The Forest Opportunity:
Where Partnerships Can Support Targets and Go Further

Authors:
Alan Kroeger and Patrick Wylie (IUCN)
Michael Wolosin (Climate Advisers)
Will Ashley-Cantello and Josefina Braña-Varela (WWF)

Overview Summary

In the build up to UNFCCC COP21 in Paris countries have agreed to strong forest targets in the new Sustainable Development Goals, (SDGs), signed the New York Declaration on Forests (NYDF), committed to both the Bonn Challenge and Lima Challenge, and submitted national climate pledges (INDCs) containing forest targets and actions. Now, through both the formal UNFCCC agreement coming out of Paris and the Lima-Paris Action Agenda (LPAA) state and non-state actors alike are looking to support climate actions by implementing existing goals and by launching new partnerships that seize on opportunities created by accelerating domestic action. In the accompanying infographic to this brief we illustrate the size of domestic actions in a sample of twelve (12) countries, and our initial results demonstrate both existing goals and new opportunities that can be supported by forming partnerships between donor and forest countries. The twelve (12) countries include: Brazil, Colombia, Democratic Republic of the Congo, Ethiopia, Ghana, Guatemala, Indonesia, Mexico, Nepal, Paraguay, Peru, and Tanzania.

This brief of initial results seeks to summarize the size of the opportunity created by these goals for developed and developing countries to work together to close the emissions gap in the forest sector, providing a preview of results from a technical report coming in 2016. As a snapshot of twelve (12) countries the size of the opportunity for avoiding and reversing the loss of forests was estimated. Without interventions, these twelve (12) countries, in aggregate, lose 5.48 mHa/year of net forest area and emit 2.56 $GtCO_2$/year on average through 2020. However, with current country targets and pledges, an average of 1.56 mHa/year forest area loss will be avoided and 5.12 mHa/year will be restored, and a combined 1.85 $GtCO_2$/year avoided (0.56 $GtCO_2$/year) and sequestered (1.29 $GtCO_2$/year) during 2011-2020. Regarding the opportunities in these twelve (12) countries, this means (1) there is still an additional 3.92 mHa/year (2.0 GtCO2/year) from forest area loss through 2020 that could be reduced on average, and (2) many of the country targets put forward are conditional on donor support. Therefore, the opportunity gap discussed here is both international support required for existing targets and increasing ambition to reduce the deforestation not currently addressed by country targets.

In total after all targets and pledges are taken into account, over 60 mHa of forest are still projected to be lost by 2030 releasing 1.53 $GtCO_2$/year on average (2011-2030) and 30.7 $GtCO_2$ in total. Initial analysis shows that in these twelve (12) countries alone 10.6 $GtCO_2$ could be avoided if deforestation is eliminated in 2020 (in addition to existing reduction targets for 2021-2030 which would avoid 13.4 $GtCO_2$). Furthermore, cumulative restoration and reforestation targets for 2011-2030, if accomplished, would result in emissions impacts of 34.1 $GtCO_2$ in sequestration.

These twelve (12) countries were not chosen at random, but were in fact selected for a variety of reasons which include: total forest loss and forest area, whether restoration plans have been put forward, as forests are particularly unique or diverse, involvement in recent global statements including the NYDF and the Lima Challenge, among others. But far more than twelve (12) countries are important in this sector, and this selection is not intended to suggest that these twelve (12) are the "most" important in any way. That is why the report calls the group a "snapshot."

Background

This work is a continuation of a previous study by WWF and Climate Advisers "Zero Net Deforestation: Status Report". The previous work catalogued and analyzed forest-related commitments and pledges made by fourteen (14) countries which together represent over half of current and projected tropical forest area loss. The goal was to draw

attention to the significant targets of some countries, the room for higher ambition of others, and the need for greater international support for conditional targets. That study also found current country targets are not enough to reach Zero Net Deforestation[1] (ZND) by 2020 or 2030, although some countries had set targets equivalent to this at national or sub-national level, and that more international cooperation and national ambition was needed. This shortfall is an opportunity for not just forest countries – but for *developed* countries to go further than they currently are – specifically by pledging to support additional climate mitigation outside their borders (in addition to pledged domestic ambition) and by partnering with forest countries to slow and reverse forest loss more quickly.

