</sup> and the indicative area for social forestry (PIAPS) that must immediately be protected by the permanent forest moratorium policy for Indonesia to reach its climate target. However, most of them are classified as secondary forests. To reach the climate target, the government must broaden the scope of the permanent forest moratorium policy to cover all natural forests, especially those that are most threatened.

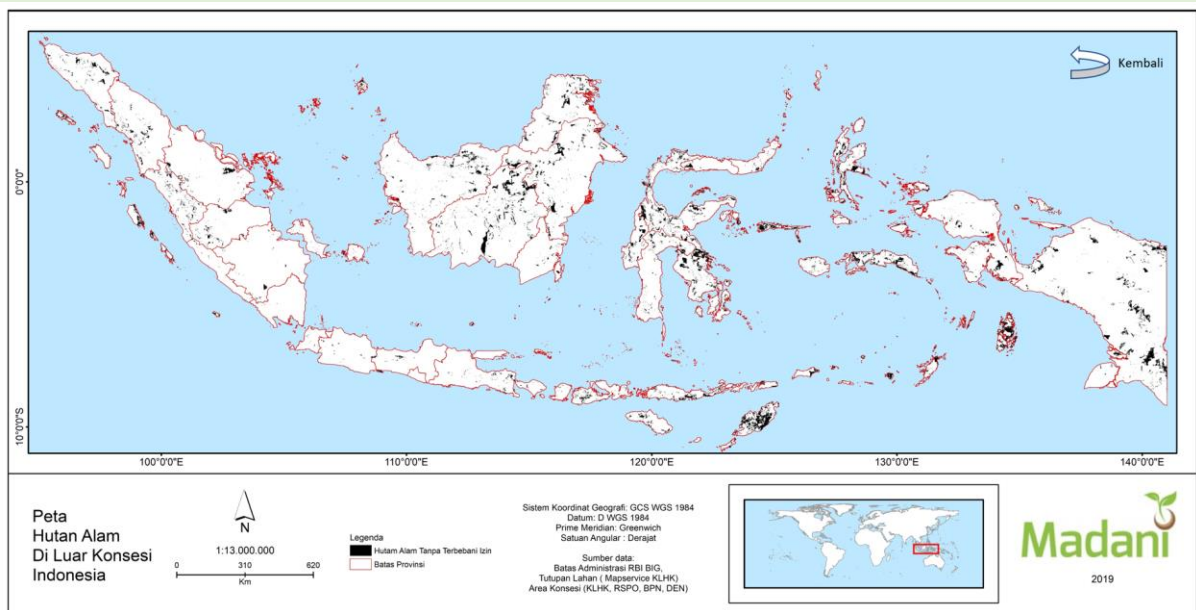
The distribution of natural forests that still need to be protected by the permanent forest moratorium policy can be seen in Figure 1 below, the largest is in Papua, Maluku, East Nusa Tenggara, Central Kalimantan, Central Sulawesi, and East Kalimantan.

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<sup>1</sup> Net deforestation means gross deforestation number (recorded at 465.5 thousand hectares) subtracted by reforestation number (recorded at 3.1 thousand hectares).

<sup>2</sup> "Hutan dan Deforestasi Indonesia Tahun 2019," Press Release by Ministry of Environment and Forestry No. SP. 162/HUMAS/PP/HMS.3/4/2020 , accessed from [ppid.menlhk.go.id](http://ppid.menlhk.go.id) on April 30, 2020. Indonesia's forest and deforestation monitoring results can be accessed from <http://geoportal.menlhk.go.id> dan [http://webgis.menlhk.go.id:8080/nfms\\_simontana/](http://webgis.menlhk.go.id:8080/nfms_simontana/).

<sup>3</sup> Palm oil plantation permit, timber plantation permit, logging permit, oil and gas concession, and mineral and coal concession.



