ZERO NET DEFORESTATION: STATUS REPORT

HOW FAR DO CURRENT NATIONAL TARGETS GET US?

About WWF-UK

WWF was established in 1961 and is at the heart of global efforts to address the world's most important environmental challenges. We work with communities, businesses and governments in over 100 countries to help people and nature thrive. WWF advocates for Zero Net Deforestation and Degradation of forests by 2020. We hope this report will help to increase the ambition on forests in the international climate process and under the new Sustainable Development Goals towards a zero deforestation future.

OVERVIEW

In a year when targets on forest loss and restoration are likely to be set nationally and at the UN level, this study quantifies the ambition of commitments currently stated by forest countries to slow and reverse their forest loss – individually and collectively.

Our report catalogues and analyses forest-related commitments and pledges made by 14 countries which together represent over half of current and projected tropical forest area loss. We seek to draw attention to the ambitious targets of some countries and the need for greater international support for meeting them, as well as to identify opportunities where additional ambition is possible. In selecting the 14 countries, we focused on those that fall within 11 global 'deforestation fronts' identified by WWF in 2015.

We assess their commitments against two targets: first, the goal of Zero Net Deforestation and Degradation by 2020, as advocated by WWF (ZND-2020); and, second, halving the rate of natural forest loss by 2020 and eliminating it by 2030 (ZND-2030). The latter is based on the timeline in New York Declaration on Forests made in September 2014.

Our findings show that if the commitments catalogued in this study were delivered successfully, they would reduce annual net forest loss in *deforesting tropical countries*[a] by 30% in 2020 and 28% in 2030. This is compared to the *projected loss* for each year without the targets[b,c].

An additional 1.1 million hectares of restoration effort is targeted by 2020 in several countries that could be considered on course for ZND-2020 – namely Colombia, Ecuador and Peru – and the Democratic Republic of the Congo which could reach ZND-2030. Indonesia and Papua New Guinea could also reach ZND-2030.

Altogether, this would amount to a reduction in net forest-related emissions of 40% in 2020 and 53% in 2030 against emissions in the projected loss scenario. This could achieve annual reductions of 1.9 GtCO2e in 2020 (more than three times the annual emissions of the UK) and 2.7 GtCO2e in 2030[d].

CURRENT TARGETS COULD REDUCE ANNUAL FOREST LOSS IN THE TROPICS IN 2020 BY AN AREA ABOUT THE SAME SIZE AS BELGIUM
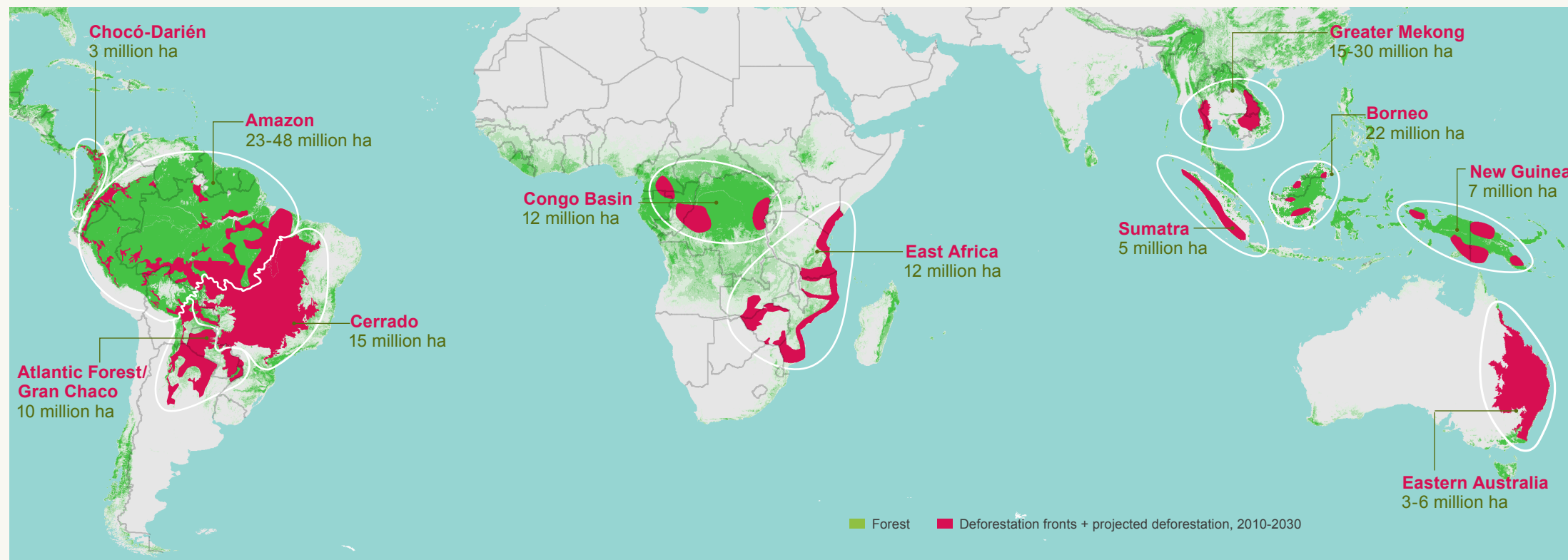
Figure 1: The 11 deforestation fronts identified by WWF for the period 2010-2030.
(Source: *WWF Living Forests Report Chapter 5: Saving Forests at Risk*, 2015)

This is significant progress but falls far short of both of the two targets above, and leaves huge potential emissions savings neglected. Exceeding the existing targets to reach ZND in 2020 in these 14 countries alone could save 3.0 GtCO2e in annual emissions. If ZND were achieved in 2030 instead, a decade of higher forest emissions would result, even if a similar amount would be saved in annual emissions from 2030 on.

