RAISING THE BAR: STRENGTHENING FOREST AMBITION IN NATIONALLY DETERMINED CONTRIBUTIONS (NDCS)

AN ASSESSMENT OF CURRENT NDCS

NOVEMBER 2024

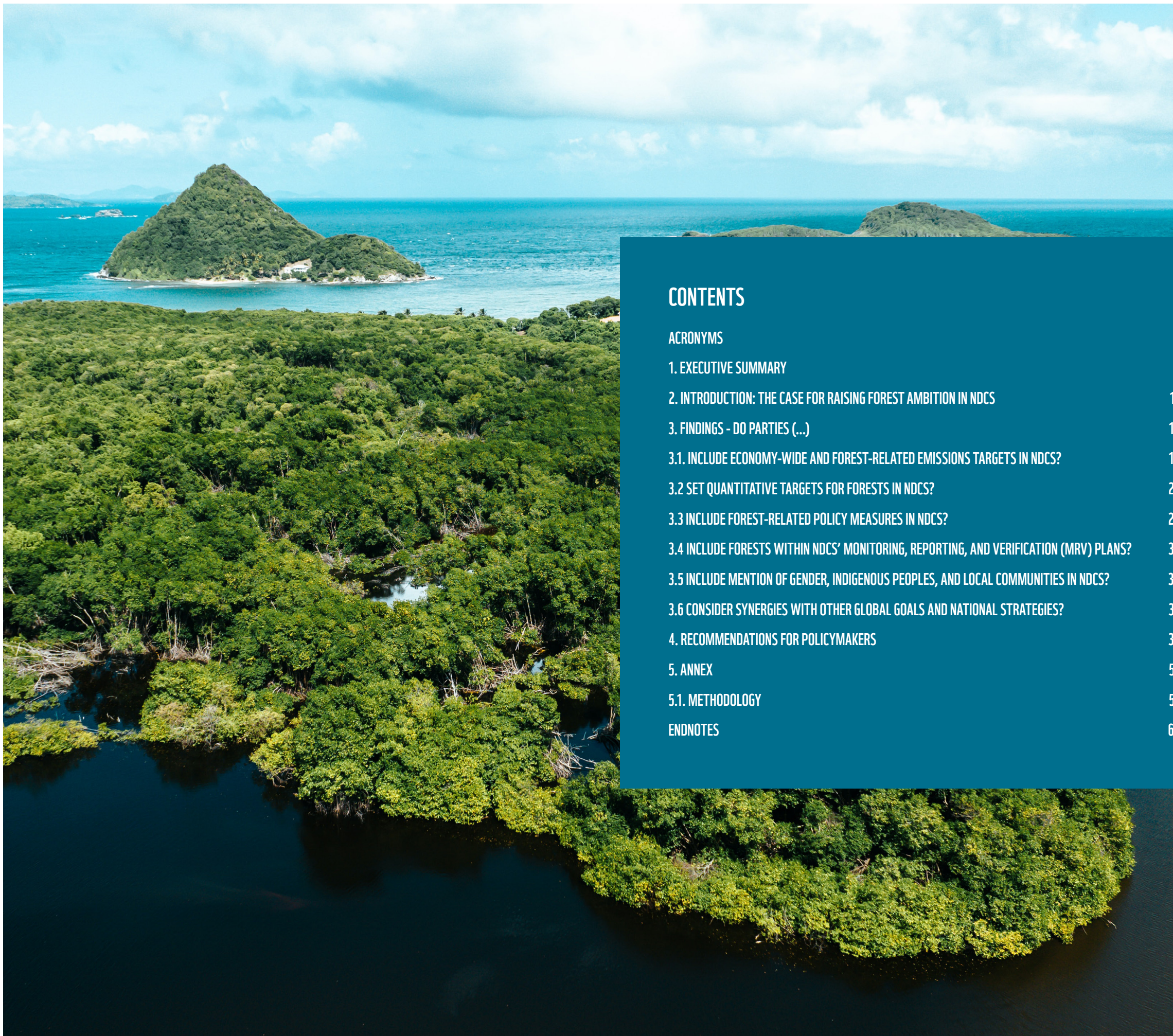**Authors:**
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CONTENTS

ACRONYMS

AFOLU	Agriculture, Forestry, and Other Land Use
CBD	Convention on Biological Diversity
COP	Conference of the Parties
DAC	Direct air capture
DCF	Deforestation and conversion-free
ER	Emission Reduction
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FOLU	Forestry and Other Land Use
FPIC	Free, Prior and Informed Consent
FSC	Forest Stewardship Council
GBF	2022 Kunming-Montreal Global Biodiversity Framework
GHG	Greenhouse gas
GLD	Glasgow Leaders' Declaration on Forests and Land Use
GST	Global Stocktake
KBA	Key Biodiversity Area
LULUCF	Land Use, Land Use Change, or Forestry
MRV	Monitoring, Reporting, and Verification
NAP	National Adaptation Plan
NBSAP	National Biodiversity Strategy and Action Plan
NDC	Nationally Determined Contribution
OECM	Other effective area-based conservation measure
PES	Payment for ecosystem services
REDD+	Reducing Emissions from Deforestation and Degradation plus conservation, sustainable management, and enhancement of forest stocks
SDG	Sustainable Development Goal
SMART	Specific, measurable, achievable, relevant, and time-bound
tCO$_2$^{eq}	Metric ton of carbon dioxide equivalent
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States dollar

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1. EXECUTIVE SUMMARY

Forests play a crucial role in climate change mitigation and adaptation. They store billions of metric tons of carbon dioxide, regulate hydrological cycles, provide irreplaceable habitats for biodiversity, and support billions of livelihoods. Deforestation and forest degradation are also among the largest sources of greenhouse gas (GHG) emissions globally. Creating a sustainable, equitable future and achieving the international climate goals as expressed in the Paris Agreement significantly depends on the protection, restoration, and sustainable management of forests around the world.

Protecting, restoring, and sustainably managing forests must be a part of national and global efforts to achieve the Paris Agreement's 1.5°C goal. Nationally Determined Contributions (NDCs) are the platform for Parties to the Paris Agreement to communicate their climate targets and actions, and Parties are required to increase their ambition in each subsequent submission. As of October 2024, the implementation of all NDCs through 2030 is estimated to put the world on track for 2.1°C – 2.8°C of warming.[1,a] In December 2023, existing NDCs were estimated to have a 99.5% chance of putting the world on a pathway exceeding the 1.5°C target.[2] Parties are currently updating their NDCs with the next round due by February 2025. This provides a crucial window of opportunity for Parties to address this risk and increase their ambitions, including for forest-related targets and measures. Increased ambitions for forests should be fundamentally integrated into the updated NDCs being prepared ahead of the 30th Conference of the Parties (COP30) of the United Nations Framework Convention on Climate Change (UNFCCC).

NDCs are a critical entry point for leveraging climate action for forests and other global goals. Elevating and integrating forest targets and measures within NDCs also advances other commitments Parties have made. Under the New York Declaration on Forests (2014) and the Glasgow Leaders' Declaration on Forests and Land Use (GLD, 2021), policymakers—along with hundreds of companies, civil society organizations, and Indigenous organizations—set ambitious goals of halting and reversing forest loss and degradation by 2030. Parties referenced their commitments to reversing and halting deforestation and forest degradation in the Global Stocktake (GST) at the UNFCCC 28th Conference of the Parties (COP28) in 2023.[3] Parties also committed to protecting and restoring 30% of ecosystems by 2030 and minimizing the impacts of climate change on biodiversity under the 2022 Kunming-Montreal Global Biodiversity Framework (GBF)'s Targets 2, 3 and 8; ensuring legal trade of wild species under Target 5; and sustainably managing their forests and agricultural lands under Target 10. Policymakers have a 2024 deadline for updating their National Biodiversity Strategies and Action Plans (NBSAPs) in line with the GBF.

This near-simultaneous update of NDCs and NBSAPs provides a crucial opportunity to develop complementary plans that accelerate action on climate, forests, and biodiversity. The GLD commitments to halting deforestation by 2030—and the GST's affirmation of those commitments—must become the new paradigm, reflected in ambitious forest-emission targets in NDCs. Leaders must foster synergies between climate action, biodiversity conservation, and sustainable development—and can do so, in part, through setting ambitious forest targets and measures in both NDCs and NBSAPs and interlinking their planning and implementation processes between national goals.

Given the importance of NDCs for guiding policymakers, this report assesses the extent to which NDCs integrate forest-related measures. The assessment included 130 NDCs from Parties with greater than one hundred thousand hectares of forest.[b] The assessment reviewed the extent to which NDCs have forest-related emissions targets and other quantitative forest-related targets; forest-related policy measures; forest considerations in their monitoring, reporting, and verification (MRV) plans; considerations of gender, Indigenous Peoples, and local communities; and synergies with other forest-related policy instruments like NBSAPs.

KEY FINDINGS

The findings of this analysis are stark: despite forests' critical role in meeting climate targets and countries' commitments to protect them, many Parties have inadequately considered forests within their NDCs. Overlooking these priceless ecosystems comes with immense risks not only for the climate, but also for biodiversity and sustainable development. Parties do not often include forest actions in their NDCs even though protecting and restoring forest ecosystems delivers multiple benefits for people and biodiversity and in turn can deliver against multiple global goals beyond NDCs. Addressing these crises in isolation undermines efforts to achieve meaningful progress. A holistic, systems-based approach enables the most cost-effective and efficient strategies to drive the necessary changes at the pace required to meet global goals set for 2030.

To effectively address the interconnected climate, development, and biodiversity crises, commitments, plans, and strategies must be integrated. Siloed approaches will only delay progress. While protecting forests is crucial for meeting international climate goals, non-forest ecosystems must also be safeguarded, both for their inherent value and their role in supporting forest protection to reach its full effect. For example, when land-clearing spills from forests into other ecosystems—potentially driven by policies that protect forests but not other landscapes—the amount of carbon released from the leakage is enough to potentially surpass the world's cumulative emissions budget.[4]

Among a range of findings, this analysis of NDCs finds that:

- **Less than half of assessed NDCs set a forest-specific emissions mitigation target:** 49% of assessed NDCs include a quantitative forest-related emissions mitigation target within their NDCs, such as a mitigation target for the Agriculture, Forestry, and Other Land Use (AFOLU), Forestry and Other Land Use (FOLU), and Land Use, Land Use Change, or Forestry (LULUCF) sector.

- **Quantitative targets on key forest issues are insufficient:** A portion of NDCs integrate quantitative targets on some forest issues, like restoration (52% of NDCs) and deforestation (28%). Other forest targets are overwhelmingly overlooked: only 2% of assessed NDCs include a quantitative target related to Key Biodiversity Areas (KBAs), and just 2% have a quantitative target related to primary forests.

- **Protected area regulations, sustainable forest management, and REDD+[c] are the most integrated forest measures for mitigation and adaptation:** Around half of all NDCs include measures related to protected areas (47%), sustainable forest management (47%), or REDD+ (39%).

- **Explicit inclusion of deforestation and conversion-free (DCF) production or supply chains is rare:** Only 4% of NDCs explicitly include explicit references to DCF production or supply chains.[d] Even though most of the deforestation and associated emissions are linked, directly or indirectly,[5] to agricultural production.

- **Many MRV sections lack mentions of forests:** A minority of Parties (32%) explicitly mentioned forests within the monitoring, reporting, and verification (MRV) sections of their NDCs.

- **Most NDCs consider marginalized groups:** A majority of assessed NDCs include mention of gender (79%) and Indigenous peoples and local communities (54%).

- **Most NDCs mention biodiversity, but a minority cross-reference related national strategies and international frameworks:** 73% of assessed NDCs recognized biodiversity to some extent. However, just 31% explicitly mention the Convention on Biological Diversity (CBD), GBF, and/or NBSAPs, despite the synergies required to achieve the commitments under these frameworks.

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a   Significant variation results from uncertainties in climate models, possible ranges in emissions levels, and assumptions about whether conditional NDC targets are met (See UNFCCC. Secretariat, 2024).

b   The analysis assessed 130 NDCs from Parties with greater than one thousand hectares of forest, based on FAO data. NDCs from Parties with fewer than one thousand hectares of forest are not assessed in this report. The 130 NDCs include that of the European Union, which represents the combined climate plan for 27 countries of the bloc. According to the UNFCCC, NDCs 3.0 for the year 2025 should be prepared with an implementation timeframe leading up to 2035. All Parties are required to submit their NDC 3.0 no later than February 2025, to allow sufficient time for the preparation of the compilation and synthesis report prior to CMA7 (November 2025). For a list of NDCs reviewed in this analysis, see the Annex.

c   REDD+ refers to efforts to reduce emissions from deforestation and forest degradation, and foster conservation, sustainable management of forests, and enhancement of forest carbon stocks, as established by a UNFCCC framework.

d   Deforestation-free (DCF) supply chains are a cross-cutting issue that intersects with a variety of other topics, including REDD+, food systems, consumption of forest-risk products, international trade, and beyond. While this analysis aims to identify explicit references to DCF and key related topics within countries' NDCs, some countries may have included DCF-related considerations under other categories, such as REDD+ plans, or made meaningful – but perhaps less explicit – mentions of tangential topics. For further clarity on the scope of this review, please refer to the keyword list provided in the Annex.

KEY RECOMMENDATIONS

Countries have made commitments to protect forests, biodiversity, and the climate. Yet these findings show that there is a huge gap between making those promises and setting concrete plans and targets in their NDCs. Without sufficient ambition and implementation of forest-related targets and measures, including those linking to biodiversity commitments and actions (as articulated in NDCs and other national planning documents), governments risk breaking the promises they made to halt and reverse deforestation and forest degradation by 2030.[e] Additionally, to mitigate both climate and biodiversity risks, nature protection should include non-forest ecosystems, as part of the implementation of robust DCF supply chains policies. Based on the assessment findings and these evident gaps in action, this report identifies the following high-level recommendations for policymakers.

1
ELEVATE FORESTS AS A NATIONAL PRIORITY WITHIN NDCS

Recognize the necessity of forests to achieve multiple national goals, the value of high integrity forests, and the diverse socio-economic roles of forests. Additionally, considering natural non-forest ecosystems (which also face alarming rates of conversion due to agricultural expansion in many regions of the world) as critical in NBSAPs would significantly contribute to a more sustainable future, by reducing deforestation leakage from forests, carbon emissions, biodiversity loss, human rights violations, and other harmful impacts for populations.

2
PRIORITIZE TARGET AREAS THAT NEED MORE AMBITION, AND ENSURE NDCS ARE SYNERGISTIC WITH OTHER NATIONAL PLANS SUCH AS NBSAPS, NAPS, AND SDGS.

Set clear, quantifiable DCF targets for both consumer and producer countries, reflecting shared responsibility. Assess drivers of forest loss and degradation on a national scale, and simultaneously review forests' integration within current NDCs. Ensure that forest protection policies do not accelerate clearing of other natural ecosystems like savannas, wetlands, and grasslands by expanding to include all ecosystem protection. Additionally, encourage countries to account for and report on embedded emissions from deforestation in their footprint.

3
SIMPLIFY AND IMPROVE ACCOUNTING AND REPORTING

Simplify and improve forest and non-forest ecosystem accounting and reporting for NDC efforts on both national and international levels.

4
SET SPECIFIC, TIMEBOUND TARGETS AND DETAILED POLICY MEASURES FOR IMPLEMENTATION

Targets should aim to be Specific, Measurable, Achievable, Relevant, and Time-Bound (SMART) as Parties develop new NDC submissions.

5
ALIGN AND INCREASE FINANCE FOR FORESTS

Leverage a combination of financial interventions that address drivers of deforestation and incentivize conservation, while ensuring coordination between different actors and ownership by forest countries. Create an enabling environment for private finance for forests by implementing policies and instruments that de-risk private investment. Channel international finance to support enabling conditions for efficient repurposing of harmful subsidies through multilateral reform programs, such as under the World Bank, Global Environment Facility or Green Climate Fund.

6
IMPROVE INTERMINISTERIAL COORDINATION AND STRENGTHEN SYNERGIES ACROSS POLICY PROCESSES

Establish inter-institutional, cross-sectoral collaboration tracking systems or build upon existing schemes to integrate forest considerations across sectors. Establish effective channels for collaboration across the UNFCCC and the CBD by adopting a joint programme of work on repurposing harmful agricultural subsidies and by creating a climate and nature workstream under the UNFCCC to implement previous decisions and promote alignment with the GBF.
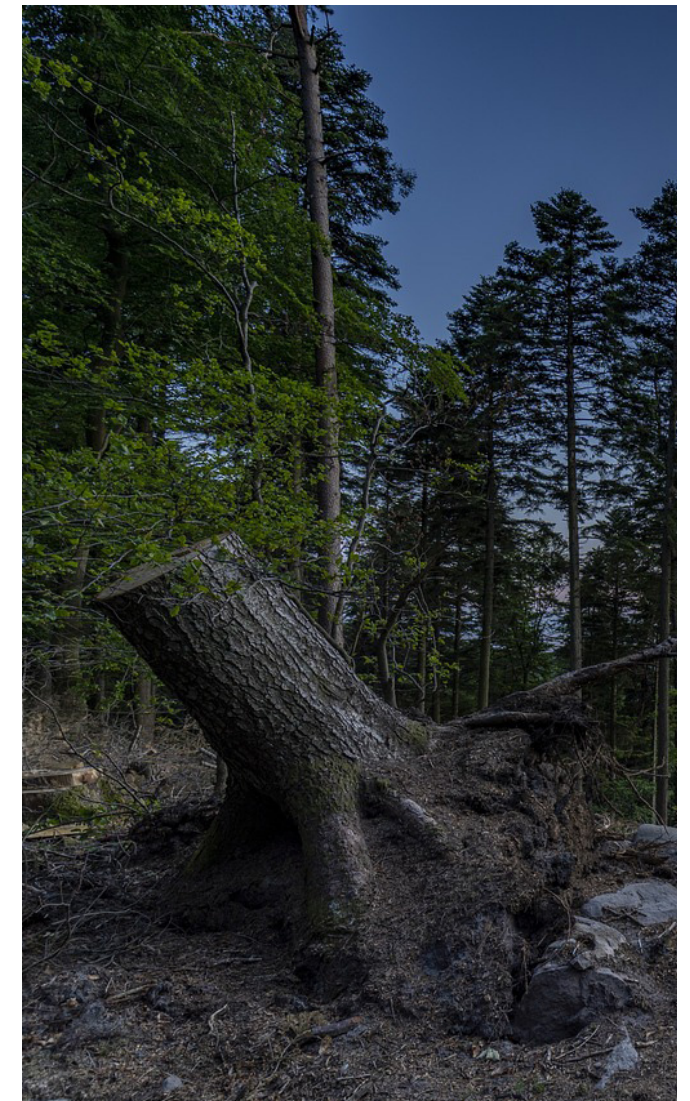
7
BUILD CAPACITY AND KNOWLEDGE

Foster strategic partnerships with Indigenous peoples and other traditional knowledge holders. Leverage existing organizations with the expertise to support Parties in enhancing ambition within their NDCs and NBSAPs. Recognizing and integrating traditional knowledge is crucial for developing more effective and culturally informed strategies.

