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

Indicator 1.1
Indicator 1.2
Indicator 2.1
Indicator 2.2
Indicator 2.3
Indicator 2.4

Key Messages

- To date, 45 private and public entities have pledged to restore over 156 million hectares of forest under the Bonn Challenge.
- Twenty-six parties to the United Nations Framework Convention on Climate Change (UNFCCC) have submitted Nationally Determined Contributions (NDCs)[1] containing quantified forest and land sector restoration targets estimated at 42.5 million hectares (though much of this total is conditional upon international financial support). Additional mitigation and adaptation measures listed in the NDCs add another 39.5 million hectares of planned forest restoration.[2]

It remains unclear how much progress has been made in the implementation of restoration pledges.

OVERVIEW OF GOAL AND INDICATORS

Goal 5 endorses the 2011 Bonn Challenge target of bringing 150 million hectares of deforested and degraded land into restoration by 2020, and expands it to include at least an additional 200 million hectares by 2030.

Given limited data and monitoring of restoration on the ground, progress indicators are currently focused on Bonn Challenge pledges and on commitments and ambitions on forest landscape restoration (FLR) expressed by countries in NDCs submitted to the UNFCCC (Table 1). These indicators allow for the aggregation of quantitative data on global ambition concerning restoration. In order to capture the diverse dimensions of progress when bringing degraded lands into FLR, indicators and reporting will be enhanced with progress tracking data from the *Bonn Challenge Barometer of Progress* and future reports.

Table 1: Indicators to track Goal 5

CRITERIA	INDICATOR
1. Forest landscape restoration pledges under the Bonn Challenge	1.1 Number of pledges committed 1.2 Size of pledges committed for 2020 and 2030 (area in ha)
2. Forest landscape restoration commitments in Nationally Determined Contributions of Parties to the UNFCCC	2.1 Number of NDCs committed that include forest landscape restoration potential commitments 2.2 Size of aggregate sectoral NDC targets on FLR (area in ha or tCO2e) 2.3 Size of aggregate FLR commitments under economy-wide NDC targets (area in ha or tCO2e) 2.4 Size of aggregate forest landscape restoration action expressed outside official NDC mitigation targets (area in ha or tCO2e)

FINDINGS

Criterion 1: Bonn Challenge FLR pledges

Under the Bonn Challenge, FLR is defined as "the long-term process of regaining ecological functionality and enhancing human well-being across deforested or degraded forest landscapes".[3] Pledges include activities such as restoration of forest lands (including planted forests, natural regeneration, and silvicultural enhancement); restoration of agricultural lands (including agroforestry and improved fallows); and restoration of protective land and buffers (including mangrove restoration, watershed protection, and erosion control), and more.[4]