We hope this report will increase awareness and understanding of the national and global targets in forest and climate discussions this year. And that such transparency will help to increase the ambition of forest sector action in the process leading up to the Paris climate conference in December 2015 and following the agreement of new Sustainable Development Goals in September 2015.

BACKGROUND

The value of forests

International action to halt forest loss is essential for global prosperity. There is overwhelming evidence that healthy forests have significant value both locally and globally. They are home to over half the world's terrestrial species[1]. The services they provide range from regulating the global climate to reducing local flood risk, and from local provision of food, fuel and fibre to driving a global forestry industry[2,3].

Tropical forest loss is responsible for 16-19% of the total annual global greenhouse gas emissions, while forest growth offsets about 8-11% of total anthropogenic emissions[4] – so their influence on the future of our global climate is enormous.

Yet, forests are still being lost at an alarming rate. In 2015, a WWF report found that on a business-as-usual path, 127-170 million hectares of forest could be cleared between 2010 and 2030 in 11 'deforestation fronts' – over 80% of the global total in the same timeframe[5] (see figure 1).

Opportunities

There is cause for hope. For example at the national level, Brazil reduced rates of deforestation by 70% between 2004 and 2013, while its soy and beef sectors simultaneously enjoyed significant growth[6].

At the global level, dozens of governments, businesses and civil society organisations expressed their collective ambition when they signed the New York Declaration on Forests (NYDF) in 2014[7]. This declaration commits its signatories to work together towards two outcomes in particular:

- At least halve the rate of loss of natural forests globally by 2020 and strive to end natural forest loss by 2030.

- Restore 150 million hectares of degraded landscapes and forestlands by 2020 and restore at least an additional 200 million hectares by 2030.

The NYDF builds on other international targets. In 2010, parties to the UN Convention on Biological Diversity (CBD) agreed to the Aichi Biodiversity Targets, which include at least halving the rate of loss of all natural habitats, including forests, and enhancing "the contribution of biodiversity to carbon stocks" by restoring at least 15% of degraded ecosystems[8].

In addition, a group of government ministers from around the world launched the Bonn Challenge in 2011. This sets a global aspiration of restoring 150 million hectares of the world's deforested and degraded lands by 2020. A number of national pledges have been made in contribution to the global aspiration.

International agreements aim to halve the rate of forest loss by 2020 and end it by 2030.

These international targets also precede the Sustainable Development Goals (SDGs) that are due to be agreed in September 2015 by UN member states. The official draft proposed halting deforestation by 2020. But the latest proposals (as of May 2015) suggest pushing the date back to 2030[9].

We support these international agreements, but WWF advocates for 'Zero Net Deforestation and Degradation' (ZNDD) by 2020 as a more challenging but achievable objective[10]. This requires that there is near zero natural forest loss, and no overall loss in forest quantity or quality, but it allows some flexibility. For example, when necessary some degraded forest may be cleared to meet local needs while an equivalent area is restored in an important biodiversity corridor. Delaying that ZNDD target until 2030 would mean releasing at least an additional 24 GtCO2e into the atmosphere[11].

WWF ADVOCATES FOR ZERO NET DEFORESTATION AND DEGRADATION BY 2020 AS A CHALLENGING BUT ACHIEVABLE GOAL

In this study, we focused on zero net deforestation only, given the difficulties in measuring degradation.

Time to act

This year presents pivotal opportunities for the world to act decisively on zero net deforestation. In September, world leaders will gather to agree and launch the SDGs on poverty eradication and sustainable development up to 2030. In December, parties to the UN Framework Convention on Climate Change (UNFCCC) are due to agree a global deal in response to the threat of climate change.

The two agreements could set the stage for large scale action on REDD+ (Reducing Emissions from Deforestation and forest Degradation, and foster conservation, sustainable management of forests, and enhancement of forest carbon stocks) and other strategies to reverse forest loss. However, even optimistic scenarios of the 2015 international climate negotiations expect a large mitigation gap to remain after the Paris deal is brokered[12]. The gap can be reduced significantly if forest countries continue and strengthen their commitment to reversing forest loss, and if partner countries contribute similar ambition and support.

Understanding current ambition

We selected 14 countries for in-depth analysis: Argentina, Bolivia, Brazil, Colombia, Democratic Republic of the Congo (DRC), Ecuador, Indonesia, Malaysia, Mozambique, Myanmar, Papua New Guinea (PNG), Paraguay, Peru and Tanzania. We also considered other major forest nations – Australia, Canada, China, Russia and the US – though we treated these differently because they won't be looking for climate-related international support in the forest sector.

This is not a study into actual change in forest cover. It is a comparison between declared intent (in commitments, pledges, and government policy) and globally stated goals. All the commitments identified are listed in the Appendix.

We used a hierarchy of data sources to assess what the commitments would mean for forest cover and emissions. The first priority was country reports to the UNFCCC, as that is where additional commitments and pledges are most likely to emerge in 2015. Second was country reporting to the UN Food and Agriculture Organisation (FAO) and occasionally the CBD. Third, satellite and remote sensing data from Hansen et al[13] on tree cover change provided a check on the self-reported data, both in terms of area and emissions.