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[e]   Such as commitments made under the GBF and GLD and referenced by the GST.

2. INTRODUCTION: THE CASE FOR RAISING FOREST AMBITIONS IN NDCS

Scientists have given the world a "final warning" on the climate crisis.[6,7] Countries finally need to embrace protecting, sustainably managing, and restoring forests as one of the most effective, efficient, and important categories of land-based strategies for addressing climate change.

Forests play a crucial role in climate change mitigation: they absorbed nearly 16 billion metric tons of carbon dioxide per year from 2000 to 2019,[8] and currently hold 861 billion metric tons of carbon in their branches, leaves, roots, and soils.[9] Forests also contain greater than half of all terrestrial species of animals, plants and insects—80% of amphibian species, 75% of birds and 68% of mammals—and contain 60,000 tree species.[10] High integrity forests, forested KBAs, and "primary"—old, undisturbed—forests are irreplaceable harbors of global biodiversity.[11]

Forests fuel the global economy by providing food, medicines, materials, clean water, and cultural spaces on which humans depend.[12] Forests also sustain billions of livelihoods.[13] The United Nations suggests that forests produce economic activity as high as USD 150 trillion per year when factoring in the value of carbon sequestration.[14] The Amazon alone produces an annual economic value of USD 317 billion – at least three times greater than the economic value linked to Amazonian deforestation for timber, ranching, soy, or mining.[15] Forests' ecosystem services—such as regulating water and nutrients cycles, reducing risks of floods and droughts, and buffering humans and wildlife, which limits the spread of zoonotic infectious diseases—are also essential to provide resilience to climate change.[16,17]

Deforestation and forest degradation contribute as much as one-fifth of all GHGs released each year.[18] In 2023, gross emissions from deforestation totaled 3.8 billion metric tons of carbon dioxide equivalent.[19] If deforestation were its own country, its emissions would be fourth highest in the world, after China, the United States, and India.[20] Deforestation, particularly in tropical regions, also disrupts local temperatures and rainfall patterns, exacerbating the local impacts of global climate change and threatening human health and agricultural productivity.

The degradation of tropical forests is estimated to release 2.1 billion metric tons of carbon dioxide each year, and, in some countries, emissions from forest degradation exceed those from deforestation.[21] A 2024 study found that forest degradation in the Amazon releases five times more carbon than deforestation, noting that roads, selective logging, fires, and natural disturbances significantly contribute to this hidden carbon crisis, and these factors are often underreported in carbon emissions data.[22] The degradation of forest ecosystems is also among the most significant drivers of biodiversity loss and ecosystem service decline globally.[23] The current global rate of species extinction is possibly hundreds of times higher than the average rate over the past 10 million years.[24]

Beyond emitting vast amounts of atmosphere-warming emissions, degraded forests' ability to absorb future carbon emissions is lost or seriously depleted. Concerningly, highly degraded areas of forests are now being observed turning from a net sink into a net source of emissions.[25] Forest loss contributes to GHG emissions that drive climate change. Climate change disrupts weather patterns, fueling events like floods, droughts, and unnatural fires.[26]

Forest degradation can, in turn, create a destructive feedback loop. Combined, these events drive more forest loss, which then exacerbates climate change. Such negative feedback loops are driving globally important forest basins towards tipping points—the points after which forest biomes could collapse due to compounding disturbances.[27,28] The impacts of this would be far reaching and catastrophic, irreversibly damaging the Earth's life-support systems and destabilize economics and societies everywhere,[29] especially the billions of people in rural areas live within 5 kilometres of a forest.[30]

The Amazon rainforest holds more than 10% of global terrestrial biodiversity, stores 250-300 billion tons of carbon (equivalent to 15-20 years of global GHG emissions[31]), and contributes significantly to regional water regulation. Yet it is at imminent risk of reaching its tipping point, with estimates that by 2050 the interactions between fires, droughts, global warming, deforestation, seed dispersal limitation, invasive species, and soil erosion could cause the ecosystem to collapse.[32] This would devastate biodiversity and have far reaching impacts on the 47 million people who live in the Amazon.[33] Globally, the ability of this import forest to provide essential ecosystem services including carbon sequestration will be lost, further exacerbating climate change.

Despite urgent calls to protect them, and commitments from hundreds of leaders to do so (Box 1), forests continue to be destroyed and degraded at an alarming rate. In 2023, 28.3 million hectares of tree cover were cleared globally.[34] Global deforestation rates remain far too high compared to the levels needed to stay on track to eliminate deforestation by 2030.[35] Meanwhile, the status of forest restoration efforts remains frustratingly opaque, with limited monitoring and reporting on restoration making it challenging to track progress.[36]

Direct drivers of deforestation include agriculture, legal and illegal timber harvest and forestry, mining and extractives, infrastructure development, and urban expansion (Figure 1).[37,38] Agricultural commodity production is by far the largest driver of deforestation and ecosystem conversion globally, particularly in the tropics (Figure 2).[39] Agricultural expansion is estimated to account for 70% of the projected loss of terrestrial biodiversity,[40] and has threatened 24,000 of the 28,000 species at risk of extinction.[41] Species richness in cropland sites is estimated to be 40% lower on average than in primary vegetation,[42] meaning that reducing agriculture's impact on forests is an important intervention at the intersection of forests, climate, and biodiversity. The Intergovernmental Panel on Climate Change (IPCC) warned that 18% of all terrestrial species could become extinct if the planet experiences 2°C of warming, and 29% could become extinct under a 3°C rise in temperature.[43]

Underlying drivers of deforestation, forest degradation, and biodiversity loss include a range of political, cultural, and socio-economic factors—unsound policies, weak governance and lack of law enforcement, landlessness and unclear allocation of rights, rural poverty, lack of investment and financial resources, population growth and migration, and civil conflict.[44]

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BOX 1. INTERNATIONAL COMMITMENTS AND FRAMEWORKS FOR FORESTS

2011
Bonn Challenge

2014
New York Declaration on Forests

2017
United Nations Strategic Plan for Forests

2021
Glasgow Leaders' Declaration on Forests and Land Use

2022
Global Biodiversity Framework

2023
First Global Stocktake

The Paris Agreement recognizes the potential of forests as key for climate change mitigation. Under Article 5 of the Paris Agreement,[45] countries committed to conserve and enhance sinks and reservoirs of GHG emissions, especially forests. The Paris Agreement is a decision under the United Nations Framework Convention on Climate Change (UNFCCC) and builds on other decisions adopted thereunder, such as the UNFCCC's legal framework for actions to conserve and enhance forest sinks and to reduce emissions from deforestation and forest degradation (REDD+).[46] These forest-related commitments in the Paris Agreement should drive Parties to integrate forest targets in their NDCs.

In 2017, the United Nations Strategic Plan for Forests 2017-2030 (UNSPF) was adopted by the UN General Assembly as a global framework to promote sustainable forest management worldwide. The UNSPF envisions a world where all types of forests and trees outside forests are sustainably managed, contributing to sustainable development and providing economic, social, environmental, and cultural benefits for present and future generations.[47]

Additionally, international forest goals have been established across a range of commitments. The "2030 forest goals" refer to collective commitments to eliminate deforestation and forest degradation and restore 350 million hectares of forests by 2030. These have been established by international commitments such as the New York Declaration on Forests (2014), the Bonn Challenge (2011), and the Glasgow Leaders' Declaration (2021).

The two most recent international agreements relevant to forests are the 2022 Kunming-Montreal Global Biodiversity Framework (GBF) and the 2023 Global Stocktake (GST). The GBF commits countries to conserving and restoring 30 percent of ecosystems by 2030. Targets 2, 3, 5, 8, and 10 establish an umbrella for climate-nature actions that are highly relevant—though not specific—to forests. Target 8 of the GBF, for example, calls upon countries to foster positive and minimize negative impacts of climate action, including forest interventions, on biodiversity. See Box 3 in section 3.6 to see more examples of how forest-based measures can contribute to GBF targets.

The GST, adopted at the 28th Conference of the Parties (COP28) of the UNFCCC in Dubai, mentions conservation and restoration of forests, ecosystems, and biodiversity as key mitigation activities, including referencing the GBF. Paragraph 33 of the GST decision "emphasizes the importance of conserving, protecting, and restoring nature and ecosystems towards achieving the Paris Agreement temperature goal, including through enhanced efforts toward halting and reversing deforestation and forest degradation by 2030...and by conserving biodiversity... in line with the Kunming-Montreal Global Biodiversity Framework." Similarly, Paragraph 34 "notes the need for enhanced support and investment ... for efforts towards halting and reversing deforestation and forest degradation by 2030, in accordance with Article 5 of the Paris Agreement, including through results-based payments for policy approaches and positive incentives for activities relating to reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks in developing countries."[48]

Figure 1. Direct and indirect drivers of deforestation and forest degradation
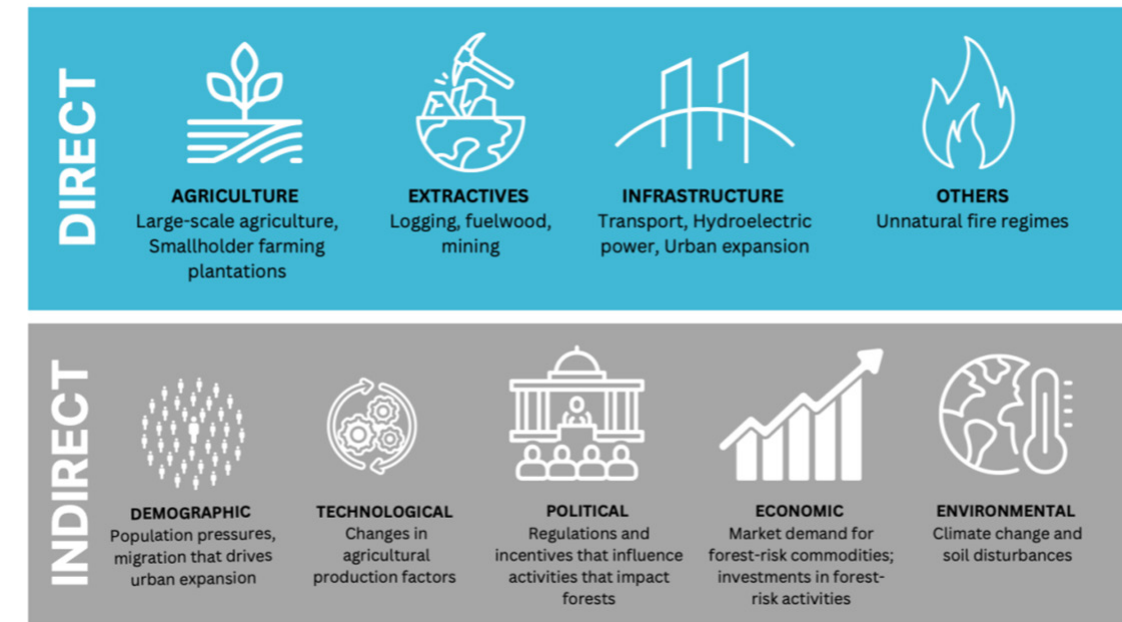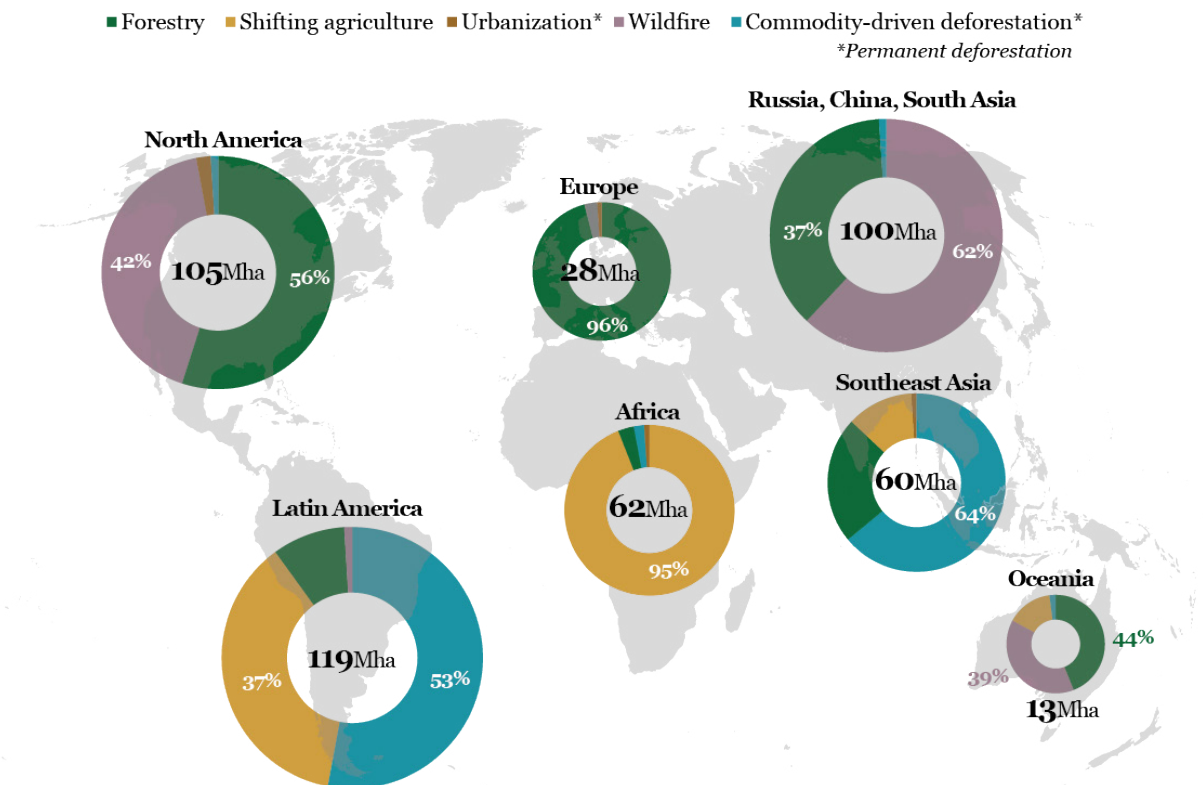

Figure 2. Drivers of tree cover loss by region, in million hectares, 2001-2022 (Source: World Resources Institute (WRI) (2023).

To avert these risks, forests can be harnessed to contribute to global climate mitigation through both emission reductions and removals strategies. Protecting standing forests, especially high-integrity forests,[f] conserves existing carbon pools in forest vegetation and soil as well as the biodiversity in those forests. Forests also play a key role in climate adaptation and disaster risk reduction, helping to buffer communities and ecosystems from climate-related disasters. When they are protected, sustainably managed, and restored, forests absorb an estimated net 7.6 billion metric tons of carbon dioxide per year – more than 1.5 times the emissions of the United States.[49]

Protecting, restoring, and sustainably managing forests requires integrating forests into the national and global efforts to achieve the Paris Agreement's 1.5°C goal. Parties to the Paris Agreement are mandated to integrate ambitious, specific, and actionable measures and targets related to forests in their NDCs, not only to mitigate and adapt to climate change, but also to address the biodiversity crisis and work towards sustainable development. Ambitions to halt deforestation by 2030 and ensure sustainable forest management while restoring degraded forests must be achieved to avoid significant risks to our planet and the life it supports.

Of course, forest-based measures are not a panacea for climate mitigation. Forest-based climate change mitigation must be implemented alongside immense and rapid reductions in the burning of fossil fuels. Forests, no matter how well conserved and restored, will not be able to sequester or avoid sufficient volumes of GHGs to avert climate catastrophe on their own. Forest-based measures also come with important trade-offs and risks that must be carefully balanced when considering forest-based strategies (Box 2).