Indicator 1.1: Number of pledges committed

Since the Bonn Challenge's launch in 2011, a total of 45 public and private entities have made commitments, up from 31 in the 2016 Progress Report. Notably, the 150 million hectare mark was recently surpassed and celebrated in May 2017 with pledges from four countries (Bangladesh, Mongolia, Pakistan, and Sri Lanka) at a high-level Bonn Challenge event in Indonesia.[5] Commitments now include 38 countries, four subnational jurisdictions, one company, and two public-private partnerships.[6] Interest is increasing within the private sector and among other non-state organizations and private initiatives, offering up additional areas for restoration.
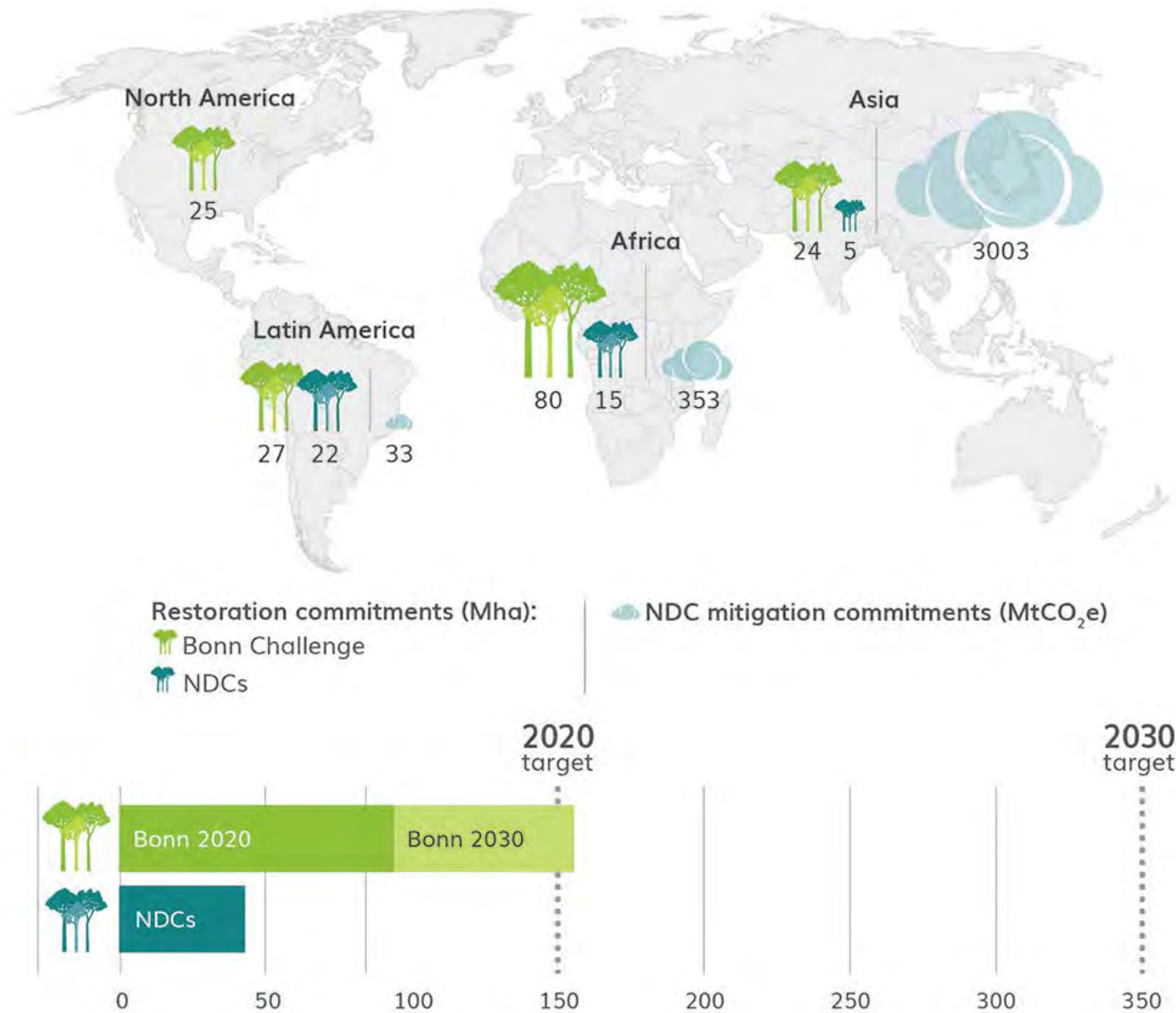
Other developments underpinning the restoration movement also signal growing political will within countries to support restoration. Regional ministerial-level political processes on the Bonn Challenge have emerged in regions around the world and continue to accelerate action on FLR. Regional progress is also being fostered through the African Forest Landscape Restoration Initiative (AFR100)[7] and Initiative 20×20 in Latin America.[8] Sixteen African countries have now endorsed the Kigali Declaration, a pan-African commitment to accelerate FLR interventions.[9] Mediterranean countries have also pledged support for the Bonn Challenge by signing the Agadir Commitment, with nine countries committing to FLR to accelerate action against degradation in the region.[10]