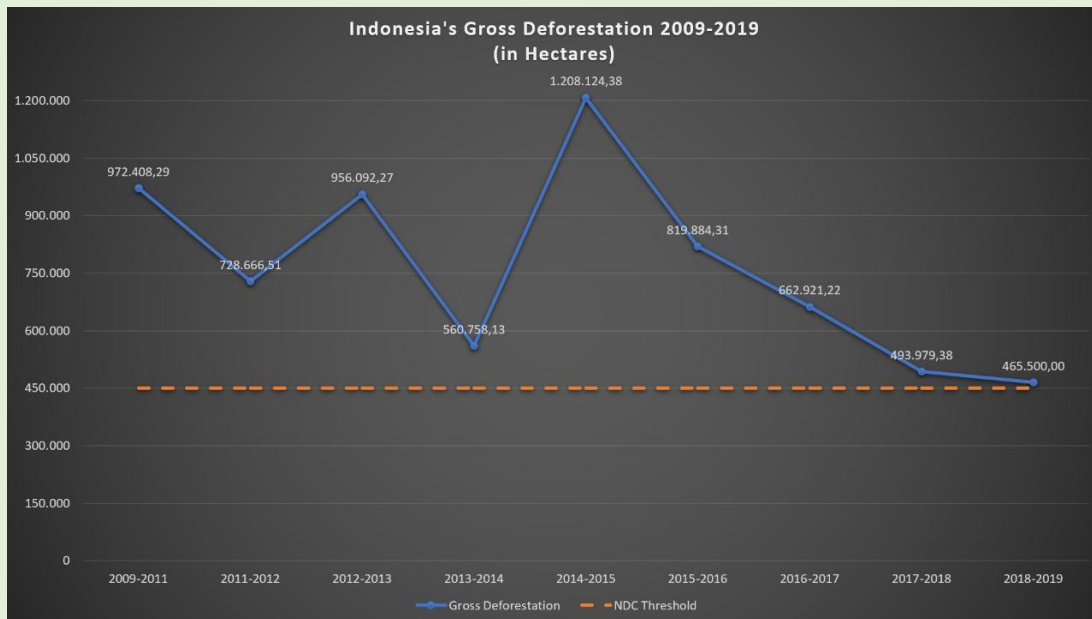
**Figure 1.** Natural forests that must be protected by the permanent forest moratorium policy for Indonesia to reach the climate target

According to the government, Indonesia’s deforestation rate has stabilized over the years.<sup>4</sup> In the last ten years (2009-2019), Indonesia’s deforestation rate does show a declining trend despite spikes in certain years, most notably in 2014-2015, namely during the General Election (see Figure 2). In fact, based on the government’s data, the deforestation rate in 2019 is the lowest since 2009, which warrants appreciation.

However, in the period up to 2020, to reach its climate target, Indonesia needs to reduce deforestation until it is below 450 thousand hectares per year, meaning that the deforestation rate in the period of 2018-2019 is still above the deforestation limit required to meet Indonesia’s climate target (see Figure 2). In the period of 2020-2030, Indonesia must further reduce its deforestation rate to below 325 thousand hectares per year to reach its climate target.

<sup>4</sup> “Hutan dan Deforestasi Indonesia Tahun 2019,” Press Release by Ministry of Environment and Forestry No. SP. 162/HUMAS/PP/HMS.3/4/2020 , accessed from [pid.menlhk.go.id](http://pid.menlhk.go.id) on April 30, 2020. Indonesia’s forest and deforestation monitoring results can be accessed from <http://geoportals.menlhk.go.id> dan [http://webgis.menlhk.go.id:8080/nfms\\_simontana/](http://webgis.menlhk.go.id:8080/nfms_simontana/).