For example, non-forest ecosystems, such as grasslands and savannahs, are being converted to cropland, pastures, or other uses at alarming rates in many regions of the world.[50] Such conversion has a significant effect on the climate, contributing over 15% of the gross land-use change emissions.[51] When forests alone are protected, the clearing of non-forest ecosystems can accelerate, as, for example, in the Cerrado region of Brazil.[52]

The Paris Agreement recognizes that its long-term goals must be achieved through a ratcheting up of countries' aggregate and individual ambition over time. Parties are required to progressively enhance their targets with the submission of new NDCs every five years. Each successive NDC should reflect the highest possible ambition in line with the goals of the Agreement. The need to rapidly raise ambitions of NDCs was referenced by the first GST at COP28, which noted that there is a "rapidly narrowing window to raise ambition and implement existing commitments" to address climate change.[53] Countries are currently updating their NDCs with the next round due in February 2025.[g] This provides a crucial window of opportunity for countries to increase their ambitions, including for forest-related targets and measures.

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BOX 2. CO-BENEFITS AND TRADE-OFFS OF INTERVENTIONS FOR FORESTS

Forest-based interventions (like reducing deforestation, reducing forest degradation, and sustainably managing forests) have the potential to simultaneously generate mitigation, adaptation, biodiversity, and sustainable development benefits. Reducing deforestation has an annual mitigation potential of 6,008 million metric tons of carbon dioxide equivalent (MtCO2eq) per year from 2020-50 (see Table 1) and is essential for addressing the biodiversity crisis and supporting key ecosystem services that sustain nature and communities.[54]

Furthermore, forest-based climate change mitigation actions are currently cheaper and more readily available than some high-tech mitigation options, like direct air capture (DAC) solutions. Cost-effective reforestation, restoration, and afforestation is available for USD 50 to 100 per metric ton of carbon dioxide equivalent (tCO2eq), while the costs of DAC are estimated to be between USD 200 and 800, depending on a range of factors including technology and scale.[55,56,57] Both nature - and technology-based solutions will be needed to mitigate climate change, and the costs of DAC are expected to decrease over time.[58] But, crucially, forest mitigation solutions can be implemented immediately, while DAC technology is still under development.

Forest-based measures also come with important trade-offs and risks that must be considered. If not designed and implemented appropriately, forest-based measures can have negative impacts on smallholders' livelihoods and create tension over competing land uses.[59] There are also concerns about the permanence of carbon sequestration from forests if their status is not protected.[60] For instance, afforestation and reforestation implemented to increase carbon sequestration in an arid region might increase demand for limited and diminishing water resources.[61] This means that the long-term mitigation and adaptation potential of ecosystems may be limited unless local contexts and conditions are carefully considered in the planning and implementation of afforestation or reforestation activities. Similarly, afforestation has the potential to threaten biodiversity if it replaces or displaces other native biodiversity, such as biodiverse grassy biomes.[62,63] These factors must be carefully balanced when considering forest-based strategies and countries should develop best practices, such as the European Union's Guidelines on Biodiversity-Friendly Afforestation, Reforestation and Tree Planting.[64]

Additionally, many Nationally Determined Contributions prioritize renewable energy policies to meet national mitigation targets. Renewable energy technologies are essential for transitioning away from fossil fuels and meeting global climate goals, and, at COP28, countries set a target of tripling global renewable capacity by 2030.[65] However, potential risks of renewable energy for forests and biodiversity should be accounted for and addressed. For instance, mining the materials necessary for renewable energy and creating renewable energy infrastructure could drive losses in primary forests and Key Biodiversity Areas.[66,67] It is important for countries to mitigate these risks and employ learnings from existing practices. Countries can – and must – ensure that mining the materials needed for renewable energy production does not simply replace the climate change-related threats to biodiversity and forests mitigated by reducing fossil fuel use.[68]

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3. FINDINGS

This assessment analyzes NDCs to determine the extent to which countries are integrating forest measures and targets. The topics assessed are summarized in Figure 3 and explained in the following sections. Sections 3.1 and 3.2 discuss the extent to which NDCs set quantitative targets related to forests, section 3.3 discusses the integration of policy measures, section 3.4 discusses considerations of forests in MRV, section 3.5 discusses mentions of marginalized groups, and section 3.6 discusses synergies with other global frameworks.

The assessment covers 130 NDCs[h] from highly forested countries. NDCs from countries with fewer than one hundred thousand hectares of forest, per data by the Food and Agriculture Organization of the United Nations (FAO), are not assessed in this report. The selection process for NDCs began by cross-referencing a comprehensive list of NDCs with FAO data on forest cover.[69] This list included countries and regions with over 100,000 hectares of forested land, resulting in a final sample of 130 NDCs representing the plans of 156 countries (i.e., 129 countries plus the 27 Member States of the European Union, the so-called EU27). This sample is chosen to ensure that the review focuses on countries where forest-related measures are likely to have significant climate implications. A detailed list of the countries included in the review is provided in the Annex.

Figure 3. Scope of NDC analysis review

DO COUNTRIES INTEGRATE FORESTS WITHIN CURRENTLY SUBMITTED NDCS?

DO NDCS SET QUANTITATIVE TARGETS RELATED TO FORESTS?

- Economy-wide emissions targets
- Sectoral emissions mitigation targets related to forests (e.g., AFOLU, LULUCF, FOLU)
- Deforestation targets
- Forest degradation targets
- Restoration targets
- Primary forest targets
- Key Biodiversity Area (KBA) targets

DO NDCS INTEGRATE KEY POLICY MEASURES RELATED TO FORESTS?

- Protected areas
- Sustainable forest management
- Payments for ecosystem services
- Forest governance measures
- Community forest management
- Deforestation- and conversion-free (DCF) supply chains
- REDD+

DO NDCS CONSIDER FORESTS WITHIN THEIR MONITORING, REPORTING, AND VERIFICATION (MRV) SECTIONS?

DO NDCS INCLUDE CONSIDERATIONS FOR MARGINALIZED GROUPS?

- Gender and women
- Indigenous Peoples (IPs) and local communities (LCs)

DO NDCS CROSS-REFERENCE OTHER GLOBAL GOALS AND FRAMEWORKS?

- Any mention of biodiversity
- Convention on Biological Diversity (CBD), Global Biodiversity Framework (GBF), National Biodiversity Strategies and Action Plans (NBSAPs)
- Sustainable Development Goals (SDGs)
- National Adaptation Plans (NAPs)
- United Nations Convention to Combat Desertification (UNCCD)

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[h]   The 130 NDCs include that of the European Union, which represents the combined climate plan for 27 countries of the bloc.

3.1. DO PARTIES INCLUDE ECONOMY-WIDE AND FOREST-RELATED EMISSIONS TARGETS IN NDCS?

FINDINGS

Most Parties include an economy-wide emissions target, but only a minority set specific forest-related mitigation targets, which are critical for reducing emissions from forests and other land use.

While the vast majority (89%) of assessed NDCs have an economy-wide mitigation target, just under half (49%) include a quantitative forest-related emissions mitigation target (Figure 4).[i] The current lack of quantitative sectoral targets suggests that Parties have a long way to go in recognizing the importance of forests for meeting their overall emissions mitigation goals (Figure 5).

Figure 4. Quantitative emission reduction targets for forests in NDCs

■ Yes ■ No

Sets economy-wide emissions mitigation target

89%	11%

Sets AFOLU, LULUCF, FOLU, or other forest-specific mitigation target

49%	51%
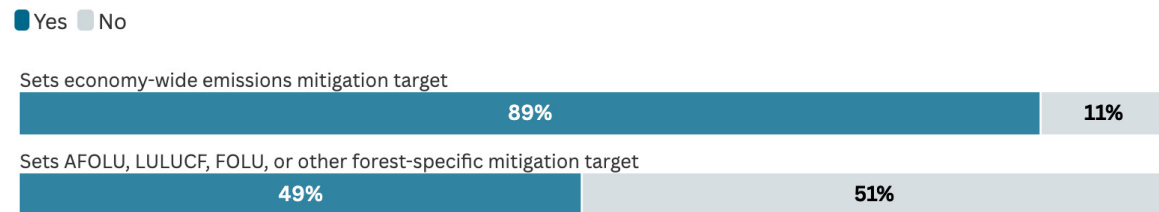
Parties that have set specific, time-bound mitigation targets related to forests provide informative examples:

PARTY	Forest area (FAO, 2022)	NDC TEXT
Gabon	23.5 Mha	"By 2030, gross emissions from the forestry sector are expected to reach 30.4 million tCO_2eq (30,381 $GgCO_2$eq) thanks to the measures put in place. Similarly, gross removals should reach 152.5 million tCO_2^{eq} (152,489 $GgCO_2$eq)."
European Union	159.6 Mha	"Net greenhouse gas removals target of 310 million tonnes of CO_2 equivalent, as a sum of the reported greenhouse gas net emissions and removals in the sector in 2030."
Malawi	2.16 Mha	"59.8 million tCO_2eq of reductions through a range of FOLU interventions covering an area of up to 2 million hectares, of which 22 per cent is unconditional and 78 per cent conditional on international support."

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[i] Forest-related mitigation targets include quantitative mitigation targets set under 'AFOLU,' 'LULUCF,' 'FOLU,' or 'LUCF' sectors; mitigation targets under the broad sectoral category or 'forestry' or 'forests'; or quantitative mitigation targets related to a specific forest-based mitigation effort such as deforestation, forest degradation, or forest restoration.

WHY IS THIS IMPORTANT?

Economy-wide mitigation targets offer overarching guidance for a Party's climate ambitions. They are most effective when they comprehensively cover all key sectors, including forests. By setting quantitative, forest-specific mitigation targets, governments can clarify the complementary roles and objectives of sectoral ministries, ensuring they contribute effectively to broader climate goals. Many of the most impactful opportunities to mitigate the effects of climate change within the AFOLU sector are located in forests. The AFOLU sector could provide up to 30% of the emissions reductions needed to limit global warming to 2°C, at a relatively low cost,[70] while also delivering adaptation co-benefits (Table 1). Yet, as of December 2023, current targets in NDCs have put the world on track for 2.5°C of warming due to weak commitments,[71] and have a 99.5% chance of exceeding 1.5°C target.[72]

Parties need to integrate quantitative forest sector targets to achieve this potential. Without this sectoral disaggregation, guided by sector-specific targets, there is a risk that decision-makers in siloed government departments may undermine or duplicate one another's efforts. However, progress and accountability depend on establishing specific, quantitative sectoral emissions mitigation targets and plans.

TABLE 1. GLOBAL MITIGATION AND ADAPTATION BENEFITS OF KEY FOREST-BASED MEASURES

Measure	Technical average mitigation potential (2020-2050)	Cost-effective* average mitigation potential (2020-2050)	Comparisons for scale	Adaptation co-benefits
Reduce deforestation	6,008 $MtCO_2$/yr	3,563 $MtCO_2$/yr**	In 2022, CO_2 emissions from buildings space and water heating were around 4,200 $MtCO_2$eq.[73]	Water filtration, flood control and reduced water pollution
Afforestation and reforestation	8,471 $MtCO_2$/yr	1,208 $MtCO_2$/yr	1,605 $MtCO_2$ of emissions came from the manufacture of cement worldwide in 2022.[74]	Air filtration and reduced pollution Resilience (enhanced adaptation capacity)
Forest management	1,834 $MtCO_2$/yr	903 $MtCO_2$/yr	The global aviation industry, which was responsible for approximately 1,000 $MtCO_2$ in pre-pandemic years.[75]	Food security through increased yields and available land
Agroforestry	5,605 $MtCO_2$/yr	1,121 $MtCO_2$/yr		Livelihoods through improved incomes and jobs

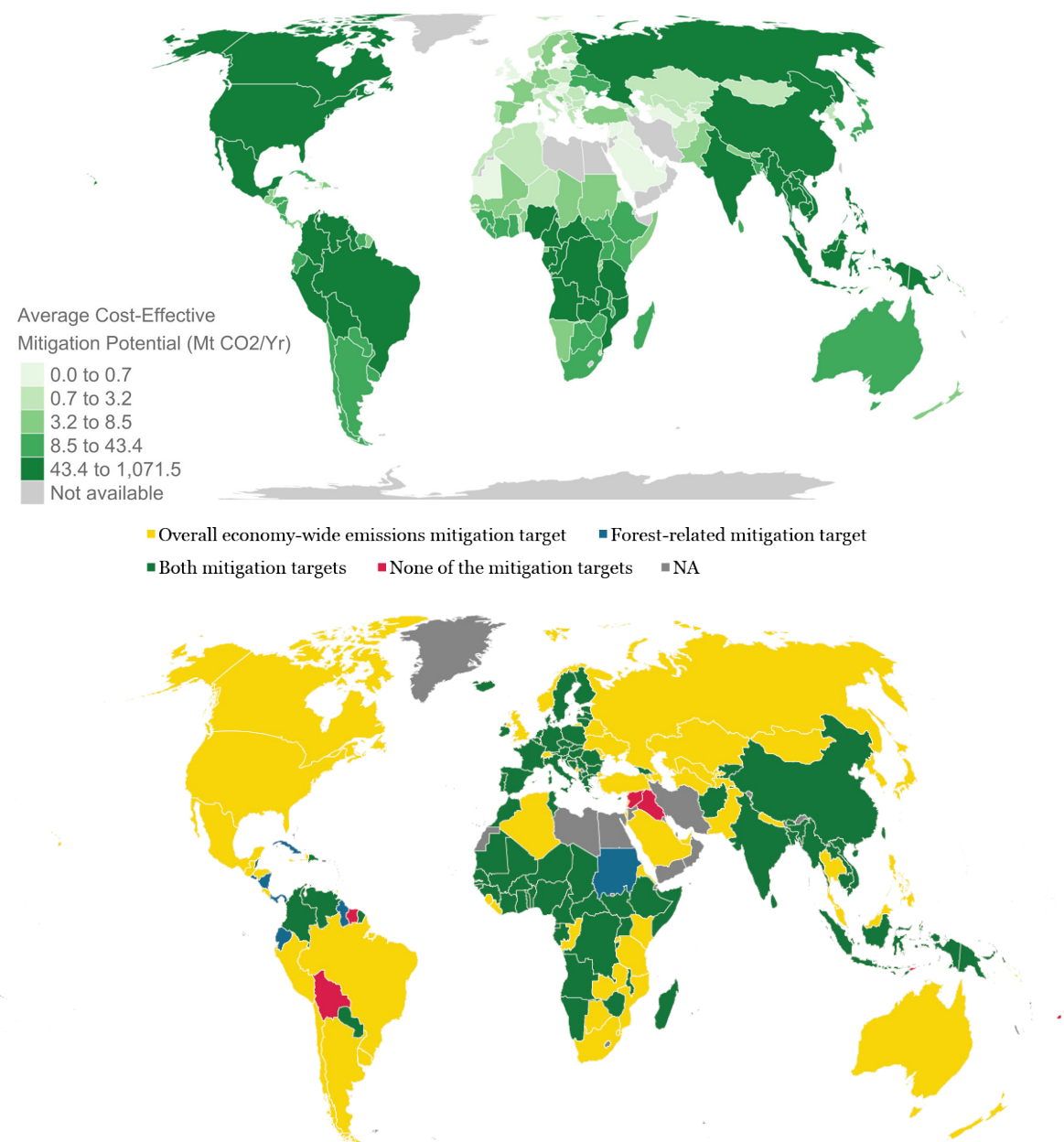Mitigation potentials from Roe et al., 2021.[76]
*Roe et al., 2021 defines cost-effective mitigation as measures for which the cost is up to USD 100/ tCO_2^{eq}
** $MtCO_2$ stands for Million metric tons of carbon dioxide

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Figure 5. Map of mitigation potential for forests and forest-related targets in assessed NDCs. Source for mitigation potential for forests: Roe et al (2021). Source for forest-related targets in NDCs: Authors' Analysis

Average Cost-Effective Mitigation Potential (Mt CO2/Yr)
- 0.0 to 0.7
- 0.7 to 3.2
- 3.2 to 8.5
- 8.5 to 43.4
- 43.4 to 1,071.5
- Not available

- Overall economy-wide emissions mitigation target
- Forest-related mitigation target
- Both mitigation targets
- None of the mitigation targets
- NA

MOVING FORWARD

To make meaningful progress in reducing emissions from forests, it is crucial that Parties to the UNFCCC set relevant, quantitative, specific, and time-bound emissions mitigation targets related to forests (e.g., AFOLU, LULUCF, FOLU) and set up MRV systems to track these targets (see section 3.4). In setting forest-related climate mitigation targets, Parties should consider all sources of relevant emissions, including from deforestation and degradation drivers such as agriculture, mining, and urban development, as well as emissions embedded in imported commodities. The Recommendations section (e.g., Recommendation 4.1) offers a framework for Parties to set specific, measurable, ambitious, relevant, and timebound (SMART) targets.

Parties with high levels of emissions associated with deforestation and forest degradation may particularly want to consider setting forest mitigation targets. Such targets may focus on forest impacts—and thereby emissions—from agriculture, mining, and infrastructure development, which are major drivers of forest loss. Integrating forest-related measures throughout their NDCs, accompanied by robust MRV systems, could significantly increase the ambition and climate change mitigation impacts of Parties with high land- and forest-emissions.