Indicator 1.2: Size of pledges committed for 2020 and 2030

Since the publication of the 2016 NYDF Progress Report, Bonn Challenge pledges have increased from roughly 124 to 156 million hectares, equal to 45 percent of the 2030 goal. Of this total, 94 million hectares are pledged for 2020 and 62 million hectares for 2030 (Figure 1).[11] Notably, in May 2017, pledges from four countries (Bangladesh, Mongolia, Pakistan and Sri Lanka) during a high-level Bonn Challenge event in Indonesia pushed the total past the 150 million hectare mark.[12]

Figure 1: Restoration commitments under the Bonn Challenge and Nationally Determined Contributions (Mha and MtCO2e)

Source: Joint IUCN and Climate Focus analysis based on United Nations Framework Convention on Climate Change. (n.d.). NDC registry (interim). Retrieved from http://www4.unfccc.int/ndcregistry/Pages/All.aspx

Progress on implementation of Bonn Challenge commitments remain scarce. Notable progress has been reported by few countries, indicating a need for better reporting of implementation progress and more urgent action. The United States has restored over 12 million hectares of its 15 million hectare contribution to the Bonn Challenge, primarily through the Collaborative Forest Landscape Restoration Programme. In August 2017, Pakistan's Khyber Pakhtunkhwa province announced that its Billion Tree Tsunami Afforestation Project had surpassed its target by restoring and planting trees in 350,000 hectares of degraded forest landscapes.[13] These achievements, however, make up less than 10 percent of the 2020 goal.

Criterion 2: Forest landscape restoration commitments in NDCs

As of September 2017, 165 countries' NDCs are included in either the interim NDC Registry[14] or the submissions portal[15] under the UNFCCC. FLR approaches and activities can be found in a large number of countries' NDCs. These approaches and activities vary significantly, however: some have explicit emission reduction, absorption or hectare targets, as well as diverse coverage, regions, and timelines, while others provide a percentage-of-forest-cover goal for the country or forest stock volume goals. The voluntary, nationally determined, and self-enforced nature of NDCs, as well as the lack of agreed methodologies for defining, measuring, and monitoring them, makes understanding and aggregating established targets challenging.

Accordingly, in 2017 we have adopted additional indicators with the aim of capturing FLR ambition and potential reflected in NDCs more accurately. In doing so, new indicators will help differentiate *forest and land sectoral mitigation targets*, which refer to reduction goals for specific sectors of the economy, from *economy-wide targets* that include the forest and land sector for the purposes of emissions reduction and carbon sequestration accounting. Likewise, the varying conditional nature of NDCs has been considered when reporting under sectoral and economy-wide indicators in order to distinguish between countries' unconditional commitments and the additional FLR potential that is contingent, in most cases, on international support. Moreover, additional FLR potential has been identified in countries' NDCs, and is expressed as voluntary commitments, intended measures, and/or national priorities under both adaptation or mitigation approaches.

Indicator 2.1: Number of NDCs committed that include forest landscape restoration potential commitments

One hundred and twenty two of 165 NDCs contain FLR commitments, as expressed under both sectoral and economy-wide mitigation targets. Nonetheless, only 20 percent include quantifiable targets which, if pledged to the Bonn Challenge, would equal 12 percent of the total 350 million hectare goal.[16] Some NDC targets might overlap with Bonn Challenge commitments.

Indicator 2.2: Size of aggregate sectoral NDC targets on forest landscape restoration

While nearly three-quarters of NDCs contain forest and land commitments under

diverse approaches, less than 10 percent have included quantifiable mitigation commitments under sectoral targets, including FLR-type interventions with an estimated 3.6 million hectares or 0.38 $GtCO_2e$[17] in carbon gains. Sectoral targets corresponding to FLR include those commitments under afforestation, reforestation, reduced degradation, sustainable forest management, or other references to carbon sequestration efforts to be accounted under "Land Use, Land-Use Change and Forestry" or "Agriculture, Forestry and Other Land Use" sectors in the NDCs. Nonetheless, it is important to remember that achieving 72 percent of those targets in hectares and 64 percent in tCO_2e is conditional upon international support, through financial resources, technology transfer, and capacity building.