**Figure 2.** Indonesia’s gross deforestation rate 2009-2019 and the NDC threshold

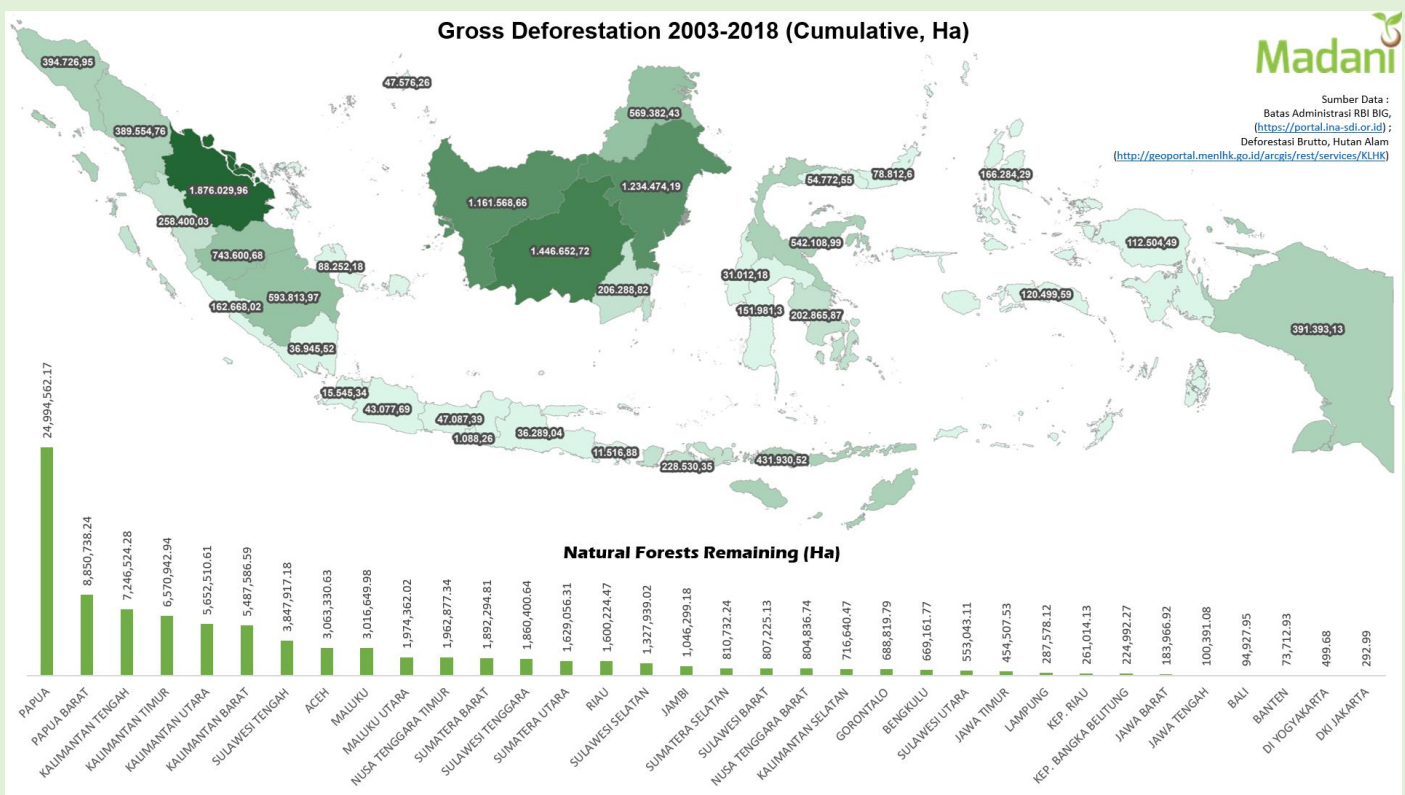
The declining trend of Indonesia’s gross deforestation rate needs to be applauded and maintained. The Ministry of Environment and Forestry attributed the stabilized rate of deforestation to several policies: the permanent forest moratorium, forest fire prevention, peatland damage prevention, climate change mitigation and adaptation, restriction on the allocation of forest zone for non-forestry sector, agrarian reform, sustainable forest management, social forestry, and forest and land rehabilitation. Indonesia, however, is facing a legislative challenge that poses a great risk to the “corrective actions” above, namely the Job Creation Bill. If signed into law, the Bill risks weakening the protection of natural forests and the environment in general and thus threatens the attainment of Indonesia’s climate commitment. Madani has published a [study](#) regarding the risks the Bill poses to the achievement of Indonesia’s climate commitment, especially from reduction of deforestation. The study found that if the Bill were enacted, Indonesia would have failed to achieve the climate commitment in 2025.

## The remaining natural forests in Indonesia

According to the MoEF, the size of forested land in Indonesia in 2019 is 94.1 million hectares or 50.1 percent from its total land size. Out of this number, 86.9 million hectares or 92.3 percent is located in forest zone. However, the government includes timber plantation in its definition of forested land. Excluding timber plantation, the size of natural forests in Indonesia in 2018 - based on the government’s data - is only 88.7 million hectares, with primary forests standing at 46.6 million hectares.

Cumulatively, the highest gross deforestation rate in 2003-2018 occurred in Riau Province (1.8 million hectares), followed by Central Kalimantan (1.4 million hectares), East Kalimantan (1.2 million hectares), and West Kalimantan (1.16 million hectares). Meanwhile,

the largest remaining natural forests in Indonesia in 2018 exist in Papua Province (24.9 million hectares), West Papua (8.8 million hectares), Central Kalimantan (7.2 million hectares), East Kalimantan (6.5 million hectares), North Kalimantan (5.6 million hectares), and West Kalimantan (5.4 million hectares) - see Figure 3. Although seemingly vast, the remaining natural forests outside the moratorium protected area (PIPPIB) and Indicative Social Forestry Area (PIAPS) that have not been burdened with permits are actually small, only 9.5 million hectares (10.7 percent) out of the 88.7 million hectares of natural forests in Indonesia in 2018. The largest of such forests exist in Papua (1.3 million hectares), Maluku (912 thousand hectares), East Nusa Tenggara (857 thousand hectares), Central Kalimantan (855 thousand hectares), Central Sulawesi (821 thousand hectares), East Kalimantan (586 thousand hectares), and North Maluku (581 thousand hectares)