3.2 DO PARTIES SET QUANTITATIVE TARGETS FOR FORESTS IN NDCS?

FINDINGS

A minority of Parties include quantifiable targets related to deforestation, degradation, restoration, sustainable forest management, primary forest loss, and KBAs in their NDCs.
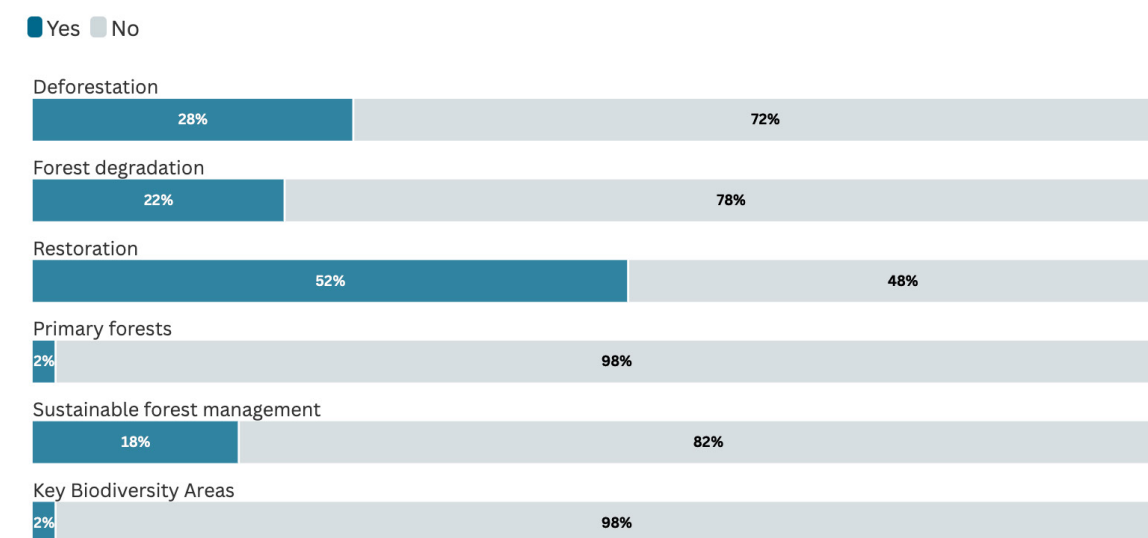
NDCs can include quantitative forest targets other than GHG emissions mitigation. These include targets related to deforestation, degradation, restoration, sustainable forest management, primary forest loss, and KBAs.

Restoration targets are the most prevalent within assessed NDCs, with 52% including some form of quantitative target related to restoration (Figure 6). Only 28% of the assessed NDCs have a quantitative target related to deforestation. Quantitative targets related to degradation and sustainable forest management appear in 22% and 18% of the assessed NDCs, respectively. Other quantitative forest-related targets are even rarer: a mere 2% of NDCs incorporate measures

for protecting KBAs, and the same share (2%) address the conservation of primary forests.

The lack of measures for primary forests and KBAs is particularly concerning because primary and largely-intact forests have higher resilience and climate mitigation potential than secondary or plantation forests, and thus the retention and restoration of primary and intact forests should be prioritized. The dearth of biodiversity-related targets also suggests that most NDCs do not have forest targets ambitious enough to meet the zero deforestation and degradation by 2030 goal that Parties committed to under global forest and biodiversity pledges (See Box 1).

Figure 6. Quantitative targets related to key forest intervention areas

- Yes
- No

	Yes	No
Deforestation	28%	72%
Forest degradation	22%	78%
Restoration	52%	48%
Primary forests	2%	98%
Sustainable forest management	18%	82%
Key Biodiversity Areas	2%	98%

Note: In this review, NDCs were assessed for the inclusion of any mention of forest "restoration," including afforestation or reforestation. See Annex for list of keywords.

Some Parties have included specific, quantitative forest targets. **China**, for example, aims to "increase the forest stock volume by 6 billion cubic meters from the 2005 level" and **Chile** aims to "reduce emissions in the forestry sector associated with degradation and deforestation of the native forest by 25%, with respect to average emissions in the period 2001-2013" by 2030. While these targets are specific and measurable, the approaches to baselines vary (i.e., China uses a single year, while Chile refers to longer periods), which could affect how progress is tracked and compared.

Some Parties that have achieved significant reductions in deforestation from baseline levels are also those with clear, quantifiable forest-related targets outlined in their NDCs. For instance, **Guatemala** and **Papua New Guinea** rank among the top 10 countries with the most substantial decreases in deforestation in 2023 compared to a 2018-20 baseline period,[77, j] reflecting the success of their proactive measures. These Parties set specific deforestation commitments in their NDCs, and their progress underscores the importance of aligning national climate goals with tangible actions to preserve forest ecosystems. This trend highlights the effectiveness of setting clear targets in driving meaningful environmental outcomes.

Biodiversity is threatened by the rapid loss of primary forests, and significant deforestation and forest degradation occurs within KBAs.[79] Monitored populations of forest-dependent species[k] declined in abundance by 79% on average between 1970 and 2018.[80] Habitat loss and degradation—largely driven by agriculture, mining, and development, overexploitation of forest species for subsistence and commercial uses, and anthropogenic climate change—are among the most dire threats to biodiversity. [81, 82]

MOVING FORWARD

Setting specific forest-related targets is essential to effectively communicate climate efforts, attract financial resources, and track progress. Parties must set quantifiable targets for deforestation, degradation, restoration, sustainable forest management, primary forest loss, and KBAs, and outline in their NDCs how they contribute to the economy-wide target. Furthermore, most Parties have committed to zero deforestation and degradation by 2030 under the GLD and other global forest pledges. Forest-related emissions targets in NDCs should align with this ambition. The current NDC update is an ideal time to introduce zero deforestation by 2030 commitments because they will align with the 5-year NDC cycle (see Recommendations section, e.g., Recommendation 2).

Party	Forest area (FAO, 2022)	NDC text
Guatemala	3.5 Mha	Reduction of forest degradation through fire prevention and control. Target to 2030: Reduction of 0.12933 million tons of CO2-eq and Restoration of degraded areas. Target 2030: Increased absorption of 0.9443 million tons of CO2-eq.
Papua New Guinea	35.8 Mha	"By 2030, annual net emission from deforestation and forest degradation due to agriculture expansion and commercial logging is reduced by 10,000 Gg CO2 eq comparing to 2015 level," and "the area of annual deforestation is reduced by 25 percent of 2015 level by 2030 (Equating to a reduction of 8,300 ha of annual deforestation)," and "the area of forest degradation is reduced by 25 percent of 2015 level by 2030 (Equating to a reduction of 43,300 ha of annual degradation)."
China	223.7 Mha	"China's updated NDC goals are as follows: aims to have CO2 emissions peak before 2030 and achieve carbon neutrality before 2060; to lower CO2 emissions per unit of GDP by over 65% from the 2005 level, to increase the share of non-fossil fuels in primary energy consumption to around 25%, to increase the forest stock volume by 6 billion cubic meters from the 2005 level, and to bring its total installed capacity of wind and solar power to over 1.2 billion kilowatts by 2030."
Chile	18.5 Mha	"By 2030, reduce emissions in the forestry sector associated with degradation and deforestation of the native forest by 25%, with respect to average emissions in the period 2001-2013."

WHY IS THIS IMPORTANT?

Including specific forest-related targets in NDCs is an important way to communicate efforts to conserve and restore forests, signal support needs, and attract additional financial resources. Without specific targets, it is difficult for Parties to measure and track progress, raise funds, and adjust their strategies to increase effectiveness.

Specific quantitative targets also help to protect the many beyond-climate benefits of forests, such as contributions to adaptation, biodiversity conservation, and livelihoods. Protected, healthy forests offer ecosystem services that contribute to resilience amidst a changing climate. Forests regulate global rainfall patterns, help conserve water resources, provide clean air, and safeguard against soil erosion and flooding.[78] Deforestation and forest degradation threaten these essential services.

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j   The Forest Declaration Assessment sets a baseline period for tracking progress on halting deforestation as the average deforestation rate from 2018-20 (see Forest Declaration Assessment Partners 2024).

k   Species that depend on forest habitats for their survival or reproduction.

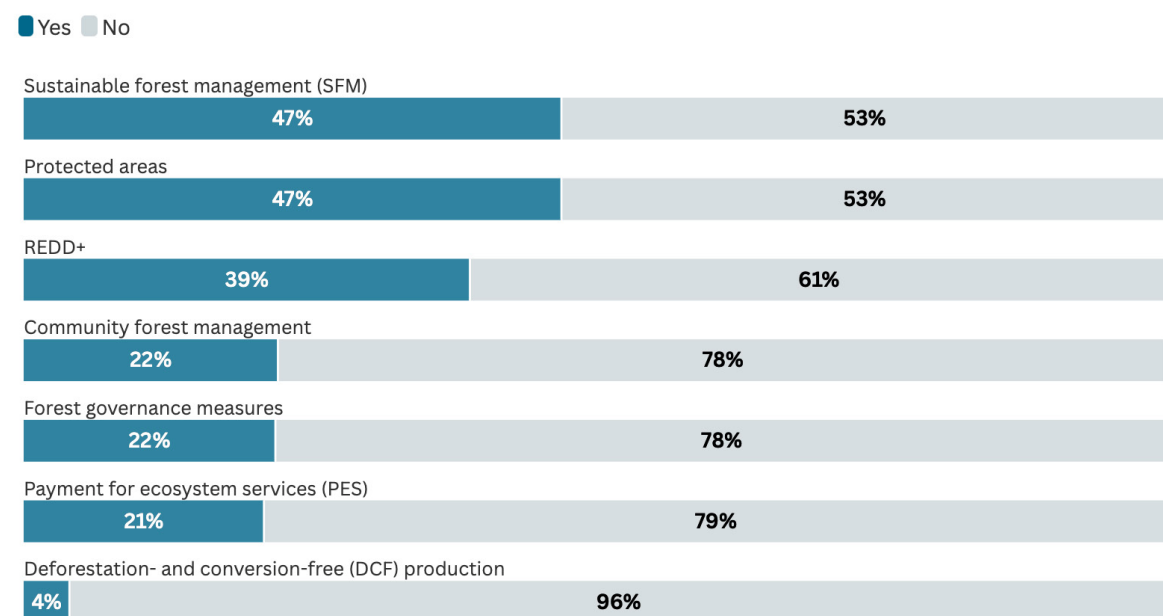# 3.3 DO PARTIES INCLUDE FOREST-RELATED POLICY MEASURES IN NDCS?

FINDINGS

Sustainable forest management and protected areas are the most common forest policy measures in the assessed NDCs. But forest governance, a critical enabling policy intervention, is not adequately included.

Measures related to sustainable forest management and protected areas each appear in 47% of NDCs (Figure 7). REDD+ is mentioned in 39% of NDCs, but other payment for ecosystem services measures are included in only 21%.

Measures related to forest governance and community forest management are included in 22% of the NDCs while just 5 NDCs (approximately 4% of those assessed) mention DCF supply chains in some form.

Figure 7. Policy measures for forests

Legend: ■ Yes ■ No

Sustainable forest management (SFM): 47% Yes / 53% No
Protected areas: 47% Yes / 53% No
REDD+: 39% Yes / 61% No
Community forest management: 22% Yes / 78% No
Forest governance measures: 22% Yes / 78% No
Payment for ecosystem services (PES): 21% Yes / 79% No
Deforestation- and conversion-free (DCF) production: 4% Yes / 96% No

Examples highlight a range of forest-related measures being implemented by different Parties:

Party	Forest area (FAO, 2022)	NDC text	Category
Indonesia	90.9 Mha	"Indonesia has taken significant steps in the land use sector to reduce emissions by instituting a moratorium of new permits and improvement of governance of primary natural forests and peatlands and by reducing deforestation and forest degradation, restoring ecosystem functions, as well as sustainable management of forest. The efforts include social forestry through active participation of the sub national governments, private sector, small and medium enterprises, civil society organisations, local communities and adat communities (Indonesia: Masyarakat Hukum Adat), and women – in both the planning and implementation stages."	Protected areas Sustainable forest management Community forestry Forest governance
Liberia	7.6 Mha	"Increase the designation of Community Forest Area to 1 million ha and promote sustainable community forest management, including guidelines for sustainable resource extraction (e.g., hunting, artisanal mining, non-timber forest products) by 2030," and "Reach 1,500 forest dependent communities with strategic messaging about incentives and opportunities to reduce their climate footprint at the household and community level by 2030."	Sustainable forest management Community forestry
Myanmar	28.0 Mha	"Increase the area of land under Reserved Forest and Protected Public Forest jurisdiction to 30% of the total national land area by 2030" and "increase the Protected Areas Systems to cover 10% of the total national land area by 2030."	Protected areas
Democratic Republic of the Congo (DRC)	124.0 Mha	"The DRC plans to set up a national PES program, to ensure that these ecosystem services, provided by the DRC, can be compensated for through PES mechanisms that reduce the incentives for deforestation, with a view to conserving biodiversity and habitats as well as carbon sinks within forest ecosystems."	Payment for Ecosystem Services (PES)
Guyana	18.4 Mha	"Guyana has made significant progress in complying with EU-FLEGT [European Union Forest Law Enforcement, Governance and Trade Action Plan] for our timber exports to the European Union. Additional resources are required to build institutional and private sector capacity to meet other trade and supply conditions such as the Lacey Act, FSC [Forest Stewardship Council] certification and other procurement requirements."	DCF Supply Chains Sustainable forest management Legal logging
Liberia	7.6 Mha	"Improve national programs and policies to enhance forest carbon stocks by incentivizing and increasing agroforestry, reforestation, afforestation, and forest restoration, including reforestation agreements with logging companies by 2030," and "improve enforcement of forest laws by 2025."	Forest governance

WHY IS THIS IMPORTANT?

Including actionable and evidenced-based policy measures within NDCs can increase the likelihood that forest, climate, and other interrelated targets are effectively implemented. While a wide range of policy measures contribute to protecting and restoring forests, this report analyzes the extent to which NDCs include the following six policy measures that have particularly strong evidence of efficacy.

Protected and conservation areas as included under GBF Target 3 are "areas of particular importance for biodiversity and ecosystem functions and services" that "are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories where applicable."[83] As the CBD Secretariat notes, effectively managed and representative protected areas and other effective area-based conservation measures (OECMs) are a proven method for safeguarding both habitats and populations of species and for delivering important ecosystem services and benefits to people.[84]

Protected areas and OECMs can take various forms, ranging from strictly protected areas to areas that allow sustainable use consistent with the protection of species, habitats, and ecosystem processes.[85] These areas range in size and can include national and state parks, wildlife sanctuaries, cultural landscapes, and Indigenous and community territories; they typically show less deforestation and forest degradation and store more carbon than comparable non-protected areas.[86] For example, Ntokou Pikounda National Park (NPNP) is one of the most significant biodiverse areas in the Congo Basin. The NPNP is located in the Tri-National Dja-Odzala-Minkébé (TRIDOM) landscape and covers 4,572 square kilometers of forests and swamps. Spread over three countries—Cameroon, the Republic of Congo, and Gabon—the TRIDOM transborder forest covers 178,000 square kilometers or 10% of the Congo Basin rainforest.[87]

Sustainable forest management refers to conserving and using forests in such a way that forests' resources, biodiversity, services, and cultural values are available to meet both present and future needs of people and nature. Sustainable forest management can include conserving forest ecosystems, managing forests to produce particular goods and services, changing production practices, enabling community management, and a range of other approaches.[88] Billions of people globally rely on forests for their livelihoods and many forests are part of productive landscapes. Sustainable forest management can protect forests and mitigate climate change by reducing forest loss while enabling continued use of forest resources. Sustainable forest management can include introducing less resource- and emissions-intensive production strategies, increasing livelihood and crop diversity to reduce overexploitation, developing ecotourism and other industries that value forests for more than timber, and facilitating the leadership

of Indigenous and local communities that have already innovated lower-impact forest management approaches.[89,90] For example, sustainable forest management through Forest Stewardship Council (FSC) certification has shown significant benefits for biodiversity in the Congo Basin. A recent study, conducted with support from WWF,[91] notes that FSC certification has been shown to be associated with reduced deforestation in African tropical forests, and shows that FSC-certified forests host up to 2.7 times more large mammals than non-certified areas.[92]

REDD+ stands for Reducing Emissions from Deforestation and Degradation plus conservation, sustainable management, and enhancement of forest stocks. It provides policymakers in developing countries with a framework for national climate action in the forest sector, enabling forest countries to receive results-based payments in exchange for verified reductions in emissions from deforestation and forest degradation. While progress of most jurisdictional REDD+ initiatives has been limited, REDD+ remains an important lever of forest finance and has the potential to mitigate climate change by recognizing and rewarding the value of forests as carbon sinks.[93] For example, in 2024, the Forest Carbon Partnership Facility (FCPF) Carbon Fund made disbursements to Vietnam,[94] Côte d'Ivoire,[95] and Lao PDR[96] for achieving Emission Reductions (ERs) through jurisdictional REDD+ programs. The Fund has so far issued USD 94 million in ER payments to six countries, with a total of USD 327.7 million worth of payments in the pipeline.[97]

Community forest management refers to ways of life and sets of practices for fostering sustainable use of forest ecosystems that are developed and practiced by Indigenous Peoples and local communities.[98,99] Community forest management is often based in ancestral bonds that communities have with the ecosystems they live in and manage.[100] Forests managed by Indigenous Peoples and local communities often have higher levels of biodiversity, carbon, and ecosystem integrity than other areas. Ensuring that communities have clear land rights and sufficient support to determine the management of their own territories provides a range of social, environmental, and climatic benefits.[101,102] For example, in Laos' Khamkeut District, a program provides villagers with technical support on forest and natural resource management. After nearly 20 years of implementation, an evaluation of the project's effects on forest cover change shows that the project areas had a 13.2% lower rate of forest loss compared to other areas. Interviews with local stakeholders reveal that with the right incentives, community members are willing to forego conversion of forests for other land uses that offer higher short-term benefits.[103]