Indicator 2.3: Size of aggregate forest landscape restoration commitments under economy-wide NDCs

While most countries' NDCs stress the importance of the forest and land sector, only half are economy-wide NDCs with FLR commitments under broader quantifiable targets. These targets total more than 38 million hectares. Around a quarter of NDCs have explicitly excluded the forest and land sector from their mitigation targets for a range of reasons, including the lack of national monitoring and accounting capacities. Further, the majority of economy-wide NDCs that include forest and land commitments and ambitions are conditional upon international support.[18]

Indicator 2.4: Size of aggregate forest landscape restoration action expressed outside official NDC mitigation targets

Countries also included information in NDCs that are external to official mitigation targets and describe voluntary national efforts, adaptation approaches, and/or intended mitigation measures. Indicator 2.4 attempts to capture these additional targets through FLR. This additional FLR-type action is expressed in 38 percent of NDCs, either under adaptation approaches or under additional voluntary national efforts, and adds up to 41.7 million hectares.

DATA DEVELOPMENTS

New developments now under way will help address gaps in data and evidence for successful FLR implementation.

Data development #1: Expanded forest landscape restoration website

In November 2016, the International Union for Conservation of Nature (IUCN)

launched the InfoFLR.org website, an information hub which captures and consolidates information, news, analysis, resources, and on-going updates on restoration initiatives around the world. InfoFLR features profiles of more than 50 countries, including domestic targets, policies, and programs related to restoration.[19]

Data development #2: Bonn Challenge Barometer

The Bonn Challenge Barometer, led by IUCN with support from Germany, was announced in September 2016 and initiated in mid-2017. This protocol is tracking progress on actions on Bonn Challenge commitments on restoration along three dimensions: policy commitment and financing for restoration, technical knowledge and underpinning, and on-the-ground progress. Findings will be publicized through Bonn Challenge Progress Reports in 2017, 2018, and 2020.[20]

Data development #3: AFR100 Monitoring Framework

Commitments under the Bonn Challenge, and thus NYDF Goal 5, are complemented by several regional initiatives, including AFR100, a country-led effort to bring 100 million hectares of degraded landscapes across Africa into restoration by 2030. The AFR100 secretariat is working to devise a Monitoring Framework on Guiding Principles for Measuring and Monitoring Progress on Forest and Landscape Restoration in Africa to assist countries in the tracking of progress in implementing FLR. The Framework covers: creating a restoration strategy; selecting appropriate indicators and targets; and principles of best practice monitoring. It was presented for further discussion and endorsement by AFR100 ministers at the second annual AFR100 Partnership Conference, in Niger in September 2017.

Data development #4: ROAM progress

The Restoration Opportunities Assessment Methodology (ROAM) is currently being used in over 26 countries – at the national or subnational level – to identify assessment opportunities and prioritize FLR interventions. In the past year, Malawi, Uganda, Brazil, and Mexico have completed the ROAM process, and eight countries in Asia are now undertaking ROAM assessments. The completed assessments have identified millions of hectares available for restoration (e.g. in Malawi) and have informed the creation of national restoration plans (e.g. in Brazil).

Authors: Alan Kroeger (Climate Focus), Maria Garcia Espinosa, and Pathanchali Premachandra (IUCN)

---

[1] As per ratification of the Paris Agreement, see www4.unfccc.int/ndcregistry/Pages/Home.aspx .