WE ASSESSED THE IMPACT OF NATIONAL TARGETS FROM A SAMPLE OF 14 COUNTRIES ON FOREST LOSS ACROSS THE TROPICS

STATUS REPORT

Forest loss in the tropics

Our reference case, or projected forest loss[14], shows a historical level of 9.3 million hectares of forest loss per year on average from 2000 to 2010, and projected losses of 10.2 million hectares per year in 2020 and 9.7 million hectares per year in 2030.

We calculated these levels by adding up estimates of national net forest loss across all tropical countries for which net forest change is negative. In other words, we added up forest loss in tropical countries that are, on balance, losing forest and which we call deforesting tropical countries. This explicitly avoids offsetting forest loss in one country with forest gain in another country, thus maintaining that ZND requires "near zero natural forest loss" at the country level.

If all the commitments we identify in this study are financed and delivered in full, they could deliver the following results compared to the projected forest loss:

- A reduction in the total annual net forest loss across deforesting tropical countries of 30% in 2020 (3.0 million hectares) and 28% in 2030 (2.7 million hectares).

- A 40% reduction in total annual net forest loss in 2020 if it includes hectares of forest restoration that goes beyond net zero forest loss in Colombia, DRC, Ecuador and Peru. The DRC in particular has a very ambitious target for forest restoration. However, this figure allows forest loss in one country to be offset by forest cover gain in another.

- A cut in annual forest loss of 24% in 2020 (equivalent to 2.5 million hectares) and 26% in 2030 (2.5 million hectares) when looking only at targets to reduce forest loss, and not the restoration targets.

- A significant annual restoration effort, amounting to 1.6 million hectares in 2020, but falling to just 200,000 hectares in 2030 as the Bonn Challenge targets have yet to be extended beyond 2020 by most countries.

- A reduction in net forest-related emissions of 40% in 2020 and 53% in 2030, potentially achieving annual reductions of 1.9 GtCO2e in 2020 and 2.7 GtCO2e in 2030[15]. Over half of the 2030 reduction is from NYDF signatory countries.

UP TO 95% OF THE EFFORT BEHIND THESE TARGETS COULD BE CONDITIONAL ON INTERNATIONAL FINANCE

It is clear that the existing commitments in the 14 countries make significant progress towards the 2020 and 2030 international goals considered in this study, but they still fall short of ZND-2020 and ZND-2030. Moreover, up to 95% of the effort represented in the targets for both 2020 and 2030 could be conditional on international finance.

IMPACT OF NATIONAL TARGETS ON FUTURE TROPICAL DEFORESTATION

2020

NET FOREST LOSS/GAIN (MILLIONS OF HECTARES)

0

1.1

4

4

3.2

7.2

↑ 30% CHANGE

0.5

6.2

2.5

10.2

PROJECTED WITHOUT TARGETS

WITH TARGETS

2030

NET FOREST LOSS/GAIN (MILLIONS OF HECTARES)

0

4

4

3.1

7.1

↑ 28% CHANGE

0.2

5.7

2.5

9.7

PROJECTED WITHOUT TARGETS

WITH TARGETS
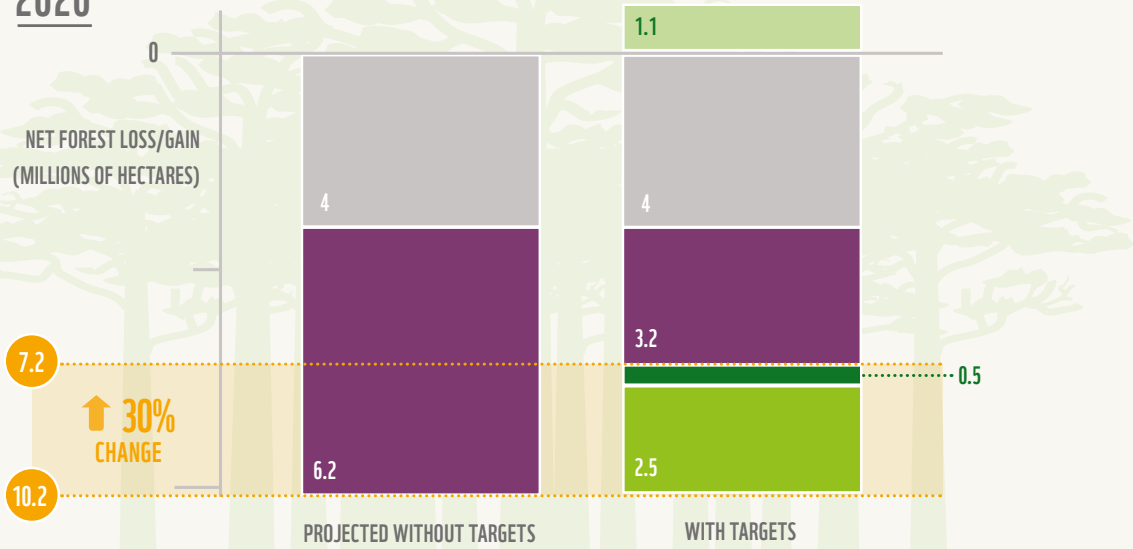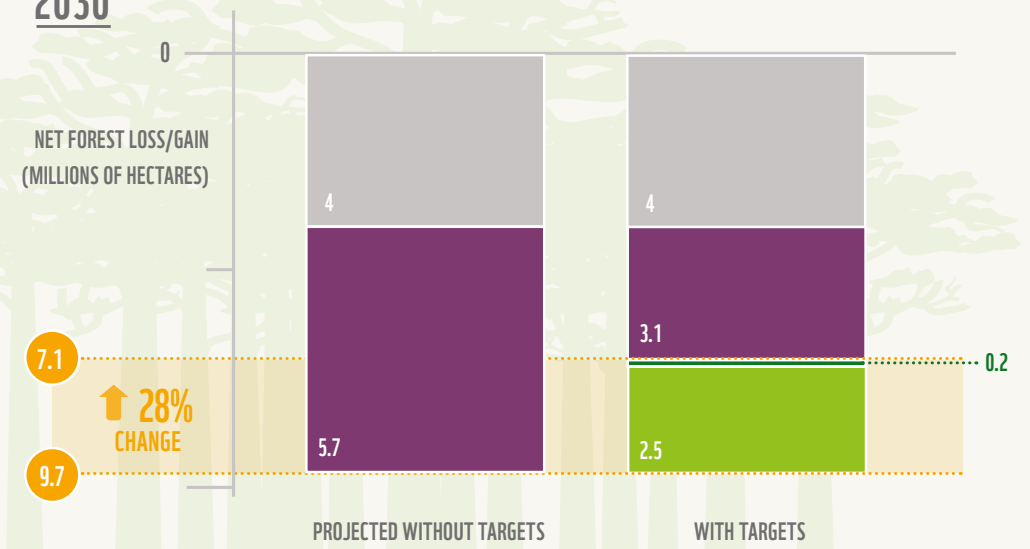
NATIONAL CONTRIBUTIONS TO THE OVERALL REDUCTION OF NET DEFORESTATION

