Progress on the

New York Declaration on Forests

Technical Annexes

Goal 5: Restore 150 million hectares of degraded landscapes and forestlands by 2020 and significantly increase the rate of global restoration thereafter, which would restore at least an additional 200 million hectares by 2030

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Contents

Description of the Goal and the Indicators

In September 2011 world leaders launched the Bonn Challenge[1], a global goal to restore 150 million hectares (ha) of degraded landscapes and forestlands worldwide by 2020. Three years later, the New York Declaration on Forests (NYDF) adopted this goal and extended the ambition to restore an additional 200 million ha by 2030. Together, these initiatives represent a 'goal continuum' of 350 million ha. Participating countries are currently making pledges to reach the 150 million ha target by 2020. These efforts will have to continue in order to reach the additional 200 million hectare target extended by the NYDF.

In the context of the Bonn Challenge, forest landscape restoration is defined as "the long-term process of regaining ecological functionality and enhancing human well-being across deforested or degraded forest landscapes" (GPFLR 2013). Degraded landscapes and forestlands that will be targeted under these restoration efforts include forests and related landscapes and ecosystems that have lost their structure, function, biodiversity, or experienced other significant damage and overexploitation (Bonn Challenge 2015a). The types of activities to be pursued under these pledges include: restoration on forest lands (including planted forests, natural regeneration, or silvicultural enhancement); restoration on agricultural lands (including agroforestry and improved fallows); and restoration on protective land and buffers (including mangrove restoration, watershed protection, and erosion control) (IUCN and WRI 2014).

A methodology for tracking progress toward the Bonn Challenge is being developed by the International Union for the Conservation of Nature (IUCN), and is expected to be released by late 2015. This methodology and platform will make it possible to monitor the implementation of Goal 5. In the meantime, we propose using restoration pledges made under the Bonn Challenge and the United Nations Framework Convention on Climate Change (UNFCCC) as imperfect proxies to signal progress. It is important to note that the UNFCCC pledges do not specify the type of land (degraded or other landscapes) being restored nor are the pledges all bound by the same timeframe.

INDICATOR 1
Forest restoration pledges under the Bonn Challenge

INDICATOR 2
Afforestation, restoration and reforestation commitments in Intended Nationally Determined Contributions of Parties to the UNFCCC

Main Concepts and Definitions

Degradation	'Degradation' of forests refers to the reduction of the capacity of a forest to provide goods and services (FAO 2015).
Restoration	'Restoration' is the long-term process of regaining ecological functionality and enhancing human well-being across deforested or degraded forest landscapes (GFLR 2013).
Afforestation	Establishment of forest through planting and/or deliberate seeding on land that, until then, was not classified as forest. Implies transformation of land use from non-forest to forest (FAO 2015).
Reforestation	Re-establishment of forest through planting and/or deliberate seeding on land classified as forest. Implies no change in land use, and excludes natural regeneration (FAO 2015).

Key Messages

INDICATOR 1: FOREST RESTORATION PLEDGES UNDER THE BONN CHALLENGE

- Since 2011, countries, regions and organizations have committed to restore 62.6 million ha of forest landscapes under the Bonn Challenge—approximately 42% of the 2020 restoration target. To meet the 2020 target, restoration pledges will need to be made at a greater rate to cover the remaining 90 million ha.

INDICATOR 2: AFFORESTATION, RESTORATION AND REFORESTATION COMMITMENTS IN INDCS OF PARTIES TO THE UNFCCC

- Parties to the United Nations Framework Convention on Climate Change (UNFCCC) have committed to restore, reforest, and/or afforest about 122 million ha as part of their land-sector Intended Nationally Determined Contributions (INDCs)—approximately 35% of the 350-million-hectare 2030 restoration target.

Data Gaps and Limitations

Detailed information on restoration activities and initiatives at the global level are available from several databases. Yet up-to-date standardized information and global aggregates or analysis of the data are still lacking. The following databases provide information on specific restoration activities and initiatives from all around the world:

- United Nations Environmental Programme World Conservation Monitoring Center (UNEP-WCMC): Forest Restoration Case Studies (UNEP-WCMC 2015) currently provide 34 international case studies of forest landscape restoration initiatives with a strong emphasis on carbon storage and climate mitigation.
- UNEP-WCMC's Forest Restoration Information Service (FRIS) (in progress) (UNEP-WCMC 2015) (Southern Regional Extension Forestry, n.d.): this new database will provide open-access information to support forest restoration projects worldwide, including technical information, case studies and a searchable database, maps and datasets, and publications.
- Society for Ecological Restoration: the Global Restoration Network Database (Society for Ecological Restoration 2015) provides detailed information on currently 203 ecological restoration case studies from around the world, with information about geographical and ecological extent, baseline conditions, dates of activities, specific activities carried out, and evaluations of the project success.