[2] These figures are estimated using only quantifiable commitments, during a 2020-2030 implementation period, and are expressed here in hectares. Due to a change in methodology used this year, this figure is significantly less than the 2016 NYDF goal 5 update. This difference is mainly due to the 2017 update's exclusion of China's NDC commitment, which is based on an increase in forest stock volume. Also, the data in this year's version excludes all pre-2020 action described in NDCs. Last year's version considered China's pre-2020 action and used non-NDC info to convert its goal in forest stock volume to hectares, but this did not conform with the new and more robust methodology and was therefore excluded.

[3] The Global Partnership on Forest Landscape Restoration. (n.d.). What is forest landscape restoration? Retrieved from www.forestlandscaperestoration.org/forest-landscape-restoration

[4] International Union for Conservation of Nature & World Resources Institute. (2014). A guide to the Restoration Opportunities Assessment Methodology (ROAM): Assessing forest landscape restoration opportunities at the national or sub-national level. Retrieved from www.iucn.org/roam

[5] International Union for Conservation of Nature. (2017). Bonn Challenge crosses the 150 million hectare milestone with pledges from Pakistan, Bangladesh, Mongolia and Sri Lanka. Retrieved from www.iucn.org/news/forests/201705/bonn-challenge-crosses-150-million-hectare-milestone-pledges-pakistan-bangladesh-mongolia-and-sri-lanka

[6] The Bonn Challenge, see www.bonnchallenge.org .

[7] African Forest Landscape Restoration Initiative. (n.d.). Home. Retrieved from http://afr100.org/

[8] World Resources Institute. (n.d.). Initiative 20×20. Retrieved from www.wri.org/our-work/project/initiative-20×20

[9] International Union for Conservation of Nature. (2016). Kigali Declaration on Forest Landscape Restoration in Africa. Retrieved from www.iucn.org/news/forests/201607/kigali-declaration-forest-landscape-restoration-africa

[10] The Agadir Commitment Towards a Mediterranean Regional Initiative on Forest and Landscape Restoration, www.fao.org/forestry/45656-0ed7af343bc2e08d467c000593c2cd9ae.pdf

[11] The Bonn Challenge, see www.bonnchallenge.org .

[12] International Union for Conservation of Nature. (2017). Bonn Challenge crosses the 150 million hectare milestone with pledges from Pakistan, Bangladesh, Mongolia and Sri Lanka. Retrieved from www.iucn.org/news/forests/201705/bonn-challenge-crosses-150-million-hectare-milestone-pledges-pakistan-bangladesh-mongolia-and-sri-lanka

[13] International Union for Conservation of Nature. (2017). Pakistan's Billion Tree Tsunami restores 350,000 hectares of forests and degraded land to surpass Bonn Challenge commitment. Retrieved from www.iucn.org/news/forests/201708/pakistan%E2%80%99s-billion-tree-tsunami-restores-350000-hectares-forests-and-degraded-land-surpass-bonn-challenge-commitment

[14] United Nations Framework Convention on Climate Change. (n.d.). NDC Registry. Retrieved from www4.unfccc.int/ndcregistry/Pages/Home.aspx

[15] United Nations Framework Convention on Climate Change. (n.d.). Intended Nationally Determined Contributions (INDCs). Retrieved from www4.unfccc.int/submissions/indc/Submission%20Pages/submissions.aspx

[16] Only quantifiable commitments expressed in hectares have been considered for estimating this figure, totaling 42.5 million hectares. Quantifiable commitments expressed as tCO2e represent 3.39 GtCO2e.

[17] The interventions totaling 3.6 million hectares and 0.38 GtCO2e are separate intervention totals as countries indicated interventions in hectares, tCO2e or sometimes both.

[18] 55 percent of economy-wide NDCs include forest and land commitments and 65 percent are conditional upon international support.

[19] InfoFLR. (n.d.). What is FLR? Retrieved from https://infoflr.org .

[20] International Union for Conservation of Nature. (2016). IUCN launches the Bonn Challenge Barometer of Progress. Retrieved from www.iucn.org/news/forests/201610/iucn-launches-bonn-challenge-barometer-progress