In this study commitments summarized in the previous analysis have been updated to include relevant commitments or other information from their INDCs and incorporated much more detailed information about the timing and specific type of countries' forest landscape restoration targets. This initial analysis now examines twelve (12) countries, representing 46.5% of tropical forest area (26.7% of global forests), and their unconditional and conditional pledges for reducing deforestation and increasing restoration. Country by country the emissions avoided by increasing those ambitions to either ZND 2030 or ZND 2020 are examined. Beyond ZND, each country is examined as to whether or not they have forest landscape restoration (FLR) as part of their forest-related mitigation activities. Natural forest landscape restoration (reforestation, natural regeneration, and watershed) and other (plantations, agroforestry) FLR activities are included in the mitigation analysis.

Zero Net Deforestation: (adapted from WWF Living Forests Report: Chapter 3)
"…as we (WWF) define it this is not quite the same as no forest clearing anywhere, under any circumstances. For instance, it recognizes peoples' right to clear some forests for agriculture, or the value in occasionally 'trading off' degraded forests to free up other land to restore important biological corridors, provided that biodiversity values and net quantity and quality of forests are maintained. In advocating ZND by 2020, we stress that: (a) most natural forest should be retained – the annual rate of loss of natural or semi-natural forests should be reduced to near zero; and (b) any gross loss or degradation of pristine natural forests would need to be offset by an equivalent area of socially and environmentally sound forest restoration. In this accounting, plantations are not equated with natural forests as many values are diminished when a plantation replaces a natural forest."

The Analysis

The avoided deforestation and forest landscape restoration information for the twelve (12) countries in this analysis comes from INDCs, national climate and forest strategy documents, official documents of the World Bank's Forest Carbon Partnership Facility (FCPF), and other multilateral programs (more detail at http://www.bonnchallenge.org/FLRdesk). This information also comes from pledges made through NYDF, NAMAs (Nationally Appropriate Mitigation Actions), and pledges to the Bonn Challenge. All targets and pledges were interpreted into annual pathways from 2010-2030, using linear extrapolations across periods when needed (unless otherwise specified in implementation information). The forest loss, avoided deforestation, and restoration schedules, and the differences between them were then summarized by decade for 2011-2020 and 2021-2030. Results are presented primarily as decadal averages for both forest loss and restoration area in millions of hectares (mHa), and in million tons of CO_2 ($MtCO_2$) for emissions.

Initial results focus on forest area changes and emissions in three categories: **avoided deforestation, remaining deforestation,** and **restoration/reforestation**. **Avoided deforestation** is modelled as the difference between a country's reference deforestation and their target deforestation (both gross). Forest loss reference levels are based on country information where available and historical rates otherwise, while target pathways are based on the most ambitious pledges made by each country. The **remaining deforestation** is the difference between the reference deforestation (net) and the countries' target reductions in deforestation (not accounting for restoration that may compensate for near-zero[2] loss). By using net deforestation as the baseline for this calculation, it is assumed that historical forest recovery/restoration rates do not decline, and that this historical recovery is in natural forests. New

[1] WWF advocates for the goal of Zero Net Deforestation and Degradation (ZNDD) by 2020. However, for reasons explained in the previous WWF and Climate Advisers report, neither analysis were able to integrate rates of degradation. Therefore, in this study we refer to Zero Net Deforestation (ZND).

[2] There is no accounting for the WWF version of ZND with "near zero" that would have counted compensatory or offsetting restoration amount as part of the avoided and remaining deforestation calculation. Instead, we put the compensatory restoration in with total restoration targets as natural restoration.

forest area expansion targets are not subtracted out so as to avoid double counting them – they are instead included in the restoration target category. The final category, **restoration and reforestation**, is treated slightly differently in the area and emissions estimates. For the area calculations only forest expansion targets are included (e.g. reforestation, assisted natural regeneration), but not the target area of restoration or reduced degradation of existing forests (e.g. natural silviculture). Emissions estimates however include all identified types of restoration actions – forest expansions and forest management. Results are generally presented as decadal averages for 2011-2020 and 2020-2030.