Standardizing this information, and compiling global data using universal measurement indicators, would make it possible to present global aggregates with greater confidence. In addition to restoration databases, advancements in spatial analysis would aid in monitoring forest growth. The Hansen/GFW dataset provides annual tree cover gain (see Goal 1), which can indicate areas where restoration, reforestation and natural regeneration may be occurring, but it is unable to confirm restoration activities directly. Further, there is large uncertainty in measuring forest growth using satellite imagery since it is difficult to detect growth in cm per year. Hansen/GFW counts forest gain conservatively, using only figures aggregated over 12 years, therefore it is likely to underestimate tree cover gain where trees are less than 5 meters high or are sparsely distributed (less than 50% on a 30x30 m pixel).

Findings

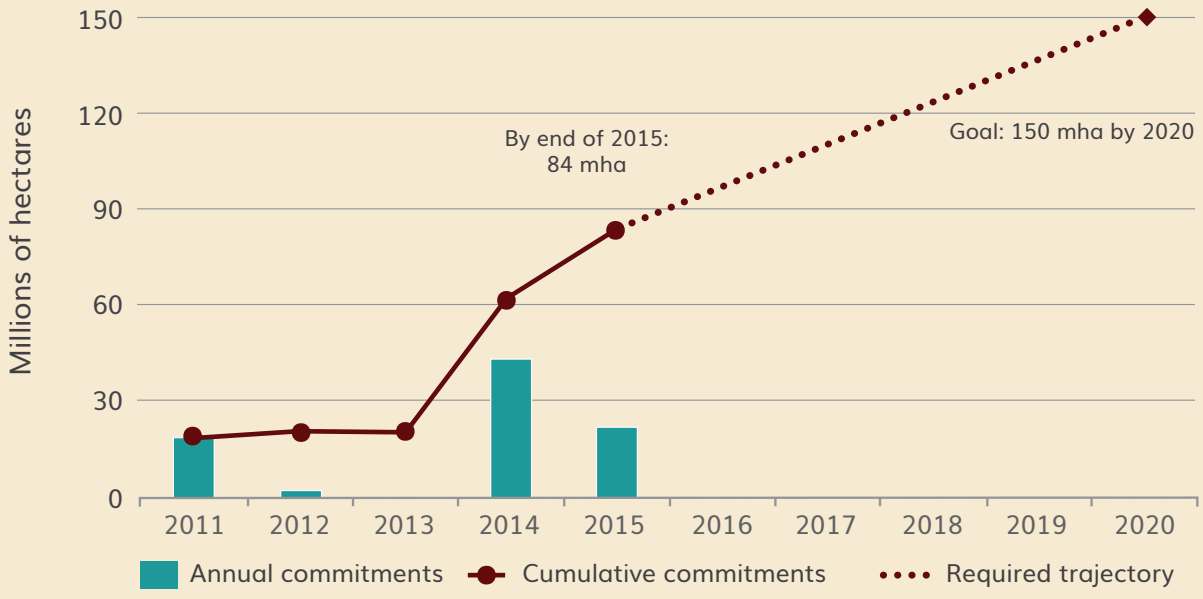
Indicator 1: Forest restoration pledges under the Bonn Challenge, in hectares

The size of the Bonn Challenge commitments and the year they were made is illustrated in Figure 1. Since 2011, 14 countries, three subnational regions, and two organizations have committed to restore 62.6 million hectares of forest landscapes under the Bonn Challenge—equal to 41.7% of the 150-million-hectare 2020 restoration target. With projected announcements during the UNFCCCC conference in Paris (COP-21), it is expected that the total will increase to 83.8 million hectares of forest landscapes – equal to 55.8% of the target (Bonn Challenge 2015a). These pledges are located within prioritized areas for restoration, including degraded forests and forest landscapes.

While the number and size of commitments have increased over time, they have been clustered around major, multi-stakeholder agreements, primarily at the start of the Bonn Challenge in 2011 and the NYDF in 2014. Future commitments to the Bonn Challenge/NYDF process will need to be made at a faster rate to meet the restoration target by 2020.

To support the Bonn Challenge and NYDF, IUCN and the World Resources Institute (WRI) have developed and are implementing the Restoration Opportunities Assessment Methodology (ROAM). These ROAM country-level assessments will identify specific areas that are feasible for restoration at a fine

Figure 1: Annual and cumulative commitments for hectares pledged for restoration under the Bonn Challenge relative to the target of 150 million hectares pledged by 2020.