Payment for ecosystem services (PES) is a finance mechanism that places monetary value on the services and rewards maintenance of healthy ecosystems that continue to provide those services.[104] Ecosystem services

describe the range of material and non-material benefits that people derive from ecosystems, including, for example, products that are necessary for livelihoods or subsistence, regulation of water cycles, removal of pollution from the air and soil, ecotourism activities, spiritual and cultural practices, and removal and storage of GHGs. PES benefit the climate and forests by channeling finance to protecting or restoring forests and forests' ability to sequester and store carbon. Well-designed payments for ecosystem services can contribute to other policy measures like community forest management or protected areas because they can channel funding to those measures that are conserving or restoring forests and their services.[105] For example, in three municipalities in the Selva Lacandona region of Chiapas, Mexico, PES was associated with reduced deforestation rates, with impacts increasing over time on lands where PES contracts were renewed throughout the study site, underscoring PES as an effective tool for forest conservation.[106]

DCF supply chains are systems of commodity production that do not destroy or degrade any natural ecosystems.[107] DCF supply chains maintain forests and other ecosystems and services they provide, including forests' ability to sequester and store carbon.[108] DCF policy measures can include improving land use planning, strengthening land tenure rights for Indigenous Peoples and local communities, reforming and eliminating harmful subsidies, and establishing due diligence legislation.[109]

Agricultural commodity production is by far the largest driver of deforestation and ecosystem conversion globally, particularly in the tropics.[110] DCF supply chains address agricultural deforestation by going beyond one actor or activity to integrate a range of actions on both the supply and demand sides of commodity production and consumption.[111] This is essential to hold consumer countries responsible for the deforestation that results from their demand for products.[112] From 2001 to 2014, 26% of deforestation was linked to international demand, the majority of which (87%) was exported to countries that either had decreasing deforestation rates or increasing forest cover.[113] For example, between 2019 and 2021, the European Union (EU) was exposed to an average of 190,500 hectares of deforestation each year from its direct imports—about one football pitch worth of deforestation every other minute—and 15% of total deforestation linked to direct trade.[114]

Some major consumer markets have already introduced (e.g., EU) or are in the process of introducing (e.g., the United Kingdom and the United States) due diligence legislation to ban commodities linked to deforestation – most commonly illegal deforestation.[115] These actions are vital first steps in establishing standards for DCF sourcing and ensuring that respect for human rights in supply chains becomes the new normal – though these current plans must be more ambitious and comprehensive. For instance, the UK and U.S. policies cover only illegal deforestation, while the EU's Regulation on Deforestation-free Products (EUDR) doesn't cover the conversion of other non-forest ecosystems, like grasslands and savannahs. Due diligence policies must go beyond legal compliance and comprehensively cover all deforestation and ecosystem conversion.[116]

MOVING FORWARD

The impacts of these policy measures depend on how well they are implemented and adapted to local conditions. For instance, regulations designating areas as protected may fulfill conservation targets on paper, but conservation success depends on effective and equitable management, concrete enforcement, and sufficient resources. Implementation and compliance failures of protected areas are variable and site-specific, but they often result from a lack of resources or human capacities.[117] For protected areas and other policy measures to be effective for the long run, financial resources, community engagement, political support, and management capacity must all be present and sustained over time.[118,119]

Parties need to embed evidence-based, actionable policies in their NDCs for achieving forest targets while ensuring alignment with other national climate, biodiversity, and development goals. Parties have made zero-deforestation or -degradation commitments, such as under the GLD. Aligning their NDCs with these commitments would significantly increase climate ambition as well as the likelihood that these forest goals are achieved. Strengthening governance, addressing institutional barriers, and integrating cross-sectoral measures in areas like food systems, health and education are also crucial for aligning and meeting forest targets (see Recommendations section, e.g., Recommendation 4).

3.4 DO PARTIES INCLUDE FORESTS WITHIN NDCS' MONITORING, REPORTING, AND VERIFICATION (MRV) PLANS?

FINDINGS

Only 32% of NDCs explicitly reference forests in their MRV plans (Figure 8), despite the critical role of MRV in tracking forest-related emissions and progress toward climate goals.

The integration of forest-related considerations in MRV plans is important to measure and track progress on targets related to deforestation, degradation, restoration, primary forests, and KBAs as well as policy-related measures.

Figure 8. Inclusion of forests in MRV systems of NDCs

■ Yes □ No

Integrates forest considerations in MRV section

32%	68%

Kenya, **Costa Rica**, and **Indonesia** provide good examples for including forests in MRV plans. **Kenya** includes comprehensive reporting categories for LULUCF, covering various land categories (forest land, cropland, grassland, and wetland) and carbon pools (above-ground biomass, below-ground biomass, litter, dead wood, soil organic matter, and harvested wood products). The country has also established several sectoral policies supporting climate adaptation and mitigation. **Costa Rica** calculates emissions from deforestation separately for primary and secondary forests, using different carbon stock estimates based on forest type and age class. The system includes net changes in carbon stocks in secondary forests, mapping plantation forests as secondary forests, and tracking carbon gains following replanting after logging. **Indonesia** includes systems for monitoring and reporting on mitigation efforts, particularly for REDD+, alongside a Safeguards Information System (SIS-REDD+) and information systems for vulnerability and joint adaptation and mitigation efforts at the village level.

Party	Forest area (FAO, 2022)	NDC text
Kenya	3.6 Mha	"For the land-use, land-use change, and forestry sector, emissions and removals the following reporting categories are included: forest land, cropland, grassland, and wetland, including land use changes between the categories, and between these categories and settlements and other land. The five carbon pools above-ground biomass, below-ground biomass, litter, dead wood and soil organic matters are included. In addition, the carbon pool harvested wood products is included."
Costa Rica	3.1 Mha	"Emissions from deforestation are calculated separately for primary forest and secondary forests. A different carbon stock per area is estimated for each forest type, as well as for different age classes for secondary forests. The enhancement of forest carbon stocks includes net changes in carbon stocks in the secondary forest category... Logging as part of the plantation forest harvesting cycle is detected as deforestation and, after replanting, carbon gain is detected as an increase in forest carbon stocks."
Indonesia	90.9 Mha	Indonesia plans for an "MRV system for mitigation including REDD+, (d) Safeguards Information System for REDD+ (SIS-REDD+); and (e) Information Systems on Vulnerability (SIDIK) and joint adaptation and mitigation at the Village level (ProKlim)."

WHY IS THIS IMPORTANT?

Without robust MRV systems, it is difficult for Parties to assess the effectiveness of forest-related mitigation and adaptation measures, making it challenging to evaluate progress, improve strategies, and meet international commitments. Effective MRV ensures transparency, accountability, and helps attract climate finance by showing clear, measurable results. Robust MRV plans increase the likelihood that targets will be quantified and implemented, enable governments to fundraise more effectively, and provide data to evaluate and change policies and strategies as needed.

MOVING FORWARD

Parties need to evaluate and strengthen their MRV systems for tracking progress in the forest sector. This includes aligning existing GHG monitoring and REDD+ processes with NDC targets and ensuring the MRV system tracks forest emissions, removals, and impacts on biodiversity. To meet forest goals, highly forested countries must demonstrate that they have robust MRV plans and the capacity to implement MRV or intentions to build that capacity. Setting clear, measurable indicators for forest-related mitigation and adaptation—covering inputs, outputs, and outcomes—will improve reporting accuracy and help Parties demonstrate progress, adjust actions, and meet their NDC commitments (see Recommendations section, e.g., Recommendation 3).

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3.5 DO PARTIES INCLUDE MENTION OF GENDER, INDIGENOUS PEOPLES, AND LOCAL COMMUNITIES IN NDCS?

FINDINGS

Most NDCs mention Indigenous peoples, local communities, and/or gender considerations.

79% of the NDCs assessed mention gender, and 54% mention Indigenous peoples and local communities (Figure 9). References to these groups appear throughout NDCs and may be relevant to forest goals even when not included in forest-specific targets or sections. It is worth noting that the presence of terms related to gender, women, Indigenous peoples, or local communities does not imply that these groups were included in NDC development or implementation, that their needs are considered, nor that

there is equity in policy development for these groups. This analysis focuses solely on identifying any mention of these groups within the NDCs, without systematically assessing the ambition or depth of those references. Subsequent analyses would do well to differentiate gender-related issues from those facing Indigenous peoples and local communities, and to examine how social safeguards, benefit sharing, and Free, Prior and Informed Consent (FPIC) are treated in NDCs.

Figure 9. Considerations of Indigenous peoples (IPs), local communities (LCs), and/or women and gender in NDCs

■ Yes ■ No

Integrates considerations of gender

| 79% | 21% |

Integrates considerations of IPs and LCs

| 54% | 46% |
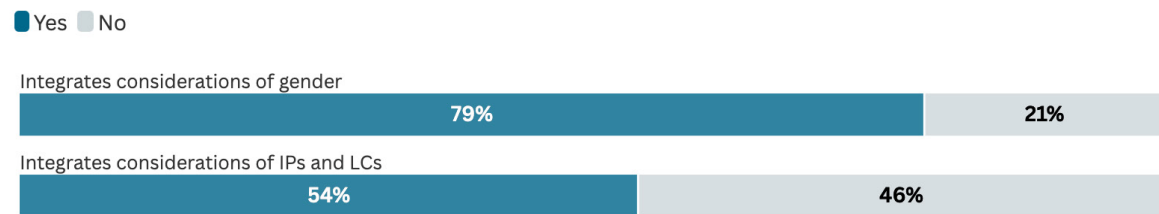
Peru and Australia include specific, actionable measures related to integrating women, Indigenous peoples, and local communities into NDC decision making and implementation:

| Party	NDC text
Peru	"The first stage of the construction of the Climate Change Framework Law Regulations included 48 workshops held throughout the country, with the participation of 2,200 representatives of all social actors (61% women and 39% men). Subsequently, the public consultation process was initiated and, finally, a prior consultation with indigenous peoples was carried out. The latter involved the direct participation of 1,433 indigenous leaders. Within the framework of these agreements, the Twelfth Final Complementary Provision of the Regulations of the LMCC [Framework Law on Climate Change] creates the Platform of Indigenous Peoples to confront Climate Change."
Australia	"The Australian Government is taking concerted action to adapt to climate change and ensure the resilience and disaster readiness of our communities and natural environment in the context of its impacts. This includes: Protecting Australia's unique environment by fixing Australia's urban rivers and catchments, and doubling the number of Indigenous Rangers, recognising the importance of employing Indigenous People's knowledge and experience to address the climate crisis."

WHY IS THIS IMPORTANT?

Evidence shows that climate and forest goals are far more likely to succeed when Indigenous peoples, local communities, and women—particularly women from those groups—are consulted and given leadership in developing targets and implementation activities.[120,121] Indigenous peoples, local communities, and women from those groups are essential stewards, experts, and stakeholders in conserving and managing forests in line with Paris Agreement goals.

Over one billion people depend on forests for their livelihoods, and 70 million Indigenous people call forests their home.[122] An estimated 2.5 billion Indigenous peoples, local communities, and Afro-Descendant Peoples hold and use 50% of the world's land, including 36% of KBAs and 20-30% of intact forests.[123] Women in Indigenous and local communities are often responsible for food production, acquiring natural resources like firewood and non-timber forest products, cooking fuel and other energy use, and household financial decisions—even when they lack formal ownership or decision-making authority[124,125]—putting women from these communities in the role of stewards of resources and their local ecologies.

Ecosystems managed by Indigenous peoples and local communities have significantly higher rates of biodiversity than other protected areas[126] and are far more effective carbon sinks than other protected areas.[127] At the same time, due to their reliance on forests for their economic, social, and spiritual well-being, Indigenous peoples and local communities are the people most negatively affected by damage to forest ecosystems.[128]

MOVING FORWARD

It is important that Parties revisit and enhance their strategies for including Indigenous peoples, local communities, women, and other historically excluded groups in NDC development and implementation. Parties need inclusive, transparent, and participatory processes to ensure these groups are actively engaged in decision-making. Parties should integrate specific guidance and targets related to land tenure and ownership, FPIC, benefit sharing, and gender-responsive policies, among other elements. Doing so will both elevate equity and rights and enhance the success of forest and climate efforts.[129,130]
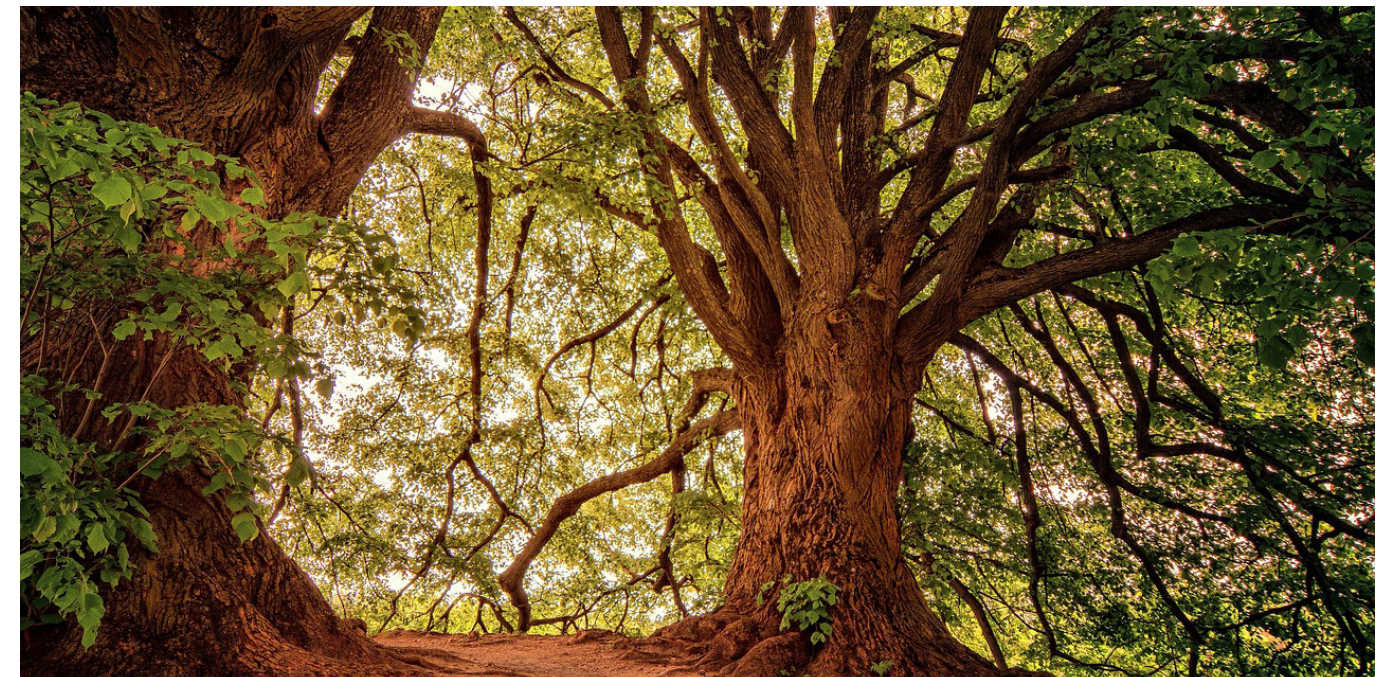
© Pixabay

3.6 DO PARTIES CONSIDER SYNERGIES WITH OTHER GLOBAL GOALS AND NATIONAL STRATEGIES?
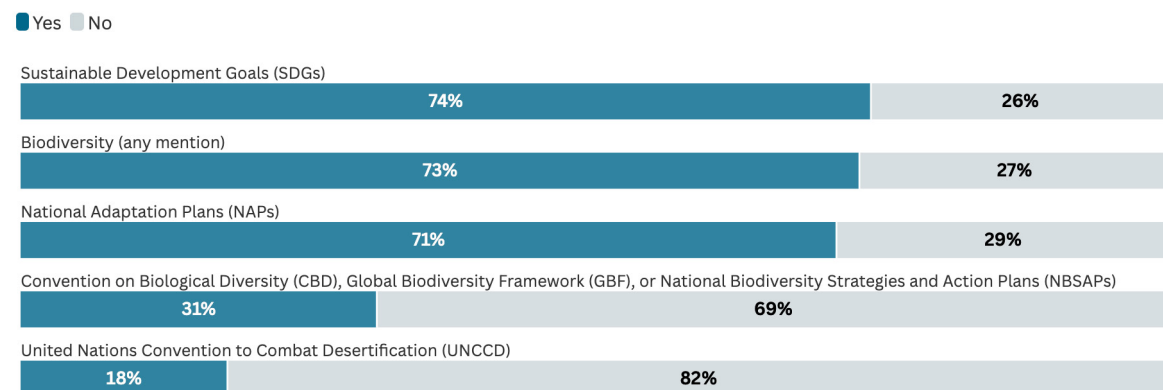
FINDINGS

Most Parties do not explicitly cross-reference other national strategies within their NDCs, missing opportunities to link climate and biodiversity goals.

Parties reference key international frameworks and national documents related to biodiversity, climate adaptation, desertification, and sustainable development goals to varying degrees (Figure 10). SDGs are referenced in 74% of the assessed NDCs and NAPs in 71%, but just 18% reference the United Nations Convention to Combat Desertification (UNCCD). 73% of the NDCs assessed mention biodiversity, but few cross-reference related national strategies and international frameworks. Only 31% of assessed NDCs include explicit mention of the CBD, GBF, and/or NBSAPs, despite the synergies referenced by the first GST for achieving these goals through cohesive implementation.