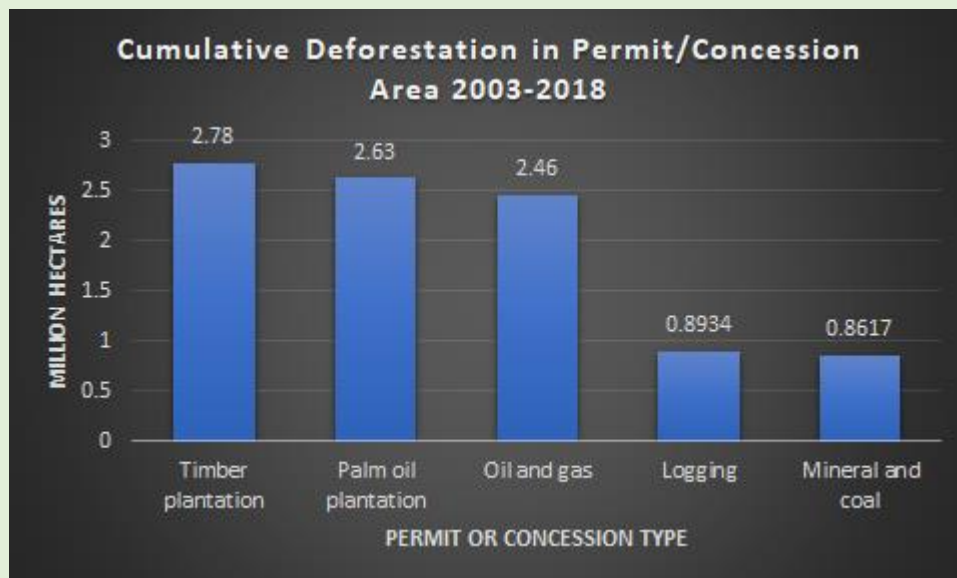


**Figure 3.** Gross deforestation 2003-2018 and the remaining natural forests in 2018

## Deforestation inside existing permits/concessions

At the expense of public awareness, the government has never disclosed how much deforestation is occurring in existing permits/concessions that have been identified as drivers of deforestation. Based on Madani's spatial analysis, in the period of 2003-2018, among logging, timber plantation, oil and gas, mineral and coal, and palm oil plantation permits or concessions, the highest number of deforestation occurred in timber plantation permits (2.78 million hectares), followed closely by palm oil plantations (2.63 million

hectares), oil and gas concessions (2.46 million hectares), logging permits (893.4 thousand hectares), and mineral and coal concessions (861.7 thousand hectares) - See Figure 4.<sup>5</sup>