RESTORATION: 1.6 MILLION HECTARES

REDUCED DEFORESTATION: 2.5 MILLION HECTARES

DRC

OTHER

BRAZIL

BRAZIL

OTHER

INDONESIA

DRC

2020

4.1 MILLION HECTARES OF PLEDGED FOREST CONSERVATION AND RESTORATION
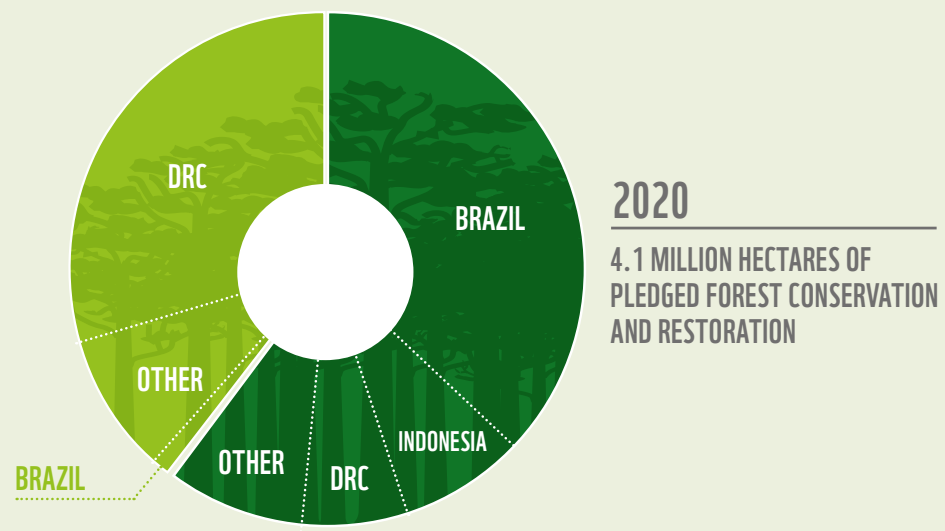
RESTORATION: 0.2 MILLION HECTARES

REDUCED DEFORESTATION: 2.5 MILLION HECTARES

BRAZIL

OTHER

BRAZIL

DRC

INDONESIA

2030

2.7 MILLION HECTARES OF PLEDGED FOREST CONSERVATION AND RESTORATION
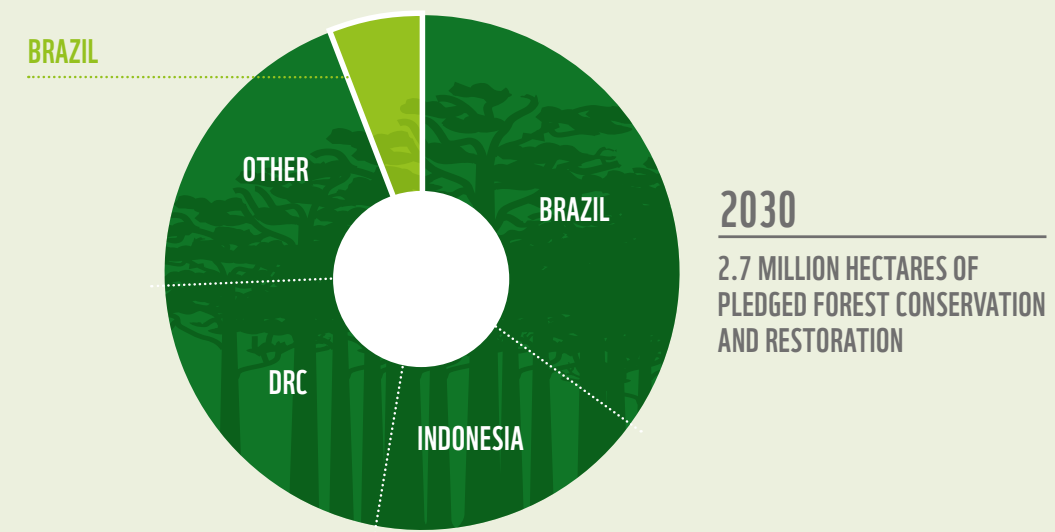
1. The sample is made up of 14 countries that represent over half of current (and projected) deforestation in the tropics: Argentina, Brazil, Bolivia, Colombia, Democratic Republic of the Congo (DRC), Ecuador, Indonesia, Malaysia, Mozambique, Myanmar, Paraguay, Papua New Guinea (PNG), Peru & Tanzania.

