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Major rainforest nations not in line with Paris Agreement

The destruction of tropical rainforests needs to end by the end of this decade to meet the Paris Agreement's goal of keeping global warming at 1.5 degrees. A closer look at the Nationally Determined Contributions of the world's largest rainforest nations show that they fall far from this target. We find that these countries can deforest 20 million hectares of tropical forests over the next decade, with emissions of 10 gigatons of greenhouse gases, and still be within their Paris Agreement contributions. This could mean that 2% of global emissions will come from deforestation in these 5 countries alone.



In 2018, Rainforest Foundation Norway (RFN) analysed the Nationally Determined Contributions (NDCs) of the world's largest rainforest nations, finding that they all fail to meet the target of ending deforestation and forest degradation by 2030¹. Since then, all countries have been encouraged to submit new and improved NDCs before implementation started this year. Colombia, Peru, and Brazil have all submitted new NDCs, while Indonesia and DRC are yet to do so. This new analysis by RFN shows that despite these updates, we are not closer to ending deforestation by 2030.

Studies have identified that so-called natural climate solutions, in particular the protection and restoration of natural, carbon-rich ecosystems, has the potential to deliver as much as 1/3 of the emissions reductions needed to keep global warming below 2 degrees². The by far largest potential comes from ending deforestation, forest degradation and restoring forests. This makes ending deforestation and forest degradation by 2030, especially in the tropics where the loss is still accelerating, a key part of any successful strategy for curbing global warming. A comprehensive review of the scientific literature on mitigation pathways from 2018 concluded that to meet the 1.5-degree target while promoting ecosystem protection, biodiversity, sustainable development, and human rights, deforestation and degradation needs to be reduced by 50% by 2020 and ended completely by 2030³.

Our analysis looks at five of the largest rainforest countries – **Brazil, DRC, Indonesia, Peru, and Colombia**. They are also five out of the six countries in the world with the highest loss of primary forests⁴. In 2018, none of the NDCs analysed were in line with ending deforestation or degradation by 2030 – a goal all of them except Brazil has signed on to as part of the New York Declaration on Forests⁵. Our updated analysis shows that their climate contributions are still far from ending deforestation and forest degradation by 2030.

Brazil

Worst is the case of Brazil, who actually takes a step back from the pledge in its initial NDC. The targets in the new NDC remain the same, with Brazil pledging to reduce its emissions by 37% lower than 2005 by 2025 and 43% lower by 2030. However, it changes how the baseline is calculated – and by quite a lot – following a change of methodology in calculating the emissions in the base year of 2005. This increases the baseline from 2.1 billion tons of carbon dioxide equivalent (GtCO₂eq) to 2.8 GtCO₂eq. Applying the same 43% reduction for 2030 against this new baseline means that emissions in 2030 will be 1.6 GtCO₂eq. This is around 400 million tons of CO₂eq higher than Brazil's indicative 2030 target from the initial NDC. It is also the same emission level as Brazil had in 2019, a year when deforestation and forest fires in the Amazon skyrocketed – showing that the new target will allow Brazil to continue to destroy the world's most important ecosystem while still meeting their NDC obligation. Deforestation in 2019 in the Amazon was 10,129 km² - well above the 3,925 km² target for 2020 that the country has committed itself to in the National Policy on Climate Change⁶.

Brazil is also backtracking on their 2025 target, which was binding in their previous NDC. With the revised baseline, they have allowed themselves an additional 460 million tons of emissions in 2025, while still meeting the 37% target. They have also gone from explicitly stating that the 2025 target was not conditional on international support, to saying that *“as of 2021, Brazil will require at least US\$ 10 billion per year to address the numerous challenges it faces, including the conservation of native vegetation in its various biomes”*⁷, implying that any action to reduce deforestation and degradation is conditional on international support. In sum, Brazil's new NDC represents a massive backtracking against previous ambitions and obligations.

1) Rainforest Foundation Norway (2018) “Approaching the Point of No Return”

2) Griscom, B.W. et al. (2017) “Natural Climate Solutions,” Proceedings of the National Academy of Sciences 114 (44): 11645–50.

3) Dooley, K et al. (2018) Missing Pathways to 1.5°C: The role of the land sector in ambitious climate action. Climate Land Ambition and Rights Alliance.