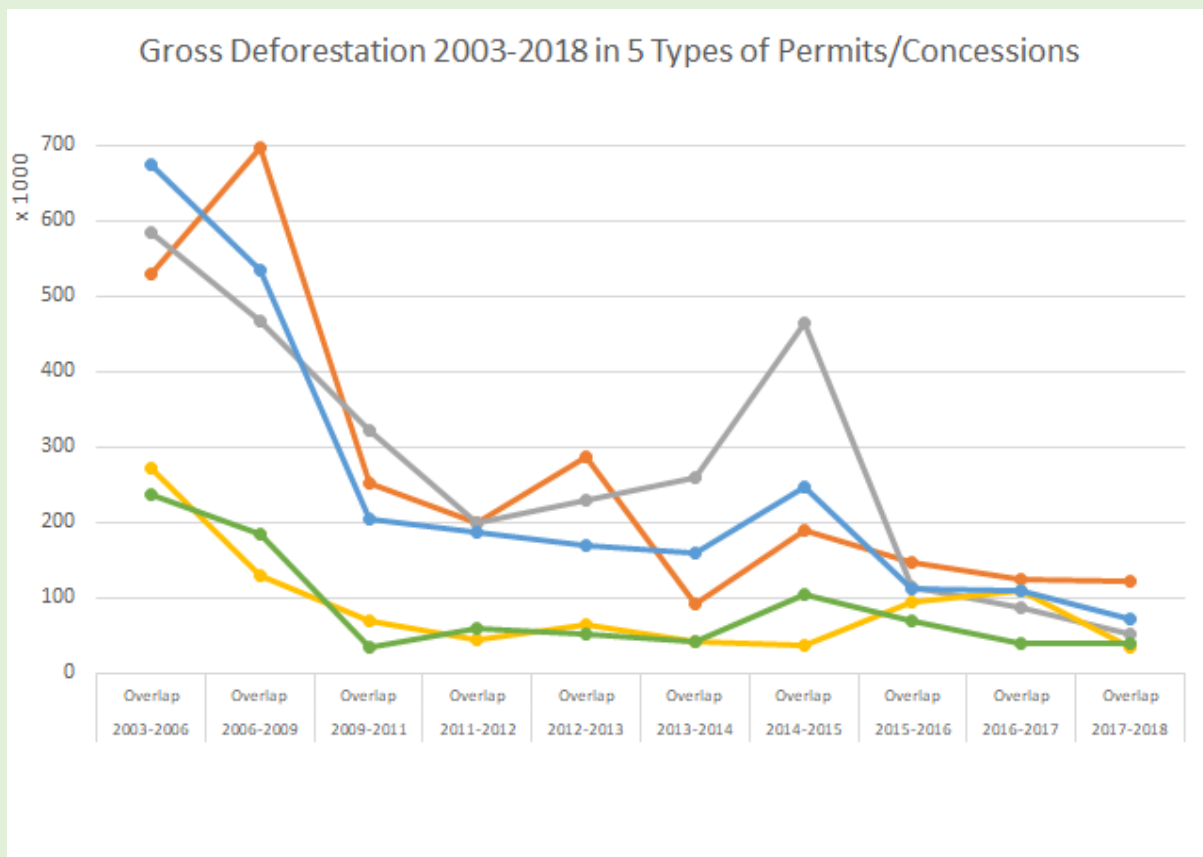


**Figure 4.** Cumulative deforestation in permit/concession area 2003-2018

During 2003-2018, gross deforestation rate in permits or concession area shows a declining trend as the size of natural forests shrinks. Before 2014-2015, deforestation rate in timber plantation and palm oil plantation area was almost equal in size. However, after 2015, deforestation in palm oil plantations always ranks first, ranging above 100 thousand hectares per year.

In 2016-2017, gross deforestation in palm oil plantation permits reached 124 thousand hectares, declining slightly to 121 thousand hectares in 2017-2018. On the other hand, deforestation in timber plantation concessions declined almost 40% from 2016-2017 to 2017-2018, from 86.4 thousand hectares to 52.1 thousand hectares. Deforestation in logging concessions declined even more steeply from 2016-2017 to 2017-2018, which is 66% from 99.7 thousand hectares to 33.1 thousand hectares – see Figure 5.

<sup>5</sup> It should be noted, however, that the deforestation data published by the Ministry of Environment and Forestry shows incidents of “repeated deforestation” in an interval of 3-14 years, which may result from the government’s formal definition of forested land, which includes timber plantation.



**Figure 5.** Gross deforestation 2003-2018 in 5 types of permits/concessions

Orange: Deforestation in Palm Oil Plantation Permit Area

Grey: Deforestation in Timber Plantation Permit Area

Yellow: Deforestation in Logging Permit Area

Blue: Deforestation in Oil and Gas Concession Area

Green: Deforestation in Mineral and Coal Concession Area

**Note:** There are overlaps between the five permits/concession area

## Natural forests inside existing permits/concessions

Saving natural forests inside palm oil plantation permits is necessary to reach Indonesia’s climate target as identified in the draft NDC Roadmap.<sup>6</sup> However, it is quite challenging because such forests have legally been “given away” to permit-holders (provided they have obtained all necessary permits) and thus can be legally deforested. In reality, however, due to land banking practice by permit-holders, a significant amount of natural forests still exist in palm oil plantation permits.

According to data from Directorate General of Climate Change in their NDC Roadmap presentation, there are approximately 1.4 million hectares of natural forests inside palm oil Land Use Right (HGU), more than half (759,462 hectares) are in protected areas, which

<sup>6</sup> Director General of Climate Change, “Unfolding First NDC: Roadmap NDC Mitigasi,” presentation during the Climate Festival held by the Ministry of Environment and Forestry, 3 October 2019.



should not be converted.<sup>7</sup> According to Madani's spatial analysis, if we count palm oil permits other than HGU (including the non-definitive but often operational on the ground Location Permit and Plantation Business Permit), the remaining natural forests in palm oil permit areas in 2018 reaches 3,415,602 hectares.<sup>8</sup>

Meanwhile, according to data from the Coordinating Ministry of Economic Affairs, forest zone that has been released for palm oil plantations reaches 5,875,585 hectares, including forested areas with size of 1,468,452 hectares and 1,503,316 hectares that have not been developed or are indicated of being misused.<sup>9</sup> Based on these data, the palm oil moratorium policy should be able to save these forests - at least 1.4 million hectares - and ideally all natural forests remaining in palm oil permits – operational or not – through various measures including enforcement of HCVF areas.