For example: Brazil's average area of **remaining deforestation** during 2011-2020 is 2.21 mHa/year with current targets. The emissions equivalent of this is an average of 0.63 Gt CO2/year emitted during the same period. Furthermore, the **avoided deforestation** is 1.042 mHa/year on average during 2011-2020. This avoided loss leads to an average reduction of 0.297 Gt $C0_2$/year during 2011-2020. Finally, the annual average area of forest area expansion through **restoration/reforestation** during 2011-2020 is 1.242 mHa, and the combined emissions impact of these expansions along with all other planned forest restoration is an average savings of 0.323 Gt $C0_2$/year during the same period.

Therefore, the opportunities for partnerships in Brazil include helping ensure existing targets to **avoid deforestation** by 0.297 Gt CO_2/year are accomplished (most conditional on donor support). Next is the opportunity for Brazil with partners to go further than their existing pledges by further reducing deforestation eliminating 0.63 Gt CO_2/year. Then there is the **restoration and reforestation** targets during 2011-2020 that is sequestering 0.323 Gt CO_2/year much of which still will require support, and the opportunity to expand by assessing additional areas for restoration and reforestation.

The opportunities for partnerships is clear, in tons and hectares, for donor and forest nations to work together to reduce deforestation and continue restoration. Partnerships can close the gap between what is possible unilaterally and what is possible through bilateral and multilateral partnerships. Many countries have untapped forest mitigation potential that is critical to closing the emissions gap, but this potential can only be unlocked if donors recognize the opportunity for reductions by forging partnerships. For example, Mexico is reducing emissions through avoided deforestation by 5.85 MtCO2/year with existing targets for 2011-2020, yet that leaves 18.27 $MtCO_2$/year during the same period that could be reduced or eliminated through partnerships. The opportunity to close the emissions gap through forests is represented by both forest-nation pledges that can be supported with international finance, and the additional action beyond these pledges that forest nations could act upon if provided with more resources. Preliminary results are represented in the infographic paired with this summary report.

Achieving Zero Net Deforestation (ZND)

To reduce emissions countries can work to reduce/avoid deforestation and degradation, and can restore forest landscapes for both protection and productivity. The combination of actions helps accomplish the goal to reach ZND. Achieving ZND is central to this analysis and how the size of the opportunity is defined in each country. Formation of partnerships is key to closing the opportunity gap. One gap is the difference between a country's target reductions in deforestation and actually reaching ZND 2020 or 2030. This is the remaining deforestation gap where partnerships can operate to (1) ensure that existing targets (un/conditional) are accomplished as planned (2) increase targets to reduce the remaining deforestation gap and achieve ZND by 2030 at the latest, and (3) help accelerate existing targets so they are accomplished earlier which would in itself have a strong climate benefit. Another opportunity gap worth recognizing is between countries' current restoration/reforestation targets and the biophysical and socioeconomic potential for additional FLR. While this potential is not quantified here, the remaining areas in need of restoration highlight even greater opportunity for partnerships.

Agricultural commodities are known as a primary driver of deforestation and tackling this issue requires a suite of strategies. Integration of deforestation reduction and restoration action is anticipated to continue in terms of planning, strategy, and will truly define how countries actually achieve a shift in their land use on the ground while providing income opportunities. Therefore, if agricultural productivity and income can be increased while the policy environment enables strong forest protection and FLR actions then substantial economic pressure for expanding agriculture can be removed from forests. This scenario has been described as the "produce and protect" model where competing goals are combined to achieve both climate mitigation and sustainable development, and the investment to restore degraded lands with productive forests, agroforestry, and climate smart agriculture can indirectly finance the protection of natural forest areas. This trend is also likely to be the dominant global approach in terms of

REDD+ and other climate finance management and funding considerations for the land sector. The consolidation seen in this space is one the outputs for opportunity are considered by combining avoided deforestation and restoration/reforestation targets (2.31 $GtCO_2$ avoided and sequestered in 2020).