Figure 10. Consideration of linkages between NDCs and other key forest-related policies

■ Yes ■ No

Sustainable Development Goals (SDGs)
| 74% | 26% |

Biodiversity (any mention)
| 73% | 27% |

National Adaptation Plans (NAPs)
| 71% | 29% |

Convention on Biological Diversity (CBD), Global Biodiversity Framework (GBF), or National Biodiversity Strategies and Action Plans (NBSAPs)
| 31% | 69% |

United Nations Convention to Combat Desertification (UNCCD)
| 18% | 82% |

Belize, for example, cross-references the importance of NBSAP monitoring and evaluation through databases, while the **Kyrgyz Republic** emphasizes the alignment of its climate actions with the SDGs embedding these goals into national policies. **Türkiye**'s strategy highlights the integration of land degradation and desertification targets under the UNCCD framework, demonstrating a comprehensive approach to mitigating the impacts of climate change on land resources.

Party	NDC text	Category
Belize	"Implement monitoring and evaluation of NBSAP and its targets and maintain an up-to-date database on natural resources and environmental services to inform policy decisions across government."	NBSAPs
Kyrgyz Republic	"The developed Implementation Plan for the Updated NDC and its proposed adaptation and mitigation actions have a co-benefit and contribute to the achievement of the Sustainable Development Goals (SDGs). The SDGs are included in state policy and reflected in the National Development Strategy for 2018-2040."	SDGs
Türkiye	"Türkiye's national strategy and action plan on combating desertification is being implemented to prevent, control, and reduce desertification and land degradation as part of climate change mitigation and adaptation. Türkiye has also set Land Degradation Neutrality Targets as part of the UNCCD framework."	UNCCD

WHY IS THIS IMPORTANT?

Both because of the potential benefits of synergistic policymaking and implementation and risks of siloed approach to addressing interlinked crises, NDCs must align with other international frameworks and national strategies to ensure policy alignment.[131] Assessing whether Parties explicitly reference these frameworks and documents is one metric to understand whether Parties are facilitating synergies between these goals. Progress on one goal may undermine others depending on which interventions are prioritized by a country, which makes it even more important to explicitly link efforts to address the climate, biodiversity, and other crises cohesively.

The climate and biodiversity crises are intricately intertwined – meaning that solutions must also be harmonized. Halting and reversing biodiversity loss directly depends on the commitment to similarly halt and reverse the destruction and degradation of forests. Parties updating their NBSAPs should include the evidence-based forest-related interventions that are crucial to the achievement of both the Paris Agreement and the GBF (Box 3).

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BOX 3. ALIGNING FOREST MEASURES TO MEET PARIS AGREEMENT AND GBF GOALS

Forest-related interventions can help Parties to meet their commitments under both the Paris Agreement and under the 2022 Kunming-Montreal Global Biodiversity Framework (GBF). Under each agreement, Parties committed to protect forests, enhance nature-based climate solutions, and deliver positive impacts for biodiversity. Parties now have a unique opportunity to pursue forest interventions that will deliver on both Agreements, as updates to Nationally Determined Contributions (NDCs) and to National Biodiversity Strategies and Action Plans (NBSAPs) are concurrently underway. Aligning forest interventions in NDCs and NBSAPs is key to not only meeting Paris Agreement and GBF goals but also to fully realizing potential benefits to forests, biodiversity, people, and the climate.[132]

The GBF has both targets to achieve by 2030 and goals to achieve by 2050. Goal A of the GBF commits Parties to maintaining, enhancing, and restoring ecosystem integrity, connectivity, and resilience,[i] which requires implementing interventions that enhance and restore healthy forest ecosystems with the ability to withstand shocks and disturbances, including climate change-related shocks. Mitigating and managing climate change-related shocks are also central goals for NDCs, making resilience and shock mitigation a key area for alignment with NBSAPs.[133]

Policy interventions for protecting forests contribute directly and indirectly to NDCs and GBF targets. For example, the biodiversity-inclusive spatial planning called for under GBF Target 1 is essential for identifying priority areas for restoring and protecting biodiversity (supporting Targets 2 and 3), mitigating climate change (Target 8), and ensuring the provision of ecosystem services (Target 11). Mapping also demonstrates the significant overlap between areas of high biodiversity and irrecoverable carbon—carbon stores that if lost could not be restored by 2050.[134] Policymakers could use these overlaps to justify conservation or restoration of forests in those areas when updating and implementing NDCs. Figure 3 outlines links between forests and GBF targets.

Similarly, restoring and conserving forest ecosystems directly supports the achievement of GBF Targets 2 and 3 and provides numerous climate benefits, including increasing or maintaining carbon sequestration[135] and ensuring ecosystems are more resilient to climate change over time. For example, high ecological integrity and levels of biodiversity enhance forests' ability to recover from climate change-associated shocks like fires or pest outbreaks.[136,137,138] Conserving primary forests and key biodiversity areas are among the most effective climate solutions because these areas hold greater carbon stocks than degraded, secondary or commercial forests.[139, 140] In addition, actions required to effectively restore and conserve forests such as establishing protected area networks, clarifying the land rights of Indigenous Peoples and local communities, strengthening government monitoring capacities, or mobilizing funding resources are enabling conditions that simultaneously advance biodiversity and climate goals. Commitments to improve the legality of timber harvest and trade would simultaneously contribute to GBF Target 5 and other global forest goals, and commitments related to sustainable forest management would similarly contribute to achieving GBF Target 10.

These are just a few examples of the numerous and extensive ways that forest interventions can simultaneously deliver on climate and biodiversity goals. Furthermore, including forest measures in both NDCs and NBSAPs in an integrated and coherent manner may increase the likelihood that they are taken up into national policies and prioritized in implementation, but also that they will effectively deliver on the GBF and Paris Agreement. Finally, ensuring policy coherence of forest interventions planned in NDCs and NBSAPs is critical to ensuring measures to deliver the GBF and Paris Agreement are coherent and mutually supportive.

Target 1:
Use spatial planning to bring deforestation/conversion in areas of high biodiversity close to zero by 2030

Target 2:
Effective restoration of >30% of degraded forest ecosystems

Target 3:
Effective conservation of >30% of forests through site-based conservation

Target 4:
Halt species extinction, protect genetic diversity, and manage human-wildlife conflicts

Target 8:
Foster positive and minimise negative impacts of climate action on forests

Target 10:
Ensure the sustainable management of all areas used for forestry and agriculture

Target 5:
Ensure sustainable, safe and legal harvesting and trade of wild Species

Target 14:
Ensure full integration of forest biodiversity into policies, regulation, development planning and poverty reduction

Target 15:
Use legal and policy measures to progressively reduce negative impacts of business on forests

Target 8:
Minimize impact of climate change on biodiversity through nature-based solutions e.g., protection of forests

Target 11:
Restore and maintain the ecosystem services forests provide e.g., climate and water regulation

Target 18:
Eliminate, phase out, reform incentives and subsidies harmful for forest biodiversity and increase positive incentives

Target 19:
Progressively increase finance for conservation, restoration, and sustainable management of forests; enhance synergies and optimise co-benefits with climate finance

Target 22:
ensure equitable inclusive participation of Indigenous People and local communities in KM-GBF implementation

Target 23:
Ensure gender equality in how the KM-GBF is implemented

Examples of GBF targets towards which forest-based measures can directly or indirectly contribute

Targets to which policy interventions such as the protection, restoration, and sustainable management of forests can **directly** contribute.

Targets to which forest policy interventions can **indirectly** contribute.

Targets that relate to putting in place **enabling conditions** for forest policy interventions to be able to contribute to the GBF

MOVING FORWARD

Protecting and restoring forests has the potential to generate benefits that extend far beyond simply meeting forest goals. Forests can help in achieving wider sustainable development objectives. Linking NDCs with other international frameworks and national planning documents is a crucial step in harmonizing global and national efforts to address these crises effectively.

Global frameworks and national documents help guide countries' actions on biodiversity loss, climate change mitigation and adaptation, and sustainable development. These include biodiversity-specific conventions, frameworks, and documents such as the CBD, GBF, and NBSAPs. Additionally, NAPs are the guiding documents for countries' climate adaptation responses, and they are important to cross-reference with mitigation actions and targets.

Countries should establish national coordination bodies to integrate climate, biodiversity, and development strategies, such as NDCs and NBSAPs. Aligning indicators and policy planning across sectors, involving all relevant ministries, Indigenous peoples, local communities, women, youth, and other marginalized groups, will lead to more effective, holistic climate and biodiversity outcomes.

Countries must also demonstrate political leadership, accountability, and commitment, orienting all actions toward halting forest loss and deforestation by 2030, as outlined in the GST and GLD. Achieving this ambition is both urgent and essential. Without this shared and agreed-upon commitment, the global goal of halting deforestation by 2030 will remain an empty promise (see Recommendations section, e.g., Recommendation 2 and Recommendation 6).

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[i] Text of Goal A of the GBF "The **integrity, connectivity and resilience** of all ecosystems are maintained, enhanced, or restored, substantially increasing the area of natural ecosystems by 2050; Human induced extinction of known threatened species is halted, and, by 2050, the extinction rate and risk of all species are reduced tenfold and the abundance of native wild species is increased to healthy and resilient levels; The genetic diversity within populations of wild and domesticated species, is maintained, safeguarding their adaptive potential."

4. RECOMMENDATIONS FOR POLICYMAKERS

Current NDC ambitions are far too low and NDC implementation far too slow for the world to meet the climate goals set in the Paris Agreement, or the forest and biodiversity goals established in agreements such as the GLD and GBF. Policymakers are also not taking advantage of potential synergies between NDCs and NBSAPs that could accelerate addressing the climate and biodiversity crises simultaneously, and in a cost-effective and efficient manner.

These findings, while alarming, also point to crucial opportunities. There are important steps policymakers can and must take to address the low ambition and slow implementation of NDCs and enhance the integration of forest-related targets within their national policies and plans. Establishing and improving forest targets requires that policymakers address underlying challenges as well as increase the precision and ambition of targets themselves. This section lays out key recommendations for how policymakers and the UNFCCC can improve how they set forest-related targets; synergize efforts to meet climate, forest, and biodiversity goals; and build up capacity and essential resources. With political will and swift action, policymakers can make significant progress in mitigating the intertwined global crises and ensuring a secure future for people and the planet.

Crucially, these recommendations must be viewed considering the differing national circumstances and economic realities that Parties continue to navigate. The call for individual Parties to integrate forests into their NDCs must not be mistaken as a suggestion that forest protection and restoration are solely national responsibilities. Historically, wealthy industrialized nations developed by unsustainably exploiting natural ecosystems. Today, lower-income countries with rich forests are grappling with how to achieve economic growth without following these same patterns. Key forest biomes like the Amazon and the Congo Basins span multiple countries, and conserving these globally vital ecosystems requires a coordinated international effort. At the same time, many of the countries that are most in need of financial support to protect their ecosystems are also the hardest hit by climate change. Industrialized governments must take responsibility in helping to protect the world's remaining standing forests both within and beyond their own borders.

RECOMMENDATION 1: ELEVATE FORESTS AS A NATIONAL PRIORITY WITHIN NDCS.

RECOMMENDATIONS FOR NATIONAL POLICYMAKERS:

1. Recognize the values forests provide to multiple sectors of the economy—including through their resources, ecosystem services, and cultural roles—and develop public policies that harness these synergies.

2. Recognize the value of high-integrity, standing forests. This includes assessing and accounting for the long-term value of forest protection within economic forecasts and budgets, as well as more accurately evaluating proposed short-term economic gains that come at the expense of forests in light of the long-term negative economic impacts of forest destruction.

3. Assess and recognize the role of forests in climate change mitigation and adaptation as well as the many ecosystem services they provide. Prioritizing forests and having a thriving economy are not mutually exclusive.

4. Set ambitious forest goals that aim at achieving the commitments and objectives under the GLD and GBF (as referenced by the GST), as the guiding and unifying ambition for all forest-related targets and policies.

5. Recognize and elevate the significant contributions of Indigenous peoples and local communities to forest conservation, restoration, and sustainable management. This should include strengthening land tenure and knowledge rights; establishing and following robust processes for consultation and FPIC, including the right to refuse consent; ensuring that Indigenous peoples and local communities are active partners in NDC development and implementation; and creating equitable benefit-sharing mechanisms based on the needs of communities.

6. Assess and address drivers of deforestation and degradation by developing the most context-appropriate policy targets and measures. This includes tracking imported deforestation and degradation associated with products or activities that a country consumes or from which it benefits.

RECOMMENDATIONS FOR THE UNFCCC SECRETARIAT:

7. Develop guidelines to help Parties identify synergies in meeting their climate and biodiversity goals.

8. Develop global guidelines and approaches for Parties to address the emissions embedded in their imports and the deforestation they contribute to beyond their borders.

9. Support assessment of climate impacts from loss of natural non-forest ecosystems.

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Forests need to be elevated in NDCs, NBSAPs, and other national policies and plans. This integration should recognize the variable roles, relevance, and values of forests for diverse sectors and stakeholders. For example, some Parties have high levels of GHG emissions associated with the land sector, while others do not. Parties have different starting points for elevating forests in their NDCs; some need to strengthen their existing forest- and biodiversity-related targets, while others still need to develop their first forest targets.

One approach that policymakers can take is to develop accurate accounting of the economic value that standing forests provide and integrate this into economic forecasts and budgets, while considering the impacts of domestic subsidies and regulations abroad. Recognizing the tremendous economic contributions of standing forests can counter an erroneous valuation of forests only in terms of their exploitable resources. In turn, a true accounting of forests' value can incentivize shifts in subsidies, regulations, and taxes toward forest conservation and away from agricultural and extractive activities that put forests at risk.

In addition, policymakers can identify and prioritize evidence-based policy measures that conserve or restore forests while supporting sustainable development. For example, ensuring secure land tenure for Indigenous peoples and local communities is linked to maintaining high levels of biodiversity and carbon storage while providing communities the ability to support their own livelihoods.[141, 142, 143] Prioritizing forests complements other long-term economic goals by mitigating climate change and related shocks, ensuring ongoing access to forest resources and ecosystem services, and co-delivering sustainable development benefits.

Accurate accounting of emissions and deforestation should take into account the impacts that Parties have beyond their borders. Many imported commodities have embedded emissions and deforestation for which consumer countries should take responsibility. Countries also drive forest-risk activities through investment, military operations, development projects, and other activities beyond their borders. Countries—particularly consumer countries—must implement regulations to track and reduce emissions embedded in their imported commodities and foreign activities to ensure that emissions are properly attributed. Consumer countries must also provide significantly increased financial support to the forest goals of producer countries. Both accurate accounting and financial support align with the principles of "polluter pays" and "common but differentiated responsibilities" and foster increased transparency.

The UNFCCC Secretariat could, at a minimum, also provide clear guidance to Parties on tracking and attributing these emissions. This may need to be accompanied by discussions of whether UNFCCC accounting systems are fair and if reforms are needed. Under current UNFCCC GHG accounting procedures, consumer countries are not required to report emissions or deforestation embedded in their imports.[144] Some voluntary initiatives (e.g., the Greenhouse Gas Protocol, Task Force on Climate-Related Financial Disclosures, and Science Based Targets initiative) and regional regulations, like the EU's Regulation on Deforestation-free Products, promote measuring and reporting emissions in supply chains, but there is currently no global mechanism that mandates that nations address emissions embedded in their imports.[145]

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RECOMMENDATION 2: PRIORITIZE TARGET AREAS THAT NEED MORE AMBITION, AND ENSURE NDCS ARE SYNERGISTIC WITH OTHER NATIONAL PLANS SUCH AS NBSAPS.

RECOMMENDATIONS FOR NATIONAL POLICYMAKERS:

1. Assess current forest policy measures within the latest NDC and consider whether these policies have achieved or will achieve real, verifiable, and timely emissions reductions, and based on this review, document the successes and barriers to success of these policies.

2. Review current and planned mitigation and adaptation targets, policies, and measures in the forest sector against other national plans or strategies. Include and improve information in the NDC on the linkages between current and planned policies and measures—particularly NBSAPs—and how they relate to development needs and measures of the country, the co-benefits and trade-offs, and how they are addressed.

3. Evaluate current integration of forests within the latest NDCs and NBSAPs, and strengthen that integration during the ongoing processes for developing new NDCs and NBSAPs. This includes taking advantage of the overlapping update periods to integrate common, ambitious measures and targets across both NDCs and NBSAPs to meet climate, forest, and biodiversity goals.

4. Raise ambition for forest-related emissions targets to align with global forest and biodiversity goals that commit to zero deforestation and forest degradation by 2030 (see Box 1). This means setting zero-deforestation targets for 2030 in the NDCs to be delivered in 2025, to align with the 5-year update cycle.

5. Ensure alignment with other international commitments (e.g., SDGs, United Nations Strategic Plan for Forests, UNCCD, Bonn Challenge).

6. Recognize and elevate the role that Indigenous peoples' and local communities' territories and knowledge play in meeting multiple forest, climate, and biodiversity goals. Increase ambitions related to strengthening land tenure, elevating Indigenous peoples' and local communities' leadership, and providing monetary and non-monetary benefits to Indigenous peoples and local communities for their roles as forest and biodiversity stewards.

7. Identify and analyze persistent barriers to change within forest-risk sectors (e.g., agriculture and food systems, mining, urban development). Ensure that forest sector targets and policies are coherent with those of related sectors, and explicitly address potential trade-offs, including increased risks to non-forest ecosystems.

8. Recognize the importance of targets and measures related to DCF supply chains, primary forests, and KBAs – and how they can contribute to reducing deforestation and forest degradation.

9. Include and improve measures to strengthen governance to address drivers of deforestation and degradation; to implement policies and measures to address trade-offs between forest-risk sectors and forests and other ecosystems; and to maximize synergies.

10. Prioritize setting and increasing the ambition of targets related to deforestation and emissions embedded in commodity supply chains, particularly for consumer countries. Pair these targets with policies that mandate disclosure of risks to and impacts on forests and other ecosystems.