Unfortunately, the implementation of the palm oil moratorium, which will end in September 2021, shows little progress and the process of permit evaluation as well as its follow-up has been very closed to the public. In addition to the COVID-19 pandemic, a change in nomenclature in which the MoEF is now under the coordination of Coordinating Ministry of Maritime and Investment (previously under the Coordinating Ministry of Economic Affairs) seems to further hamper the implementation of the policy. As a part of resolution of palm oil permits existing in the forest zone, the MoEF is said to be developing a Government Regulation on Resolution of Palm Oil Plantations in the Forest Zone, but the process is closed to the public.

As to natural forests inside timber plantation concessions, data from DGCC shows that forested area inside timber plantation concessions reaches 2.9 million hectares, including 1.49 million hectares in areas with protected function, which should be conserved.<sup>10</sup> Through the NDC Roadmap, the government is attempting to address this planned deforestation through "policy innovations." However, there has been no concrete regulations or policies deriving from this plan.

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<sup>7</sup> Ibid.

<sup>8</sup> Madani's spatial analysis based on land cover map 2018 from the Ministry of Environment and Forestry and palm oil plantation permits data from various sources.

<sup>9</sup> Coordinating Ministry of Economic Affairs, "Pencapaian Inpres No. 8 Tahun 2018 tentang Penundaan dan Evaluasi Perizinan Perkebunan Kelapa Sawit dan Peningkatan Produktivitas Perkebunan Kelapa Sawit," presented in Jakarta on 9 October 2019.

<sup>10</sup> Director General of Climate Change, "Unfolding First NDC: Roadmap NDC Mitigasi," presentation during the Climate Festival held by the Ministry of Environment and Forestry, 3 October 2019.

## Indicative Map of Permanent Forest Moratorium (PIPPIB) 2020

On 26 February 2020, the MoEF enacted Ministerial Decree No. SK. 851/MENLHK-PKTL/IPSDH/PLA.1/2/2020 on Indicative Map of the Stoppage of Issuance of New Permits in Primary Natural Forests and Peatland for the first period of 2020. The permanent forest moratorium policy is the backbone of Indonesia's reduction of deforestation efforts and a major mitigation policy in the forestry sector. Positively, the area protected by the policy increased by 314.3 thousand hectares, making the protected area reaching 66.3 million hectares.<sup>11</sup>

However, the public is never informed about the detailed reasons for subtraction or increase of area protected by this policy, making assessment and monitoring difficult. The government only cites the following blanket reasons for every change in every revision period, which is every 6 months: confirmation of permits issued before Presidential Instruction 10/2011, updating of permit database, spatial plan revision, updating of forest zone allocation, and results of peatland and primary forests survey.<sup>12</sup>

## Forest Fire 2019 Analysis

Forest fire, especially peat fire, is one of the largest contributors of GHG emissions from the forest and land sector in Indonesia. In 2019, fire in Indonesia burnt 1.6 million hectares of forest and land, 44% of which in areas classified as Peatland Ecosystem (Madani, 2020). Quite disturbingly, according to Madani's [analysis](#) 63% or more than 1 million hectares of forest and land fire in 2019 was newly burnt area, which was burnt the first time in 2019 since 2015. Overall, Central Kalimantan and South Sumatera have the largest burnt area in 2019. Meanwhile, the newly burnt area with the largest size is located in three provinces: Central Kalimantan (202,468.86 hectares), South Sumatera (185,125.12 hectares), and West Kalimantan (125,058.60 hectares). These three provinces also saw a high rate of increase in planted palm oil size in the period of 2015-2018: West Kalimantan with 129,471 hectares/year, Central Kalimantan 1243,444 hectares/year, and South Sumatera with 78,607 hectares/year (Ministry of Agriculture 2015-2018).

<sup>11</sup> <http://webgis.menlhk.go.id:8080/kemenhut/index.php/id/peta/pippib>.

<sup>12</sup> "KLHK Tetapkan Peta Indikatif Penghentian Pemberian Izin Baru Tahun 2020 Periode I," Press Release by Ministry of Environment and Forestry No. SP. 163/HUMAS/PP/HMS.3/4/2020, accessed from [ppid.menlhk.go.id](http://ppid.menlhk.go.id) on April 30, 2020.