Source: Bonn Challenge website and communication with World Resources Institute.

scale, and also help determine monitoring options.

Indicator 2: Afforestation, restoration and reforestation INDCs

Since early 2015, 68 parties to the UNFCCC have submitted INDCs containing land-sector targets (UNFCCC 2015). The total, forest restoration, reforestation, and afforestation pledges are estimated at 121.7 million hectares—equal to 35% of the 350-million-hectare 2030 restoration target. The specificity of reforestation and restoration pledges vary significantly, with some having explicit hectare targets, regions, and timelines, and others providing a percentage-of-forest-cover goal for the country or targets conditional on support. Our rough estimate provides a glimpse of the potential restoration efforts underway, and shows a path for reaching the 2030 target.

Technical Annex

Selection of Indicators

The two selected indicators measure: (1) Bonn Challenge pledges which indicate in hectares the amount of degraded areas committed towards the 150 million ha restoration target by 2020; and (2) INDCs of Parties to the UNFCCC, using the afforestation, restoration, and reforestation pledges in hectares as estimates for the 2030 restoration target.

A methodology for tracking progress toward the Bonn Challenge is being developed by the IUCN, and is expected to be released by late 2015. This methodology and platform will make it possible to monitor the implementation of Goal 5. In the meantime, we assess progress based on the two selected indicators, as they currently represent the most direct measures of global contribution to forest restoration. Tracking of actual restoration implementation and spatially explicit tree growth will be the next step, addressed in the IUCN methodology.

Methodology

Indicator 1. Forest restoration pledges under the Bonn Challenge

For Indicator 1, restoration commitments are taken from the Bonn Challenge website, which is updated regularly. Data are provided on the geographic location of restoration pledges (multinational, national, or sub-national), the size of the pledge in ha, and the year the pledge was made. These data are used to provide a graphical representation of cumulative progress in meeting the goal of 150 million ha by 2020 (see Figure 1). Additional information on specific restoration activities and progress will also be supplemented by data from the Forest Restoration Information Service (FRIS), which will be released later this year (Southern Regional Extension Forestry n.d.).

Indicator 2. Afforestation, restoration and reforestation INDCs of Parties to the UNFCCC

As a second step, we monitor INDCs submitted by parties since early 2015 to the UNFCCC in advance of the 21st Conference of the Parties (COP-21) in Paris. INDCs provide specific national commitments regarding the extent to which they will mitigate greenhouse gases within their national boundaries and implement adaptation measures.

To measure Indicator 2, all 129 INDCs submitted to the UNFCCC as of November 1, 2015 were downloaded from the INDCs Portal and analyzed for specific commitments to reforestation, afforestation, or landscape (e.g. pasture, forest, or degraded lands) restoration. Of these, 68 were found to have specific relevant restoration commitments within the text. The specificity of forest restoration pledges provided in the INDCs varies considerably, with some providing explicit quantitative, timebound, geographically specific pledges, while other countries provide a percentage-of-forest-cover goal to be reached, conditional upon support. Where specific hectare estimates for restoration were provided, we have used those figures. Where percentage increases in forest cover were provided, we estimated hectares based on the country's forest cover data as provided in the 2015 FAO report. Our estimate therefore provides a current snapshot of the potential restoration efforts underway, as well as providing a potential path for reaching the 2030 target. Finally, in some cases where countries pledege to increase their forest stock volume or forest carbon sink volume, standard proxies on volume or carbon per hectare were taken from FAO regional standards in ord

Data

The Bonn Challenge website tracks restoration commitments for specific countries and regions: http://www.bonnchallenge.org/commitments (note that spatial data on the priority areas to be restored are not yet available). This site will evolve into a tracking platform being developed by IUCN and WRI that may also include crowd-sourced data on major restoration initiatives.

The UNFCCC's INDCs portal is the official source to download the latest INDC submissions from parties (UNFCCC), available at: http://unfccc.int/focus/indc_portal/items/8766.php, 'Submitted INDCs'. This database is being continuously updated leading up to the COP-21 negotiations in Paris, and provides the most accurate and up-to-date source of information on parties' intended restoration efforts.

Though these two datasets are imperfect proxies for global restoration—as they represent commitments rather than restoration activities—they provide a critical representation of parties' intended restoration efforts that are determined nationally based on both political and economic feasibility.

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Endnotes

[1] www.bonnchallenge.org

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