2. The overall level of net deforestation in the tropics was calculated as the sum of national net deforestation in all tropical countries that have a net loss of forests on balance – i.e. countries with a net gain of forest cover were excluded to avoid forest gain in one country offsetting loss in another.

Regional differences

The distribution of stated ambition is uneven across regions and the deforestation fronts.

Unsurprisingly, Brazil, Indonesia and DRC dominate the results of this analysis. Brazil is responsible for two thirds of the gross reduction in deforestation area by 2020, and Indonesia is responsible for nearly two thirds of the gross reductions in emissions by 2030. When it comes to forest restoration, the DRC is responsible for three quarters of the effort in this sample by 2020. This has a significant impact on the overall net deforestation figure for that year.

National differences

The level of ambition of the 14 countries sampled can be broadly grouped into three categories.

High ambition: close to or meeting ZND. Emphasis is placed on upholding high ambition and supporting successful implementation.	**Colombia, DRC, Ecuador, Indonesia and Peru**. Depending on interpretations of their targets, Colombia, Ecuador and Peru could all surpass ZND in 2020 and retain it (or regain it) in 2030. The DRC would be a net reforesting country in 2020 if it meets its Bonn Challenge pledge, and would reach ZND-2030. Indonesia has targeted ZND-2030 at the latest. For Indonesia and DRC, the relationship between forest area change and emissions from the land sector is very uncertain. All of these countries are signatories to the New York Declaration on Forests, which sets the ambition for several of them.
Some ambition: far from ZND. Clearer and more ambitious policy intent is needed from these countries.	**Argentina, Bolivia, Brazil, Paraguay and PNG.** We identified commitments in each of these countries but they fell far short of ZND, were unclear and/or only partially covered the national forest area. There is no doubt that Brazil has demonstrated considerable progress in the last 10 years. However, its 2020 and 2030 targets do not approach ZND, and in fact their recent progress has exceeded previously set long-term targets, suggesting there is an opportunity to update its future targets.
Weak or no stated policy ambition. Enhanced support and/or engagement with these countries would be needed to develop a national target.	**Malaysia, Mozambique, Myanmar and Tanzania.** Malaysia's national forest cover goal allows for significant further forest cover loss. Development needs and pressures put the forests of Mozambique and Tanzania at risk, where a national commitment or intent on tackling forest loss has not yet been developed. There is no explicit commitment in Myanmar that would significantly reduce forest loss.

The deforestation fronts

It is not possible to draw complete conclusions about ambition in the deforestation fronts. However, there are some trends worth noting. Based on the targets of Colombia and Ecuador, the Choco-Darien front perhaps has most hope of a zero deforestation future. Several countries that share the deforestation front in the Amazon can be considered to have high ambition, but Brazil – the most significant of those by far – has not set a pathway to zero net deforestation either nationally or for the Amazon, even though its deep cuts in deforestation of the past decade suggest that such a pathway is not only possible but also consistent with strong economic development. The DRC sets a high ambition in the Congo basin, but several countries which share that front were not included in this study. Indonesia's ambition could benefit the front in Sumatra and its share of the Borneo and New Guinea fronts. The targets examined in this study do not provide evidence of political ambition to reduce deforestation in the remaining deforestation front areas.

Temperate and boreal forests

From a light touch review of policy ambition for these forests, we found a mixed picture. On paper, Canada, China and the US have policy commitments to be net reforesting countries and net sinks (rather than sources) of emissions by 2020. Russia's national policy to maintain forest cover misrepresents the significant ongoing forest degradation. Australia's previously strong policy framework is at risk of unravelling and potentially leading to net deforestation in the east Australia deforestation front.

Impact on deforestation projected in the forests of the 14 sample countries

Although the impact of the commitments made by these 14 countries is a 31-40% reduction in total net forest loss in deforesting tropical countries (depending on how one treats DRC's restoration beyond ZND), when measured only against the forest loss projected within their borders the reduction is clearly a higher proportion. The commitments amount to a 51-66% net reduction in the deforestation projected within their borders in 2020 (again depending on the treatment of DRC), and a 47% reduction in 2030.

It is worth noting that when measuring the potential global impact of existing national commitments there are countries outside our sample of 14 that should otherwise be counted. For example, Mexico has included the goal of zero deforestation by 2030 in its Intended Nationally Determined Contribution to the UN climate process, as released in March 2015[16]. The omission of Mexico and other countries that have put forward targets suggests that estimates of existing pledges are minimums (conservative), while estimates of remaining ambition needed are maximums.

Finance shortfall

Although these targets fall short of ZND, they will still be extremely challenging to deliver and will require international finance and support. We were unable to estimate the proportion of the commitments that any country could deliver without international finance. But nearly all the commitments we examined are conditional on international finance to at least some extent.