Madani's analysis revealed that fire in Peat Ecosystem in 2019 is very significant (44% or 727,972 hectares), including fire in areas protected by the permanent moratorium policy, which constituted 31.35% of the total burnt area, 64.41% of which is in Peat Ecosystem. Among three types of permits/concessions (palm oil plantation, timber plantation, logging), fire in palm oil plantation areas was the largest (217.49 thousand hectares), followed closely by fire in timber plantations (190.83 thousand hectares), and logging (30.81 thousand hectares). The majority (59.66%) of fires in palm oil plantations occurred in the Peat Ecosystem while in timber plantation areas, fire in Peat Ecosystem stood at 38.66%.

In 2019, the dominant land that was burnt was not forests, but swamp bushes, savanna, plantations, dry land agriculture, land without vegetation, and bushes. "Only" 74,997 hectares of forests were burnt, dominated by secondary forests (92.8%).

Looking forward, Madani recommended early warning and prevention measures in five provinces that have the largest areas prone to fire (based on land type, proximity to permits and concessions, existence of Peat Ecosystem and history of fire in 2015-2019): Central Kalimantan, West Kalimantan, Papua, East Kalimantan, and South Sumatera.

## Social Forestry Realization May 2019

Social forestry - one of Indonesia's priority policies to eradicate poverty - is listed in the National Medium-Term Development Plan (RPJMN) 2020-2024 under National Priority 4. The RPJMN set a target that 12.1 million hectares of forest zone will be managed by the people by 2024 with a separate target for village forest, community forestry, community timber plantation, and forestry partnership, which is 8 million hectares. The RPJMN also set a target for customary forests ("hutan adat"), which envisions recognition of 40 customary forests by 2024.<sup>13</sup>

Up to 2 May 2020, the realization of social forestry is **4,105,268.03 hectares** (6,548 units), involving more than 830 thousand households. However, this number includes the allocated or indicative area of customary forests that has not actually been enacted, with the size of more than 914 thousand hectares.<sup>14</sup> Of the five social forestry schemes already realized, village forest is the largest, followed by community forestry, forestry partnership with forestry permit holders, community timber plantation, customary forests, and forestry partnership with Perhutani (see Table below).

<sup>13</sup> National Medium-Term Development Plan 2020-2024, Development Matrix, p. A. 4. 12

<sup>14</sup> Directorate General of Social Forestry, "Capaian Perhutanan Sosial sampai dengan 2 Mei 2020," presentation slides.

No.	Scheme	Size (Ha)
1.	Village Forest (HD)	1,573,945.15
2.	Community Forestry (HKm)	763,446.64
3.	Community Timber Plantation (HTR)	352,351.68
4.	Forestry Partnership (KK)	
	With forestry permit holders (Kulin KK)	429,840.60
	With Perhutani (IPHPS)	26,127.49
5.	Customary Forest (HA)	
	Enacted	44,629.34
	Allocated	914,927.13
	<b>TOTAL</b>	<b>4,105,268.03</b>

## Updated Nationally Determined Contribution (NDC) 2020

### Substance

Indonesia's First NDC submitted in 2016 contained a target up to 2030, which means that in 2020 Indonesia is only mandated to communicate its updated NDC. Until the report is written, despite repeated requests from civil society, the government has not disclosed the final draft of the Updated NDC, which still has to be approved by the Minister of Environment and Forestry and subsequently the President before being submitted to the UNFCCC. However, based on information from a webinar on Updated NDC held by the Environment Institute (13/4)<sup>15</sup> Indonesia will not increase its mitigation ambition and hence Indonesia's emission reduction target remains at 29%-41% from BAU baseline in 2030.

In its Updated NDC, however, Indonesia is said to have increased clarity in mitigation by adopting the Paris Rulebook and clarified the National Registry System (SRN) as the "backbone" of Indonesia's transparency framework. Indonesia has also updated some policies considered to be contributing to an increase in NDC target achievement, including the biodiesel blending mandate (B30-B100), which implementation has been accelerated from 2030 to 2020. With this, biofuel policy is reaffirmed as one of the main mitigation actions of Indonesia, especially from the energy sector.

<sup>15</sup> Presentation of Dr. Nur Masripatin, "Updated Nationally Determined Contribution (NDC) Indonesia" at Environment Talks 2020 held by Environment Institute on 13 April 2020.