Meeting climate and forest goals requires increasing ambition across sectors. Targets related to eliminating deforestation, protecting biodiversity, and conserving primary forests particularly need to be strengthened. Policymakers could also prioritize DCF supply chains and the role of trade in driving deforestation, conversion and GHG emissions for integrating and increasing ambition in their NDCs.

Consumer countries in particular could include targets related to deforestation and emissions embedded in commodity supply chains because these countries drive

much of the demand for extraction and production that put forests at risk. Policymakers can introduce policies that mandate disclosure of risks to and impacts on forests as well as commitments to reduce or eliminate deforestation. Such policies have been established in the EU in recent years.

It is important to note that unintended consequences of reducing deforestation in one place can create spillover effects in another. A particular case in point is the Cerrado, a vast expanse of dry forest, shrubland, and grassland in Brazil's northeast. The biome has suffered dramatic

deforestation as a result of agricultural expansion, particularly due to lucrative large-scale soybean plantations. The establishment of two zero deforestation conservation agreements—the 2006 Soy Moratorium and 2009 Brazilian Federal Prosecutors' Terms of Adjustment of Conduct (TACs)—prompted commodities traders and ranchers to stop buying soy and cattle raised on newly deforested Amazon land.[146] However, a portion of this agribusiness activity simply relocated to the Cerrado.

Non-forest terrestrial ecosystems, like grasslands and savannahs, should also be recognized for their important contributions to carbon storage and climate resilience.[147] They provide carbon stores to mitigate climate change—possibly more reliably than forest areas with high risk of fire—and have huge restoration potential. Recent figures for grasslands suggest they store 25-35% of terrestrial carbon, 90% of it underground. They are also crucial for reducing soil dust storms and desertification; protect against flooding, contributing to climate change adaptation; and aid water security through protection of surface and groundwater sources.

RECOMMENDATION 3: SIMPLIFY AND IMPROVE ACCOUNTING AND REPORTING

RECOMMENDATIONS FOR NATIONAL POLICYMAKERS:

1. Develop common MRV systems that enable reporting on climate, biodiversity, and forest goals simultaneously – minimizing duplication of efforts in reporting against NBSAPs and NDCs.

2. Assess MRV systems, processes and capacities in the forest sector, including systems established in the context of GHG monitoring and REDD+, and determine how they can be used for tracking progress toward NDCs and NBSAPs. Develop strategies to ensure MRV alignment and address overlaps.

3. Set clear targets, milestones and indicators for mitigation, adaptation, and biodiversity goals based on existing MRV capacities, covering input/activity, output, and outcome indicators.

4. Quantify and account for forest and land use change emissions in order to identify the potential for action. This includes establishing methodologically sound baselines for GHGs and forests. Use existing REDD+ capacities to gather data on forest cover changes, monitor progress, and set future targets.

5. Develop MRV systems that can be implemented by rural and local communities. Consider how to integrate local and traditional knowledge on climate, biodiversity, and forests to make MRV systems more accurate and relevant.

RECOMMENDATIONS FOR THE UNFCCC SECRETARIAT:

6. Implement more robust target setting guidance for Parties, specifically referencing the importance of the forest-based measures and targets.

7. Facilitate the use of common reporting tools or methodologies for NDCs and NBSAPs to reduce reporting burden.

National-level policymakers can improve accounting by developing robust, clear, and common MRV systems that enable reporting on climate, biodiversity, and forest goals. Policymakers might consider their countries' existing capacities for MRV when setting GHG and forest-related targets and include capacity-building and improved MRV systems can be included as conditional targets in NDCs.

At the international level, the UNFCCC and other multilateral bodies can do the same by providing common reporting templates and frameworks and being willing to accept data collected for one commitment to report on another.

The UNFCCC and other international actors can simplify accounting by establishing clear and specific methodologies, approaches, and templates for Parties to use to establish and monitor indicators. Where available, UNFCCC could also facilitate Parties' accessing existing data on emissions, mitigation and adaptation measures, finance, and stakeholder engagement. They can also provide targeted capacity building initiatives to assist Parties in creating and maintaining their accounting mechanisms as well as funding to support capacity building and MRV, particularly where these are included as conditional NDC targets.

To the extent possible, the UNFCCC could prioritize developing approaches that can be used to monitor and report on both NDCs and NBSAPs. This will be easier to do if Parties harness the synergies between biodiversity and climate goals, another area in which the UNFCCC could provide guidance. Aligning reporting on different climate, forest, and biodiversity commitments at the national and international levels will help to simplify reporting and accounting, which in turn enables Parties to increase their ambitions.

RECOMMENDATION 4: SET SPECIFIC, TIMEBOUND TARGETS AND DETAILED POLICY MEASURES FOR IMPLEMENTATION

RECOMMENDATIONS FOR NATIONAL POLICYMAKERS:

1. Set specific, measurable, achievable, relevant, and time-bound (SMART) targets for emissions from forest-relevant sectors, deforestation, forest degradation, restoration, primary forest loss, KBAs, and biodiversity.

2. Include and improve targets across food systems, particularly to address food loss and waste, shift unsustainable diets; and integrate food production approaches that promote healthy forest ecosystems and biodiversity, such as agroecology and agroforestry methods.

3. Identify specific policy measures to meet forest targets—including protected area regulations, forest governance measures, community forest management, DCF supply chains, and beyond—that are well-suited to national contexts.

4. Define intermediate milestones (e.g., a goal of eliminating deforestation by 2030 should set annual milestones for each year leading up to 2030).

5. Consider setting targets that go beyond the UNFCCC requirements; national ambitions do not have to stop at the requirements.

6. Implement appropriate requirements and incentives to encourage the achievement of targets across stakeholder groups.

RECOMMENDATIONS FOR THE UNFCCC SECRETARIAT:

7. Develop and implement more robust target setting guidelines for forests and other ecosystems and related sectors. Parties often choose to follow the guidelines as written, meaning that more specific requirements will guide Parties to make specific, measurable, and ambitious targets.

8. Develop guidelines that support and encourage Parties to identify and integrate synergistic approaches to achieving climate, forests, biodiversity, and food systems goals.

An underlying challenge to accurately tracking progress on commitments related to GHG emissions, forests, and biodiversity, and to keeping Parties accountable, is that NDC and NBSAP targets tend to be vague. The UNFCCC can address this challenge by providing clear guidance on setting ambitious and clear targets for forests. For example, in the AFOLU sector, the UNFCCC can provide guidance on setting real, verifiable, and timely emissions reductions targets that are based on conservative baselines, and on integrating these targets into national policies and implementation efforts. Similarly, the monitoring framework being developed for the GBF can include further considerations for clear and quantifiable reporting on targets. These reporting structures could include assessments of risks and safeguards, as well as identification of best practices, roadblocks, and financial needs. This information could be leveraged by both the CBD and UNFCCC Secretariats to help Parties learn from each other and channel financial support.
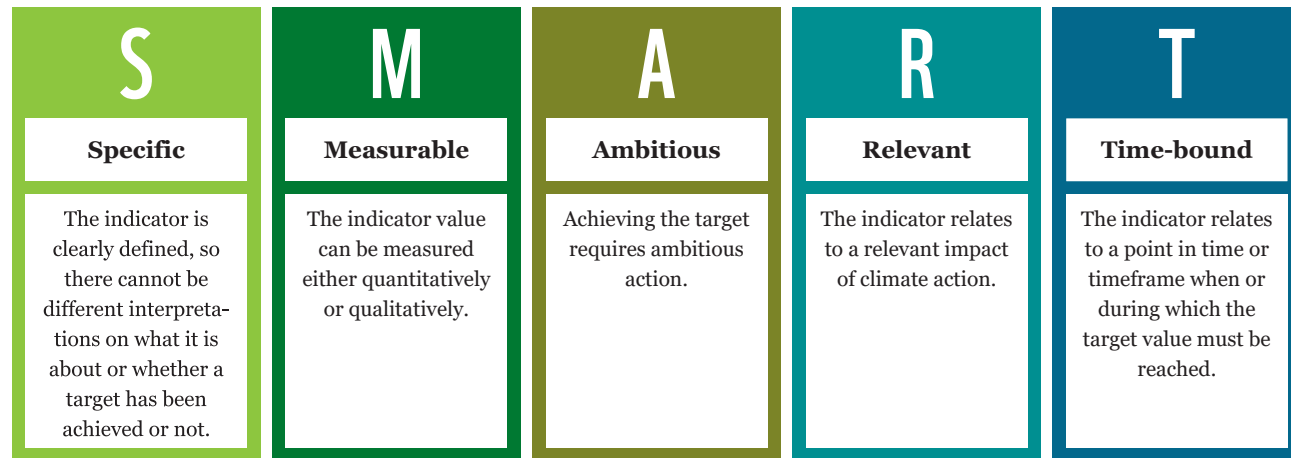
In the meantime, policymakers should not wait for the UNFCCC to provide additional guidance, but rather start increasing ambition immediately – recognizing they are much more likely to achieve and exceed climate and forest goals if they set specific and timebound targets. Policymakers

can use the SMART framework (Figure 11) when considering targets: make goals specific, measurable, achievable, relevant, and time-bound (SMART). A SMART target related to land use, for example, could be for a country to determine that it will increase protected areas by 15% over 10 years while maintaining current levels of biodiversity and carbon sequestration in existing protected areas. In their targets, policymakers should include concrete milestones. For example, if a country aims to eliminate deforestation by 2030 in line with the GLD, then policymakers should set measurable targets for how much the deforestation rate should decline in each interim year.

Setting SMART targets helps policymakers to track their achievements, revise their strategies where they fall short, and more effectively seek international funding. Clear and measurable forest targets that are integrated into NDCs, MRV plans, and national policies enhance the ability of governments to meet climate, forest, and biodiversity goals.

Figure 11. The SMART Method

S	M	A	R	T
Specific	**Measurable**	**Ambitious**	**Relevant**	**Time-bound**
The indicator is clearly defined, so there cannot be different interpretations on what it is about or whether a target has been achieved or not.	The indicator value can be measured either quantitatively or qualitatively.	Achieving the target requires ambitious action.	The indicator relates to a relevant impact of climate action.	The indicator relates to a point in time or timeframe when or during which the target value must be reached.

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RECOMMENDATION 5: ALIGN AND INCREASE FINANCE FOR FORESTS

RECOMMENDATIONS FOR NATIONAL POLICYMAKERS:

1. Prioritize cost-effective, forest-based approaches in national policies to address climate mitigation and adaptation and biodiversity conservation (see Box 2).

2. For recipient countries, utilize NDCs to clearly define specific finance needs and capacities for finance transfers as part of the country's overall climate strategy, for example, by specifying the financial needs to meet conditional NDCs.

3. For donor countries, increase finance for forests and biodiversity, and prioritize funding activities that can provide benefits to multiple goals, while also ensuring finance is additional and not double counting contributions to forests and biodiversity.

4. For recipient and donor countries in partnership, explore the potential for a combination of multiple financial instruments and other regulatory, fiscal, and policy interventions to holistically incentivize and enable forest conservation and sustainable investment.

5. Evaluate the role of public and private finance in supporting forest-sector investments, considering market-linked opportunities like green or sustainably sourced commodities as potential funding sources.

6. Increase national resource allocation for forest sector policies by diverting funds from activities that drive deforestation and degradation, while ensuring a just and equitable transition.

7. Create an enabling environment for private forest finance by implementing policies and instruments that de-risk private investment. Approaches could include piloting scalable projects that demonstrate the benefits of integrated approaches to climate and biodiversity and establishing clear regulations for private sector investment in emerging financing mechanisms to provide certainty.

8. Invest in, and create an enabling environment for, multistakeholder landscape initiatives that promote multifunctional landscapes and sustainable production.

9. Prioritize channeling finance to projects and initiatives led by Indigenous peoples and local communities, which enable these groups to maintain and strengthen their forest stewardship.[m]

RECOMMENDATIONS FOR THE UNFCCC SECRETARIAT:

10. Provide guidance to international climate finance mechanisms (e.g., Green Climate Fund, Global Environment Facility) on simplifying the processes for accessing finance at the international level.

The fact that climate, forest, and biodiversity targets can be achieved through common actions offers important opportunities to align financial flows. At the same time, these synergies present a risk that finance contributed to one target gets counted as contributing to several, resulting in over-counting and under-delivery of finance.

Policymakers from countries that receive finance may be able to make the finance they receive go further by designing policies and strategies that simultaneously meet climate, forest, and biodiversity objectives. Governments can also aim to strengthen staff capacity to write proposals, manage large grants, and coordinate with donors. If policymakers and civil servants in countries that receive finance can clearly formulate top national priorities, they may be more able to effectively seek funding from international donors and to direct private sector investment into high-need areas.

However, the responsibility for increasing finance to meet climate, forest, and biodiversity goals largely lies with policymakers in donor countries. Donors themselves should investigate and propose potential synergies between climate, forest, and biodiversity goals. Recipient and donor countries can leverage multiple financial interventions in tandem, while ensuring coordination between different actors. Ideally, they should combine financing instruments that address drivers of deforestation or place value on standing forests with those that help to de-risk private investment in forest-friendly activities, such as green grants, low-interest loans, green bonds, or blended finance. For example, the Forest and

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m   Examples of Indigenous-led initiatives include Shandia, the Mesoamerican Territorial Fund, and Nusantara Fund.

Climate Leaders' Partnership has announced several such "country packages," most recently for Gabon.[148]

Policymakers from donor countries and private sector donors can also provide training and guidance that enables policymakers and civil servants from countries that receive finance to be more successful in accessing funds. Donors should lead by example by redirecting harmful subsidies away from forest-risk activities, ensuring their own national policies are aligned with international commitments, and regulate private sector investment to contribute to climate, forest, and biodiversity goals.

RECOMMENDATION 6: IMPROVE INTERMINISTERIAL COORDINATION AND STRENGTHEN SYNERGIES ACROSS POLICY PROCESSES

RECOMMENDATIONS FOR NATIONAL POLICYMAKERS:

1. Strengthen political commitment and action at the highest level for identifying synergistic interventions (e.g., nature-based solutions and food systems measures) that can deliver mitigation, adaptation, and biodiversity outcomes through multi-stakeholder partnerships with Indigenous peoples and local communities.

2. Establish an inter-institutional, cross-sectoral collaboration tracking system, or build upon existing schemes to integrate forest considerations across sectors.

3. Ensure that staff responsible for developing NBSAPs and NDCs are either the same or in routine communication with one another.

4. Cross-reference targets and measures in NDCs and NBSAPs, and align quantitative and qualitative indicators for monitoring progress towards mitigation, adaptation, and biodiversity to facilitate reporting to the GST of the Paris Agreement and the Global Review of the GBF.

5. Align with existing policies and development plans both at national and subnational levels.

6. Include transparent processes to involve civil society, Indigenous peoples, local communities, business, the financial sector, and subnational governments to strengthen the quality of policy measures and their implementation. Include participatory approaches to identify and avoid adverse and inequitable outcomes and ensure the creation of gender-responsive approaches.

7. Strengthen coordination with and respect for local authorities, such as those governing Indigenous tribes and autonomous regions.

RECOMMENDATIONS FOR THE UNFCCC SECRETARIAT:

8. Explicitly recognize, in the revision of the information to facilitate clarity and transparency and understanding of NDCs in 2026, the role of nature for achieving climate goals, and include guidance on aligning metrics and methodologies for developing policy measures, monitoring progress, and reporting on climate mitigation and adaptation with biodiversity targets under GBF in tandem (i.e., directing Parties to consider benefits and trade-offs across mitigation, adaptation, and biodiversity).

9. Ensure that the recommended approaches, metrics, and methodologies for monitoring and reporting on mitigation, adaptation, and biodiversity from the UNFCCC Subsidiary Body for Scientific and Technological Advice (SBSTA) and the CBD Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) are holistic (i.e., consider benefits and trade-offs across mitigation, adaptation, and biodiversity) and that they embed safeguards to mitigate negative impacts.

10. Mainstream nature and climate convergence in the negotiations of the UNFCCC COPs by adopting a workstream focusing on the implementation of NDCs and NBSAPs, assessing of the progress of such plans, and fostering their connection with other international pledges and initiatives.

In many cases, policymakers are developing their national commitments and policies for NDCs and NBSAPs in siloed ministries and departments, unaware of the similar goals being set by their colleagues. At the national level, policymakers can improve interministerial coordination through a range of activities. As a first step, policymakers should ensure that civil servants who are responsible for updating and implementing NDCs and NBSAPs are in regular communication with each other, possibly through the establishment of interministerial committees or routine consultative workshops or meetings. Such committees could also have a broader mandate to ensure coordination on the design and implementation of other climate, forest, and biodiversity-related policies. The government could create a separate formal coordination body for overseeing climate and forest policy implementation, identifying gaps and inconsistencies, and managing interministerial coordination on these issues.

Policymakers are strongly encouraged to establish a legal basis for interministerial coordination, for example by mandating the involvement of different departments or ministries in making decisions about land use, climate change actions, and budgets. Laws can clarify the roles and responsibilities of different ministries. Policymakers could develop databases to share collected data, information about initiatives, and relevant parties, such as for activities like forest monitoring. Potential interministerial dialogue could also emerge in the design or implementation of activities that impact multiple sectors, which is the case for many forest and land-use related projects. Parties could identify improved interministerial coordination as a need and seek financial or technical support to build this capacity.

At the international level, the UNFCCC can facilitate dialogues between policymakers from different countries and ministries to increase coordination and information sharing. The UNFCCC could also require evidence of interministerial contributions to NDCs and provide financial support to facilitate dialogues, workshops, and consultations.