Finance pledged by developed countries to date has been insufficient to match the goals the international community is seeking to achieve. Some developed countries have provided recent leadership by committing to help resource the implementation of action by the forest sector – notably Germany, Norway and the UK[17]. Together with the US and Japan, these countries account for 75% of all international pledges of REDD+ finance to date[18].

$0.22

HOW MUCH CURRENT REDD+ FINANCE PLEDGES WORK OUT TO BE PER TONNE OF CO2E

REDD+ finance pledges for 2006-13 from all sources totalled an average of about US$1 billion a year, much of which has not been disbursed[19]. It's notoriously difficult to estimate how much finance is needed for REDD+ but clearly it will take more than US$1 billion per year to reach the 3 GtCO2e reduction potential from the 14 countries in our sample, and the 4.5 to 8.8 GtCO2e reductions of the goals in New York Declaration on Forests. The current finance on offer represents US$0.22 per tonne. There is a large gap to fill.

Commitments made by non-government actors

The private sector, in particular, is critical to reducing and reversing deforestation. It can reverse the incentives for deforestation and help generate the political will needed for making and delivering ambitious commitments. A number of international companies have now made commitments to remove deforestation from their supply chains.

COMPANY PLEDGES ON ZERO DEFORESTATION SUPPLY CHAINS WOULD MATCH OR SURPASS GOVERNMENT TARGETS IN BRAZIL AND INDONESIA

We analysed soy and beef in Brazil and palm oil in Indonesia to assess the potential impact of private sector pledges. We concluded that the impact at the national level of the zero deforestation supply chain pledges we analysed would be similar or potentially greater in ambition than the government pledges. If we were able to assess these supply chain pledges alongside the government pledges without double-counting, it is likely that they would in fact bring ambition in both countries closer to ZND by 2020.

Delivering on these private sector pledges is essential for a zero deforestation future.

NET FOREST LOSS OR GAIN IF NATIONAL TARGETS ARE MET IN 2020 OR 2030

TARGETED FOREST COVER GAIN OR AVOIDED LOSS (MILLIONS OF HECTARES)

1.5

1.0

0.5

ZERO

PROJECTED FOREST LOSS (MILLIONS OF HECTARES)

0.5

1.0

1.5

2.0

2.5

3.0

| | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 | | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 | | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 | 2020 | 2030 |

COLOMBIA — 0.05 / 0.00
ECUADOR — 0.02 / 0.02
BRAZIL
BOLIVIA
PERU — 0.01 / 0.00
ARGENTINA
PARAGUAY

DRC — 1.04 / 0.00
MOZAMBIQUE
TANZANIA

MYANMAR
INDONESIA — 0.00
MALAYSIA
PNG

0.21 / 0.26 (BOLIVIA)
0.11 (ARGENTINA)
0.25 (ARGENTINA)
0.23 / 0.23 (PARAGUAY)
1.42 / 1.30 (BRAZIL)

0.22 / 0.22 (MOZAMBIQUE)
0.40 / 0.40 (TANZANIA)

0.28 / 0.25 (MYANMAR)
0.14 (INDONESIA)
0.11 / 0.11 (MALAYSIA)
0.12 / 0.08 (PNG)

CHOCÓ-DARIÉN
AMAZON
CERRADO
ATLANTIC FORESTS / GRAN CHACO

CONGO BASIN
EAST AFRICA

GREATER MEKONG
SUMATRA
BORNEO
NEW GUINEA

Legend
- **0.00** — NET LOSS OR GAIN IN MILLIONS OF HECTARES IF TARGETS MET
- PROJECTED FOREST LOSS
- TARGET FOR REDUCTION IN FOREST LOSS
- TARGET FOR RESTORATION OF FOREST LAND
- DEFORESTATION FRONTS

RECOMMENDATIONS

To set the world on course for a zero deforestation future, more countries need more ambitious policy commitments to reach zero deforestation within their borders. Commitments also need to be more transparent and comparable (see box on following page) to allow us to measure progress. Countries with higher capability need to match this with more finance and other support.

> **As countries finalise their position ahead of the Paris climate summit, and plan to respond at national level to the Sustainable Development Goals, we call for:**
>
> **1. All countries to agree a universal commitment to the goals set out in the New York Declaration on Forests, including cementing at least the same level of ambition in the SDGs.**
>
> **2. Countries with higher capability to pledge support to those forest nations who have already set targets equivalent to or close to ZND in 2020 or 2030. And to demonstrate willingness to do the same for others.**
>
> **3. All countries whose forests play a major role in their emissions to include a time-bound commitment to Zero Net Deforestation and Zero Net Emissions from forests, including achieving near zero natural forest loss.**

In practice, this will require the following steps:

1. Developing forest nations to lay the foundations for their own action and potential partnerships by clearly quantifying against an explicit baseline:

   a. the national emissions reductions they will achieve on their own from forests;

   b. the additional forest emissions reductions they would achieve with international support; and

   c. the relationship they expect to see between emissions reductions in the forest sector and rates of forest area loss and restoration, considering in some cases setting targets for both.

2. Parties with higher responsibility and higher capability to:

   a. set ambitious domestic economy-wide mitigation targets including forests; and

   b. pledge an additional mitigation target to be achieved through partnerships with developing countries, including finance and other support.

3. Parties with higher responsibility and higher capability, international financial institutions, the Green Climate Fund and other actors to:

   a. significantly accelerate financing for forest protection pre-2020 to support delivery against the ambitious conditional commitments already tabled by forest nations; and

   b. acknowledge the differences in national policy commitments and the unequal coverage of deforestation risk areas from these commitments, rightly rewarding the ambitious and encouraging and enabling ambition where it is currently absent.