Avoided Deforestation & Restoration

One of the largest forest mitigation opportunities is reduced and avoided deforestation and degradation. Through avoided deforestation current and planned emissions from the land sector are reduced, and preserve multiple ecosystem services. Initial analysis shows that in these twelve (12) countries alone an additional 10.6 Gt CO_2 could be avoided if deforestation is eliminated in 2020 (eliminating the remaining deforestation in 2021-2030). Furthermore, the cumulative restoration and reforestation targets for 2011-2030, if accomplished, the emissions impact is 34.1 Gt CO_2 in sequestration. An analysis of the New York Declaration on Forests (NYDF) goal to "at least halve the rate of loss of natural forests globally by 2020 and strive to end natural forest loss by 2030" estimated that achieving the 2030 forest loss goal would remove or avoid 2.9-5.4 Gt CO_2/year in 2030 and 29.3.-54.0 Gt CO_2 cumulatively to 2030. Achieving the goal earlier, as the SDGs call for a halt to deforestation by 2020, would save a significant amount of carbon emissions. One estimate put the total savings at as much as 24 GtCO2[3].

The opportunity in forest countries is large, but their capacity and responsibility to deliver emissions reductions may not match the scale of opportunity. This makes partnerships between developed and developing countries critical for delivering on the opportunity. In this initial analysis of twelve (12) countries, after all targets/pledges are taken into account, over 60 mHa of forest are still projected to be lost by 2030 releasing 1.53 $GtCO_2$/year on average (2011-2030) and 30.7 $GtCO_2$ in total. This clearly demonstrates how much more could be accomplished through partnerships. If a country receives the right kind and amount of support to avoid deforestation while still providing a secure future for its people then surely that is the desirable path. Efforts to avoid and reduce deforestation can add value to a country beyond forests. For example, these efforts can produce jobs, reform governance structures, and reform tenure rights. Therefore, investments in REDD+ policy infrastructure can produce both financial benefits from reducing carbon emissions, and also help assuage other social and economic issues.

One of the best ways to keep existing natural forests standing is to take decisive action to restore and efficiently use the forest land that has already been cleared. Therefore, countries should also look to complement reduced deforestation actions with forest landscape restoration. This dynamic compilation of actions and sustainable development concept supports ZND efforts by directly and indirectly removing development pressure from intact natural forests. The opportunity for restoration is immense. For example, Indonesia's targets for both expanding and restoring forests are anticipated to achieve 674.48 $MtCO_2$/year in reductions (2011-2020) and 822.43 $MtCO_2$/year in 2021-2030. When combined with targets to avoid deforestation, emissions savings add up to 824.55 $MtCO_2$/year (2011-2020) and 1,469.40 MtCO2/year in 2021-2030. Cumulatively, the restoration/reforestation targets in Indonesia aim to impact 17.66 mHa with an emissions savings of 14.97 $GtCO_2$ (2011-2030). Globally the opportunity is clear when you consider what achieving the NYDF restoration goal contributes to climate mitigation. It is estimated that if the restoration of 150 Mha for the Bonn Challenge is initiated by 2020 and an additional 200 Mha by 2030 under the NYDF then 1.6-3.4 $GtCO_2$/year is removed or avoided in 2030 and 11.8-33.5 $GtCO_2$ cumulatively to 2030.

The Opportunity Gap

Sizeable opportunities for partnerships identified here could accelerate pre-2020 (Workstream 2) action, help ensure there is no further delay in forest-related emission reductions, and provide a partnership model for delivering or bettering post-2020 action. The opportunity for partnerships is where donor and forest nations find commonality in either meeting current targets and/or increasing ambitions through further forest mitigation action, and through that partnership choose how to finance policy levers and action on the ground. In doing so countries move closer to eliminating the gap between what is being done and what is possible. A clear partnership example is the recent Germany-Norway-UK pledge to increase REDD+ donor finance to $1 billion per year by 2020 if forest countries present ambitious plans for produce verified emission reductions. In this brief (and accompanying graphic) we are essentially presenting a summary of what an ambitious plan from forest nations could achieve with current targets and the potential for even more.