In terms of adaptation, Indonesia's Updated NDC is said to have increased adaptation ambition by including details regarding adaptation programs, strategy, and actions. Regarding Long-Term Strategy, Indonesia's Updated NDC is said to be connecting the current situation and milestones contained in the National Medium-Term Development Plan 2020-2024 (RPJMN) with indicative pathways towards Indonesia Vision 2045. However, the Long-Term Strategy itself is still in the development phase and Indonesia will not announce its emission peaking time anytime soon.

Indonesia's apparent lack of increased ambition in mitigation is met with disappointment among civil society, especially because there was a hope that the mitigation target in the energy sector would be ramped up. In the energy sector, Indonesia's NDC has not reflected the urgent need to phase out coal. The government through its electricity procurement plan (RUPTL 2019-2028) still plans to [double up](#) the capacity coal-fired power plants to meet the increasing energy demand. According to the Institute for Essential Services Reform (IESR), to be in line with the Paris Agreement's goal, Indonesia must [stop building new coal-fired plants by 2020](#). Meanwhile, Indonesia's renewable energy target (23% in 2025) seems to be contributed heavily by the biodiesel blending mandate (B30-B100) for transportation and power sector, which sparks controversy because it carries risks to [drive deforestation and peatland destruction in Indonesia](#).

In the land and forestry sector, the government has always maintained that ambition in this sector is already too ambitious and could not be made higher. However, Indonesia is in the process of updating its Forest Reference Emission Level (FREL) for REDD+, which opens up hope that the new FREL will reflect increased ambition in this sector by adopting a more ambitious deforestation baseline.

## Process

There are at least two kinds of criticisms levelled towards the process of developing Updated NDC in Indonesia. The first pertains to the process, which is viewed as less inclusive than desired. The second is the substance that does not reflect civil society's inputs, especially regarding increased ambition in mitigation. Regarding the former, in the raw draft Updated NDC circulating among CSOs, the government claimed that public consultations with civil society had been conducted at the national and regional level. However, civil society raised questions because such consultations involved too few organizations and because no official draft with status of inputs have been disclosed. On February 23, the civil society coalition submitted last minute [inputs](#) to increase Indonesia's ambition in the Updated NDC to the government. In the land sector, the inputs are as follows:

1. **Strengthening the permanent forest moratorium policy** to include all types of natural forests, including those classified as secondary forests, with the potential addition of 9.5 million hectares of forests to be protected.<sup>16</sup>

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<sup>16</sup> Madani's Spatial Analysis, 2020.



2. **Increasing peatland restoration target** from the current target of 2.78 million hectares by 2020 (target for Peatland Restoration Agency) or 2 million hectares by 2030 (NDC target) to 4.6 million hectares by 2030. According to Wijaya et al. (2017), the potential of increased carbon removal from this increase is 11 tCO<sub>2</sub>e/hectare/year.<sup>17</sup>
3. **Accelerating the realization of social forestry target** (12.7 million hectares) and strengthening community empowerment to reduce deforestation and degradation and increasing forest and land rehabilitation. Providing forest-dependent communities with secure tenure in the indicative area of social forestry with high deforestation risk, which size reaches 1.37 million hectares, has the potential to contribute 34.6 percent to NDC target from reducing deforestation (Boer et al., 2019).<sup>18</sup> In addition, forest and land rehabilitation in social forestry areas with the size of 2.2 million hectares by 2030 has the potential to increase carbon removal by 2.5 tCO<sub>2</sub>e/hectare/year (Wijaya et al., 2017).
4. **Ensuring reduction of degradation** to become one of the government's priorities in climate change mitigation because the degradation trend is increasing.<sup>19</sup>
5. **Preventing forest and peat fires** by strengthening law enforcement against corporations that drain peatland and whose concessions burn.
6. **Conserving natural forests inside forestry and plantation permits** through innovative policies and REDD+ incentives.
7. **Conserving the remaining mangrove forests**, which serve both as carbon pools and guardian of food security for coastal communities.

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<sup>17</sup> Arief Wijaya et al., 2017, "How Can Indonesia Achieve Its Climate Change Mitigation Goal? An Analysis of Potential Emissions Reduction from Energy and Land -Use Policies." Working Paper. Jakarta, Indonesia, [www.wri.org/publication/how-can-indonesia-achieve-its-climate-goal](http://www.wri.org/publication/how-can-indonesia-achieve-its-climate-goal).

<sup>18</sup> Madani dan Yayasan Climate & Society, 2019, "Kontribusi Perhutanan Sosial terhadap Pencapaian NDC Indonesia: Studi Kasus KPH Bukit Barisan."

<sup>19</sup> Government of Indonesia, 2018, Emission Reduction Report for Norway

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