This report has explicitly not assessed the challenges of implementing ZND targets countries have or could set. Achieving ZND in 2020 or 2030 will be extremely challenging in all cases, but would reap the benefits discussed above. Other studies have discussed national strategies that could deliver on such targets.

For example WWF's 2015 report on 'deforestation fronts'[5] identified the following: expanded and strengthened networks of protect areas, valuing ecosystem services in land-use planning and policy making, implementing jurisdictional or national REDD+ programmes, the expansion and fulfilment of private sector commitments to deforestation-free supply chains, and building forest 'safeguards' into infrastructure projects.

AFTERWORD: DESIGNING NATIONAL FOREST TARGETS

Setting goals is a critical step, but it will be difficult to pursue them, fund them and assess success or failure in reaching them without clarity as to exactly what they mean. This study has found that this clarity is lacking in many of the forest targets set to date. We identified several potential pitfalls and risks when collating forest data and targets, and we tried to interpret the latter in the light of the former. These risks could threaten the ability of forest countries to manage their forests as planned, or even to successfully attract international finance through a climate agreement.

Governments need to consider the following in order to support the implementation and accountability of the forest goals they set:

1. **Lack of transparency on baselines.** Countries setting targets against a business as usual baseline need to communicate sufficiently complete information (data sources, methods of calculation) for other parties to be able to reproduce the baseline. Links or references to data sources are needed.

2. **Unclear relationship between forest emissions and forest area targets.** In complex landscapes, there is not a simple direct relationship between forest area loss and forest emissions. For example, Indonesia's very significant emission reduction targets could theoretically be met successfully with continued forest area loss. While extreme, the example draws attention to the need for countries to define their goals in both area and emissions.

3. **Mixed messages on targets.** A new target may be a restatement, replacement, extension or subset of existing targets. Countries should seek to place any new targets explicitly in the context of previous targets that may have been set in different contexts (UNFCCC, CBD, NYDF, domestic law).

4. **Mixed messages from different data sources.** None of the readily available data on deforestation area and emissions is perfect. Even when there are good reasons for differences, the mixed messages can make forest targets seem poorly defined.

5. **Net versus gross.** Countries should be clear on whether deforestation area and emissions targets are set on a net or gross basis. Net deforestation targets and baselines would ideally be broken down into gross forest loss and forest restoration or regrowth targets.

6. **Regional and biome-scale targets lacking national context.** Paraguay exemplifies the challenges of a country with a zero-deforestation target for a particular region or biome, but lacking a national level target. Its zero-deforestation law for the Atlantic forest region has been successful in protecting some forests, but forest loss outside that region has been accelerating.

7. **Lack of geographical information on areas included in or excluded from targets.** Malaysia has proposed a Forest Reference Emission Level (FREL) for the area of its permanent forest reserve. Without geographically explicit map data on the extent and location of areas included in or excluded from the permanent forest reserve, it is very difficult for external data to inform Malaysia's performance on its FREL.

8. **Forest degradation could be looming.** It is difficult to measure and monitor forest degradation. This means many countries are likely to exclude the process from targets for the foreseeable future. However, there is some evidence that degradation is extensive and is the source of significant carbon emissions. Countries should work towards full accounting for all forest changes as soon as is practicable.

APPENDIX: COLLATED NATIONAL COMMITMENTS AND TARGETS

Country	Target	Base year	Goal year	Est. period	Type	Source
Argentina	Initiative 20x20 – restoration of 2.05 million hectares, half of the Conservación Patagónica pledge (Chile/Argentina)		2020		Unconditional	Initiative 20x20
Bolivia	Increase forest coverage by 10% of the area degraded and deforested in the next 10 years	Undef	2019 or 2020	Undef	Conditional	Government of Bolivia, 2009
Brazil	Reduce 80% of the annual deforestation rates in the Legal Amazon	1996-2005	2020	2006-2020	Conditional	Alcobe 2014
	Copenhagen reduced deforestation in Amazon target: reduce deforestation in the Amazon to achieve 564 million tonnes CO_2e by 2020		2020	2020	Conditional	Parker 2014
	Reduce 40% of the annual deforestation rates in the Cerrado	1999-2008	2020	2010-2020	Conditional	Alcobe 2014
	Copenhagen reduced deforestation in Cerrado target: reduce deforestation in the Cerrado to achieve 104 million tonnes CO_2e by 2020		2020	2020	Conditional	Parker et al 2014
	Expand forest plantations by 3 million hectares (excluded)		2020	2010-2020	Conditional	Alcobe 2014
	Copenhagen Pledge – 36.1 to 38.9% below business as usual for overall emissions	BAU	2020		Conditional	Climate Action Tracker
	Pacto para Mata Atlântica: 15 million hectares restored by 2050		2050		Conditional	Pacto Mata Atlantica
	Bonn Challenge Pledge: 1 million hectares Mata Atlântica restoration		2020		Conditional	Bonn Challenge
	Rio Branco Declaration: 6 Brazilian states commit to 80% reduction in deforestation by 2020				Conditional	CGF 2014
	FREL submitted				Conditional	
Colombia	Zero net deforestation in the Colombian Amazon		2020	2011-2020	Conditional	Alcobe 2014; Parker 2014
	Bonn Challenge Pledge of 1 million hectares		2020		Conditional	Bonn Challenge
	Initiative 20x20 – restoration of 1 million hectares		2020		Conditional	Initiative 20x20
	NYDF – halve natural forest loss by 2020 and end it by 2030	2014	2020 & 2030		Conditional	NYDF
	UNFCCC submitted FREL				Conditional	UNFCCC FREL
Democratic Republic of the Congo	Bonn Challenge Pledge: 8 million hectares		2020		Conditional	Bonn Challenge
	FCPF ER-PIN 2020 tonnes			2015-2020	Conditional	FCPF ER-PIN
	NYDF – halve natural forest loss by 2020 and end it by 2030	2014	2020 & 2030		Conditional	NYDF
Ecuador	Increase to 300,000ha the accumulated forest restoration area	2012	2017	2013-2017	Conditional	Alcobe 2014
	Initiative 20x20 – restoration of 500,000 hectares		2020		Conditional	Initiative 20x20
	NYDF – halve natural forest loss by 2020 and end it by 2030	2014	2020 & 2030		Conditional	NYDF
	UNFCCC submitted FREL				Conditional	UNFCCC FREL