4) <https://research.wri.org/gfr/forest-pulse>

5) <https://forestdeclaration.org/goals>

6) http://www.planalto.gov.br/ccivil_03/_Ato2015-2018/2018/Decreto/D9578.htm#art25

7) Brazil's first NDC (updated submissions), submitted 9/12/2020. All NDCs are available at <https://www4.unfccc.int/sites/NDCStaging/Pages/All.aspx>

Colombia

The only really good news amongst the major rainforest nations is from Colombia, which has substantially increased its emissions reductions target from a 30% reduction to 51% in 2030⁸. Although the business-as-usual baseline has been increased, the new emissions reduction target will mean total emission of no more than 169 MtCO₂eq in the year 2030. This is unconditional of international support. The new target represents a significant improvement in ambition compared to the old NDC, which meant 234,5 MtCO₂eq of national emissions in 2030 even with international support. Colombia's total emissions in the year 2014 was 214 MtCO₂eq⁹.

Colombia also specifies a target of reducing the annual deforestation to 50 000 hectares in 2030. This is a significant improvement of ambition and would mean an 85 % reduction in deforestation compared to 2020. It would also be the lowest deforestation rate Colombia has had since 2001. However, the development in Colombia is currently going in the opposite direction – in 2020 the loss of primary forest in Colombia increased a staggering 44,3%¹⁰. The NDC means that Colombia must curb and reverse this trend significantly, but also that deforestation and forest degradation will continue in Colombia in 2030 unless ambition is increased further.

Peru

Peru has also increased their target, from 20% reduction in 2030 to 30%¹¹. Peru also commits to increasing the reductions to 40% conditional on international support. The reductions are against a business-as-usual baseline with a significant growth in emissions, including a 70 percent increase in emissions from deforestation and degradation from 2010 to 2030. So, while the new targets increase Peru's overall ambition, the NDC is still far from ending deforestation or forest degradation by 2030.

The updated version of Peru's NDC does not have a specific target for the land use or forestry sector, which the previous version had. There is also no specific deforestation target. Assuming that the same distribution of emissions reduction between land use and forestry sector and other sectors will be similar as in the previous NDC, the new targets mean emissions in the land use and forestry sector of 90 million tonnes in 2030, and 74 million conditional on international support. This would still allow for significant deforestation in Peru in 2030.



Photo: Araquem Alcantara

8) Colombia's first NDC (updated submission), submitted 30/12/2020

9) Colombia's second Biennial Update Report, submitted 11 Apr 2019, <https://unfccc.int/documents/194659>

10) Numbers on primary forest loss in Colombia from Global Forest Watch, <https://www.globalforestwatch.org/dashboards/country/COL/>

11) Peru's first NDC (updated submission), submitted 28/12/2020

Indonesia

Indonesia has so far not updated their NDC. There are indications that they might do so shortly, possibly during the Leader's Climate Summit hosted by President Biden on the 22nd of April. However, Indonesia has made it clear that it has no intention of increasing its ambition for the forestry sector, claiming that they already have a very ambitious target. And on the face of it, this has some merit, as the current NDC plans to reduce emissions from the forestry sector by 2030 with 82 percent compared to 2010, conditional on international support¹². However, the NDC also makes clear that even with 82 percent emissions reductions, Indonesia assumes their annual deforestation will be 325 000 hectares annually up to 2030. The mitigation will rather be through forest restoration than from reducing deforestation. This means that 3.25 million hectares of forest, an area the size of Belgium, could be deforested between now and 2030 even when reaching the NDC target.

In recent years, Indonesia has been successful in reducing its deforestation, bringing the loss of natural forests down to 117 000 hectares in the forest year 2019-2020¹³. The last three years have all been below the 325 000 hectares indicated in the NDC. This shows that the target for emissions reductions in the forestry sector is not as ambitious as the Indonesian government claims, at least in reducing deforestation, and that they have room to do more to meet the challenge of climate change. Indonesia should therefore revise and improve its NDC targets, also for the forestry sector, to be in line with ending deforestation as early as possible and no later than 2030.

The continued high level of deforestation means that a large part of the mitigation Indonesia is planning in the forestry sector rests on restoring forests. The NDC specifies that the target depends on restoration of 12 million hectares of currently unproductive land. It is good that Indonesia plans to restore unproductive lands much of it previously forested, however it cannot excuse continued deforestation. The NDC also does not specify what kind of restoration this will be. To maximize its contribution to climate mitigation, as well as the adaptation, biodiversity, and sustainable development benefits from this restoration, as much of this as possible should be restoration back to natural forests and ecosystems. The formulations in the current NDC rather gives the impression that this will be plantations, which provides no-where near the same mitigation¹⁴.