[3] WWF Living Forests Report: Chapter 3 – Forests and Climate: REDD+ at a Crossroads (page 18)

In some regions there is little land left that is suitable for agricultural expansion, and that is why FLR is a necessary strategy to increase resilience and productivity while avoiding deforestation. In a scenario where open agricultural land is scarce and beginning to compete with marginal forest land is where investments from partnerships to keep forests standing can be used indirectly to enhance productivity on existing agricultural land in order to avoid clearing forest and remove the need to clear additional forest lands. Overall, there is a need to simultaneously increase forest conservation and restoration, boost the productivity of land, and promote rural economic development and poverty reduction. These goals can be accomplished through innovative partnerships between forest and donor nations because investments in forest protection, productivity, and restoration deal with the nexus of climate mitigation, economic, and adaptation needs for developing countries.

Countries have come to recognize the benefits of taking action to reduce deforestation and degradation, and this is clear when you consider both the sheer number and ambition of forest initiatives. These commitments and goals will require a greater influx of climate finance (REDD+ for example) to initially match current forest nation ambitions, and it should follow that when finance is more readily available this will encourage countries to increase forest mitigation ambitions. The existing commitments and the room for increased ambition are discussed here as opportunities for partnerships between donor and forest nations.

The current projected emissions gap in order to have a likely chance of staying below 2°C is 12-17 Gt CO_2 in 2030. One way to close the emissions gap is to look beyond domestic action and focus on what could be achieved through international partnerships and collective action. Therefore, it is important that countries looking to invest in international climate mitigation understand the enormous opportunities in the forest sector. The opportunity in the forest sector in only the twelve (12) countries examined so far would go a long way to closing the emissions gap in 2030. The first opportunity identified is to support existing targets for avoided deforestation which remove 1.56 $GtCO_2$ in 2030 and another 1.79 $GtCO_2$ in 2030 is removed via restoration and reforestation. Next is the opportunity for partnerships to increase the climate benefits of existing targets by decreasing the timeline. With support and increased ambition a 2030 target could be met in 2020 or 2025 which would compound the climate benefits. Even more opportunity exists by eliminating remaining deforestation in 2030 which would remove an additional 0.87 $GtCO_2$ and 2.0 mHa of forest loss remaining in 2030.

Next Steps and Further Analysis

At present, this is a snapshot of a future that is far from certain. Developing countries are unlikely to deliver on this future without ambitious and savvy partnerships to support current targets and go further to finance reduced deforestation and restoration. With international support, new policy levers and finance can help accomplish and improve upon countries' current commitments to ZND by 2030 or – even better and still possibly – by 2020, which represents real savings of forests on the ground, of tons of CO_2 in the air, and of the multitude of co-benefits that forest landscapes provide to people.

The intent of this analysis is to draw attention to the myriad of opportunities in the forest sector that are available right now – and which could disappear if action is not quickly taken. Some of this action has been pledged unilaterally by these forest countries, and is a core part of their climate strategies. But this is but a starting point. These countries have put a challenge on the table to the rest of the world – that have stepped forward and said "we will do more with support." Most of the tons and hectares identified in this analysis will only be realized if those countries who are able to do so step forward and say "yes." If they do so clearly, quickly, and at scale, these opportunities can be realized.

Author's Note: This new initial analysis is a contribution towards the Lima Paris Action Agenda (LPAA) and in support of Lima Challenge and Bonn Challenge countries. In 2016 it is intended to extend the analysis beyond the initial twelve (12) countries, and both current and future results could be used as part of a decision-support tool for identifying where more finance and ambition would do the most good for the climate and forest landscapes by reducing deforestation, and reversing forest loss through restoration/reforestation. These results are a way for policy and decision-makers to define the scope of opportunities for partnerships in the forest and land sector. These initial results should feed the global idea that work should begin now to establish and increase donor-to-forest nation partnerships to reduce emissions and deforestation, and capitalize on the forest opportunity expeditiously. The size of the opportunity gap for all twelve (12) countries of this preliminary analysis will be fully explained in a technical report anticipated in early 2016. Those interested in collaborating on further analysis, with feedback on this approach or potential next steps are encouraged to contact the authors directly via forests@iucn.org.