APPENDIX: COLLATED NATIONAL COMMITMENTS AND TARGETS

Country	Target	Base year	Goal year	Est. period	Type	Source
Indonesia	Copenhagen Pledge – reduce total GHGs 26% below BAU	BAU	2020		Unconditional	G of Indonesia 2010
	Post-Copenhagen Conditional Pledge – reduce total GHGs 41% below business as usual	BAU	2020		Conditional	G of Indonesia 2011
	LULUCF component of 26%: 80% of reduction from LULUCF	BAU	2020		Unconditional	Ministerial Speech
	LULUCF component of 41%: 80% of reduction from LULUCF	BAU	2020		Conditional	Ministerial Speech
	FCPF ER-PIN 2020 tonnes (excluded)	FREL	2020	2016-2020	Conditional	Indonesia ER-PIN
	FCPF ER-PIN 2026 tonnes	FREL	2026	2016-2026	Conditional	Indonesia ER-PIN
	FCPF ER-PIN 2030 tonnes	FREL	2030	2016-2030	Conditional	Indonesia ER-PIN
	NYDF – halve natural forest loss by 2020 and end it by 2030	2014	2020 & 2030		Conditional	NYDF
	Rio Branco Declaration: 6 Indonesian provinces commit to 80% reduction in deforestation by 2020				Conditional	GCF 2014
	FREL submitted to UNFCCC					
Malaysia	Maintain 50% forest cover	none	all		Unconditional	UNFCCC NatCom
	UNFCCC submitted FREL				Conditional	UNFCCC FREL
Mozambique	FCPF Preparation Grant signed (no targets)					
Myanmar	Double protected area to 10% of land area		2030-2031		Unconditional	Myanmar NFAP
Papua New Guinea	Copenhagen Pledge: decrease GHG emissions at least 50% before 2030, and carbon neutral before 2050				Conditional	Climate Action Tracker
	27-38 MtCO$_2$e reductions in forestry sector below BAU by 2030; 16-43 MtCO$_2$e reduction in agriculture sector by 2030	BAU	2030		Conditional	Parker 2014
Paraguay	ZND in Atlantic Forest Region	none	Up to 2018		Unconditional	Paraguay ZND
Peru	FCPF ER Programme		2020	2016-2020	Conditional	Alcobe 2014
	100% reduction in GHG emissions from LULUCF. (Parker et al word this as 'zero deforestation in primary or natural forests by 2021')	2000	2021	2012-2020	Conditional	Alcobe 2014; Parker 2014
	Initiative 20x20 – restoration of 3.2 million hectares		2020		Conditional	Initiative 20x20
	NYDF – halve natural forest loss by 2020 and end it by 2030	2014	2020 & 2030		Conditional	NYDF
	Rio Branco Declaration: 5 Peruvian states commit to 80% reduction in deforestation by 2020				Conditional	GCF 2014
Tanzania	40% of land area designated as wildlife and forest protected areas	none	none		Conditional	CBD NBSAP, CBD 5th Nat Com

ENDNOTES

a. Meaning those tropical countries that are net deforesters: losing more forest area than is regrown.

b. The net reduction in 2020 would be 40% if it includes restoration that goes beyond net zero forest loss in Colombia, DRC, Ecuador and Peru. We use the 30% figure above because it avoids forest loss in one country being offset by forest cover gain in another.

c. The figure in 2030 is lower because most restoration targets do not extend beyond 2020.

d. The greater reduction in 2030 is brought about by the potential for later action on carbon rich forests.

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14. This was calculated using a combination of projecting the historical baseline and, for some currently low deforestation countries such as DRC and PNG, allowing for a slight increase in deforestation based on their national reference levels where possible. This is a different approach to the (more optimistic) modelling used to determine the business-as-usual pathway for the WWF deforestation fronts analysis.

15. Although net forest loss is higher in 2030, the reduction in emissions is projected to be greater owing to the importance of action on carbon-rich peat lands in Indonesia on a 2030 timescale.

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FORESTS IN NUMBERS...

127-170 MILLION

Number of hectares of forest that could be lost in the deforestation fronts WWF has identified for the period 2010-2030

>50%

Forests are home to well over half of the world's land-based species

24%

The proportion of global anthropogenic greenhouse gas emissions that come from agriculture, forestry and other land uses

>75%

Over three-quarters of the world's accessible fresh water comes from rivers in or around forests

Why we are here
To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

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