DRC

The Democratic Republic of the Congo have also not submitted a new NDC. Its initial NDC targets a 17 percent reduction by 2030 compared to a business-as-usual baseline – a reduction of just over 70 million tons of CO₂¹⁵. Practically all this reduction is intended to be taken in the land use and forestry sector. Still, emission in the land-use and forestry sector would be 50 percent higher in 2030 than in 2010 even when meeting its NDC. From 2010 to 2020, tree cover loss in DRC has increased by 61,5% while loss of rainforest has increased by 85%¹⁶. This suggests that DRC needs to achieve some reduced emissions in the land-use and forestry sector to meet the NDC target. However, the NDC also says that much of the emission reduction in this sector is to be achieved through afforestation and reforestation measures. Therefore, it is likely that deforestation in the DRC can continue *at least at 2020 level*, a year when deforestation increased by 3,3% to a loss of 4 910 km² of primary forest, depending on what kind of reforestation and afforestation DRC does. The current NDC is therefore far from doing what is necessary to stop deforestation by 2030.

Recent developments in the DRC, including the historic passing of an Indigenous Peoples' law¹⁷, could indicate an increased interest in protecting its vast rainforests by recognizing indigenous peoples' land and resource rights. Hopefully, this will be followed up with a new and more ambitious NDC that stakes a path to end deforestation and degradation by 2030.

12) Indonesia's first NDC, submitted 06/11/2016

13) Official deforestation numbers from Government of Indonesia, <http://ppid.menhk.go.id/berita/siaran-pers/5848/laju-deforestasi-indonesia-turun-7503>

14) Lewis, Simon et al. (2019). "Restoring natural forests is the best way to remove atmospheric carbon". Nature, Vol 568

15) Democratic Republic of the Congo First NDC, submitted 13/12/2017.

16) Numbers on tree cover loss and loss of humid primary forest from Global Forest Watch, <https://www.globalforestwatch.org/dashboards/country/COD/>

17) <https://www.regnskog.no/en/news/how-the-drc-could-become-a-model-on-climate-and-biodiversity>

What does this mean for the rainforest in the coming decade?

It's beyond doubt that these five NDCs all fall short of the need to end deforestation and degradation by 2030. Collectively *and* individually, the ambitions of the most important rainforest nations are not in line with what is needed to meet the goals of the Paris Agreement. The rainforests, and the world's climate, is in urgent need of increased ambitions and action.

Due to a lack of specific targets for reducing deforestation, with the notable exceptions of Indonesia and Colombia, it is impossible to say with certainty how much deforestation these NDCs will lead to. However, based on the information available and some very basic assumptions, we can make a rough estimate.

Indonesia is explicit in that even their conditional target could be met while deforesting 325 000 hectares annually up to 2030. This means 3.25 million hectares of deforestation cumulatively up to 2030.

Brazil could continue deforestation in the Amazon alone at least at today's level, which was 1 million hectares in 2019. This means 10 million hectares of deforestation cumulatively up to 2030.

DRC could also continue to deforest at least 491 000 hectares of primary forest annually, depending on the scale and form of their reforestation efforts. This means 4.91 million hectares of deforestation cumulatively up to 2030.

Colombia aims to reduce deforestation to 50 000 hectares in 2030. Assuming a linear reduction from the 320 000 hectares that was lost in 2020, this still means about 1,7 million hectares of deforestation cumulatively up to 2030. Peru does not provide enough detail to make such a calculation.

Taken together, this means that these four countries could lose about 20 million hectares of forests over the next ten years, while meeting their NDC targets. This equals an area roughly the size of Guyana.

A lot would be carbon-rich rainforest. Half would be in Brazil alone.

This will lead to emissions of 10 gigatons of CO₂ over the next decade¹⁸, 1 gigaton per year on average. That would be about 2% of annual global emissions, coming from deforestation in these four countries alone.

With a rapidly shrinking carbon budget for the 1.5-degree target and looming tipping points for extremely carbon- and biodiversity rich ecosystems such as the Amazon, it is clear that the major rainforest countries need to shift gear in addressing and stopping deforestation and forest degradation. This should be reflected in increased ambitions in their NDCs, to bring them in line with the Paris Agreement. We've got no more time to lose. 

18) This is based on an emission factor of 500 tons per hectares, which is a fairly conservative estimate for tropical forests with more than 30% canopy cover. Much of the forest in question will probably have significantly higher canopy cover, and hence be more carbon dense.