RECOMMENDATION 7: BUILD CAPACITY AND KNOWLEDGE

RECOMMENDATIONS FOR NATIONAL POLICYMAKERS:

1. Seek out strategic partnerships with organizations (e.g., United Nations Development Programme [UNDP], United Nations Environment Programme [UNEP], NDC Partnership), that have the mandate and the capacity to support Parties to increase ambition within their NDCs and their NBSAPs.

2. Seek out strategic partnerships with Indigenous peoples' and local communities' organizations, authorities, and groups. Enable and support Indigenous and community leadership in the development and implementation of NDCs and other national commitments.

3. Improve institutional memory by, for instance, allocating funds for civil servant capacity building activities, reducing staff turnover, and documenting expertise so that knowledge is retained.

In addition to specifically increasing interministerial coordination, governments often need more general capacity and institutional knowledge to be able to effectively update their commitments, apply for and access funding, implement policies, and conduct MRV. Not only is currently available finance insufficient, but Parties often lack capacities to accurately assess needs and access finance for NDCs.

Parties should seek out assistance from civil society and multilateral organizations to fill capacity gaps, where feasible. Collaborating in the short-term can serve as a stopgap while internal capacities are increased. Additionally, one way to improve technical capacities is through "train-the-trainer" programs in which policymakers or civil servants are given information and materials that they can then use to train their colleagues. National governments and the UNFCCC or international donors could allocate funds for such training programs, which can reduce costs and increase institutional knowledge in the long-term.

Governments and international actors can also build capacity and institutional knowledge by allocating resources for documentation of procedures, outcomes, findings, collaborations, funding sources, and a range of other essential information. Policymakers could consider establishing administrative processes and a designated body to specifically document information about forests, climate, and biodiversity.

In efforts to raise the bar for forests in NDCs, policymakers have numerous resources available to support them (Table 2). Policymakers can make headway in mitigating the connected crises and ensure a sustainable, equitable future for people and the planet.

TABLE 2. RESOURCES FOR NDC PLANNING AND IMPLEMENTATION

| Resource	Description
Breaking Silos: Enhancing synergies across NDCs and NBSAPs	This report sets out how national governments can strengthen synergies between their national climate plans (NDCs) and national biodiversity strategies (NBSAPs), identifying a number of entry points to ensure that policy planning and implementation processes work together to deliver for climate, nature, and people.
NDC 3.0 Navigator	The NDC 3.0 Navigator is an interactive tool that supports the development of NDCs to be submitted in 2025. It helps countries raise ambition and accelerate implementation of the next round of NDCs (NDCs 3.0).
Food Forward NDCs: Enhancing NDCS For Food Systems	United Nations Environment Programme (UNEP), WWF, EAT, and Climate Focus published recommendations for enhancing NDCs in the food sector. The guidance outlines the potential of the food system to contribute to climate change mitigation and adaptation (with a focus on mitigation) and provides specific policy recommendations and measures that can be incorporated into NDCs.
Enhancing Forest Targets and Measures in Nationally Determined Contributions (NDCs)	This paper provides recommendations for how government decision-makers can incorporate the full potential of forests for climate change mitigation and adaptation in NDCs under the Paris Agreement. It seeks to inform policymakers in developing measurable policies and actions for NDCs and other national climate strategies and policy documents.
NDC Partnership	The NDC Partnership brings together 124 countries, developed and developing, and 95 institutional members to create and deliver on ambitious NDCs that help achieve the Paris Agreement and the Sustainable Development Goals (SDGs). Governments identify their NDC implementation priorities and the type of support that is needed to translate them into actionable policies and programs. Based on these requests, the membership offers a tailored package of expertise, technical assistance, and funding.
NDC Assessment Toolkit	The NDC Assessment Toolkit provides a suite of resources – published by the Global Alliance for the Future of Food – designed to assist countries in adopting a food systems approach to address climate change through their NDCs.
The NDCs We Want	The NDCs We Want is a checklist and tracking database by WWF designed to promote progress, highlight best practices, pinpoint challenges, and address shortcomings within the NDC process. The project's ultimate objective is to elevate the ambition level of NDCs on a global scale.
Food, Environment, Land and Development (FELD) Action Tracker	The Food, FELD Action Tracker is a strategic initiative under the Food and Land Use (FOLU) Coalition, led by the UN Sustainable Solutions Network (SDSN). The Action Tracker is complementing other initiatives by the Coalition, dedicated to providing practical support to countries' transformation of food and land use systems.
NDC Tracking Tool	Operational since 2022, FAO's NDC Tracking Tool is openly available and allows users to collect information required to track progress made in implementing a country's NDC.
Nationally Determined Contribution Expert Tool (NEXT)	NEXT is an open access, new generation GHG accounting tool for estimating the GHG emission reduction potential of mitigation actions in the agriculture, forestry, and land-use (AFOLU) sector, developed by FAO.
Accelerating Climate Ambition and Impact: Toolkit for Mainstreaming NatureBased Solutions into Nationally Determined Contributions	The tools collected in this document offer key information, methodologies and guidance for national authorities related to climate change, environmental management, forests, other land use sectors, as well as other sectors related to the NDCs. This toolkit also provides information relevant for sub-national governments seeking to align their commitments and actions with the NDCs. There are over 100 tools in this kit, and they complement the UNDP's Pathway for Increasing Nature based solutions in NDCs Seven Steps. Each tool in this kit can contribute to at least one of the seven steps.
COP28 Agriculture, Food and Climate Action Toolkit	The Toolkit serves as a key resource for national policymakers and decision-makers aiming to accelerate and align national efforts on climate action and food and agriculture system transformation by (1) providing a summary of priority actions, (2) giving an overview of good examples of NDCs and NAPs in how they integrate agriculture and food system measures, and (3) providing overview of existing initiatives, platforms, and tools that can help governments in developing and implementing agriculture and food system policy measures as part of their NDCs and NAPs.
WWF NBSAP Tracker	Launched on September 30, 2024, WWF's NBSAP Tracker assesses the progress and content of the NBSAPs revision according to a checklist. The NBSAP Tracker also shows which countries have already submitted revised NBSAPs since COP15, which countries have only submitted revised National Targets, and which countries have done neither. The NBSAP Tracker webpage features an interactive map to explore the different country assessments and a table that provides an overview of the assessment results of both the revised NBSAPs and the National Targets
Integrating deforestation and conversion free supply chains into NBSAPs	This report by WWF and Climate Focus lays out five steps for policymakers and other stakeholders to further harness the power of DCF policies to meet national and international biodiversity goals. It clarifies the links between GBF targets and DCF production and highlights opportunities for DCF production policies to contribute to the GBF.

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5. ANNEX
5.1. METHODOLOGY

This assessment analyzed NDCs to determine the extent to which countries are integrating forest measures and targets. The assessment covers 130 NDCs from highly forested countries based on FAO data. NDCs from countries with fewer than one hundred thousand hectares of forest are not assessed in this report.

The selection process for NDCs began by cross-referencing a comprehensive list of NDCs with FAOSTAT data on forest cover.[149] This list included countries and regions with over 100,000 hectares of forested land, resulting in a final sample of 130 NDCs representing the plans of 156 countries (i.e., 129 countries plus the EU27). This sample was chosen to ensure that the review focused on countries where forest-related measures are likely to have significant climate implications. A detailed list of the countries included in the review is provided in the Annex.

To ensure ambition increases over time, the Paris Agreement mandates that successive NDCs must represent a progression compared to the previous submission and reflect each country's highest possible ambition. In this analysis of NDCs, 11 percent of NDCs assessed are first submission NDCs, 68 percent are second submission, 19 percent are third submission, and 2 percent are fourth submission (Figure 12). A full list of NDCs assessed and their submission dates is provided in the Annex.

Figure 12. Submission level of the NDCs assessed in this report

Submission version of NDCs

- First submission
- Second submission
- Third submission
- Fourth submission
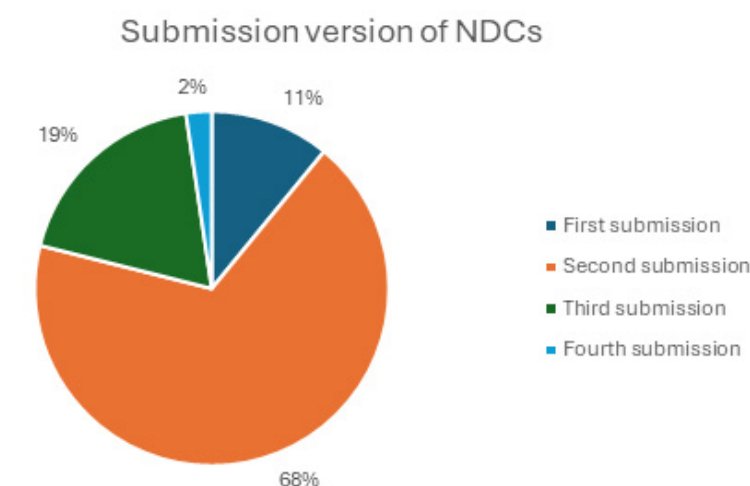
To assess the integration of forest-related targets and measures, the authors identified a set of critical forest-related issues, which are vital for climate mitigation and are supported by a strong evidence base. These included targets and measures related to deforestation, forest degradation, restoration, sustainable forest management, primary forests, and key biodiversity areas. The questions and keywords used to assess NDCs are explained below.

- **Economy-wide and forest-related emission mitigation targets:** Reviewers identified each country's overall economy-wide emissions mitigation targets by reading the NDCs, recognizing that different terms might be used across documents. For forest-specific mitigation targets, reviewers conducted keyword searches focusing on sectors like AFOLU, FOLU, LULUCF, or other relevant category (e.g., forestry). Both unconditional and conditional targets were noted when present.

- **Quantitative forest targets (emissions or non-emissions):** Reviewers then used specific keywords to search for quantitative targets related to deforestation, forest degradation, forest restoration, sustainable forest management, primary forests, and KBAs. These targets could be emissions-related (e.g., reduce emissions from deforestation to [X] metric tons of CO2 by

2030) or address other quantitative forest (e.g., halve deforestation from baseline levels by 2025; maintain [X] area of primary forest through 2030; restore [X] hectares of forest by 2030).

- **Quantitative or qualitative forest-related measures mention:** Reviewers then searched each NDC for mentions of other forest-related measures in mitigation and adaptation sections of NDC, whether quantitative (e.g., increase the designation of community-managed forest areas to [X] million hectares by 2030) or non-quantitative (e.g., 'promote' or 'increase' community forest management, without specifying by how much). Reviewers noted if these measures appeared in mitigation or adaptation sections of the NDCs.

- **Forests in MRV Sections:** Reviewers examined the MRV sections of the NDCs for references to forests. Given the variability in how NDCs are organized, this involved navigating to the relevant sections (which are often labelled differently across documents) to ensure that a keyword search didn't erroneously exclude an NDC's MRV section. Any mention of provided keywords within the MRV section was recorded.

- **Considerations of marginalized groups:** Reviewers conducted keyword searches to identify

mentions of marginalized groups – focusing on women or considerations of gender more broadly, as well as Indigenous Peoples, and local communities – throughout the entire NDC. These mentions did not necessarily relate specifically to forests.

- **Synergies with biodiversity and other national and global goals:** Finally, reviewers searched for references to global goals, frameworks, and national strategies, using specific keywords.

Annex Table 1 presents a list of the 130 reviewed NDCs (representing 155 countries, with the EU's collective NDC representing its 27 member states). These NDCs were selected based on the criterion that each country has equal to or greater than 100,000 hectares of forest, per FAO data. NDCs from countries with less than 100,000 hectares of forest were excluded from the analysis. Countries are ordered based on their current forest cover area.

ANNEX TABLE 1. REVIEWED NDCS

Country	Submission date*	Submission version*	Title*
		*As listed on UNFCCC NDC Registry	
Russian Federation	25/11/2020	First submission	Russian Federation First NDC
Brazil	03/11/2023	Fourth submission	Brazil First NDC 2023 adjustment
Canada	12/07/2021	Third submission	Canada First NDC (updated submission)
United States of America	22/04/2021	Second submission	United States of America First NDC (After rejoining the Paris Agreement)
China	28/10/2021	Second submission	China First NDC (Updated submission)
European Union	19/10/2023	Third submission	EU NDC 2023 update
Australia	16/06/2022	Fourth submission	Australia NDC 2022 Update
DR Congo	28/12/2021	Second submission	Democratic Republic of the Congo First NDC (Updated submission)
Indonesia	23/09/2022	Third submission	Enhanced NDC - Republic of Indonesia
India	26/08/2022	Second submission	India Updated First Nationally Determined Contribution
Peru	18/12/2020	Second submission	Peru First NDC (Updated submission)
Angola	31/05/2021	Second submission	Angola First NDC (Updated submission)
Mexico	17/11/2022	Third submission	Mexico: Updated NDC 2022
Colombia	30/12/2020	Second submission	Colombia First NDC (Updated submission)
Bolivia	15/04/2022	Second submission	Nationally Determined Contribution of the Plurinational State of Bolivia
Venezuela	09/11/2021	Second submission	Venezuela (Bolivarian Republic of) First NDC (Updated submission)
Tanzania	30/07/2021	Second submission	United Republic of Tanzania First NDC (Updated submission)
Zambia	30/07/2021	Third submission	Zambia First NDC (Updated submission)
Mozambique	27/12/2021	Second submission	Mozambique First NDC (Updated submission)
Papua New Guinea	16/12/2020	Second submission	Papua New Guinea Second NDC
Argentina	02/11/2021	Third submission	Argentina Second NDC (Updated submission)
Myanmar	03/08/2021	Second submission	Myanmar First NDC (Updated submission)
Japan	22/10/2021	Fourth submission	Japan First NDC (Updated submission)
Gabon	06/07/2022	Second submission	Seconde Contribution Déterminée au Niveau National (République Gabonaise)
Turkey	13/04/2023	Second submission	TÜRKİYE UPDATED 1st NDC
Central African Republic	24/01/2022	Second submission	Central African Republic First NDC (Updated submission)
Congo	02/08/2021	Second submission	Congo First NDC (Updated submission)
Nigeria	30/07/2021	Third submission	Nigeria First NDC (Updated submission)
Cameroon	11/10/2021	Second submission	Cameroon First NDC (Updated submission)
Thailand	02/11/2022	Third submission	Thailand 2nd Updated NDC
Malaysia	30/07/2021	Second submission	Malaysia First NDC (Updated submission)
Guyana	20/05/2016	First submission	Guyana First NDC
Chile	09/04/2023	Second submission	Chile First NDC (Updated submission)
Sudan	22/09/2022	Third submission	Sudan's First NDC
Zimbabwe	24/09/2021	Second submission	Zimbabwe First NDC (Updated submission)
South Africa	27/09/2021	Second submission	South Africa First NDC (Updated submission)
Ethiopia	23/07/2021	Second submission	Ethiopia First NDC (Updated submission)
Lao PDR	11/05/2021	Second submission	Lao People's Democratic Republic First NDC (Updated submission)
Paraguay	16/07/2021	Second submission	Paraguay First NDC (Updated submission)
Suriname	09/12/2019	Second submission	Suriname Second NDC
Botswana	11/11/2016	First submission	Botswana First NDC
Viet Nam	08/11/2022	Third submission	Viet Nam NDC 2022 Update
Mongolia	13/10/2020	Second submission	Mongolia First NDC (Updated submission)
Mali	11/10/2021	Second submission	Mali First NDC (Updated submission)
Ecuador	29/03/2019	First submission	Ecuador First NDC
Madagascar	29/01/2024	Second submission	NDC 2 Madagascar
Norway	03/11/2022	Third submission	Norway First NDC (Second updated submission)
New Zealand	03/11/2021	Second submission	New Zealand First NDC (Updated submission)
Ukraine	31/07/2021	Second submission	Ukraine First NDC (Updated submission)
Belarus	11/10/2021	Second submission	Belarus First NDC (Updated submission)
Senegal	29/12/2020	First submission	Senegal First NDC
Ghana	04/11/2021	Second submission	Ghana First NDC (Updated submission)
Cambodia	31/12/2020	Second submission	Cambodia First NDC (Updated submission)
Liberia	04/08/2021	Second submission	Liberia First NDC (Updated submission)
Philippines	15/04/2021	First submission	Philippines First NDC
South Sudan	21/09/2021	Second submission	South Sudan Second NDC
Namibia	17/01/2024	Third submission	NDC UPDATE
Honduras	19/05/2021	Second submission	Honduras First NDC (Updated submission)
Korea (Republic of)	23/12/2021	Third submission	Republic of Korea First NDC (Updated submission)

Burkina Faso	09/1072021	Second submission	Burkina Faso First NDC (Updated submission)
Guinea	28/07/2021	Second submission	Guinea First NDC (Updated submission)
DPR Korea	19/09/2019	Second submission	Democratic People's Republic of Korea First NDC (Updated submission)
Nepal	08/12/2020	Second submission	Nepal Second NDC
Somalia	31/07/2021	Second submission	Somalia First NDC (Updated submission)
Morocco	22/06/2021	Second submission	Morocco First NDC (Updated submission)
Panama	12/2020		
Chad	19/10/2021	Second submission	Chad First NDC (Updated submission)
Turkmenistan	30/01/2023	Second submission	Nationally Determined Contribution of Turkmenistan under the Paris Agreement
Uzbekistan	30/10/2021	Second submission	Uzbekistan First NDC (Updated submission)
Pakistan	21/10/2021	Third submission	Pakistan First NDC (Updated submission)
Kenya	28/12/2020	Second submission	Kenya First NDC (Updated submission)
Guatemala	23/05/2022	Third submission	Contribución Nacionalmente Determinada de Guatemala(Updated submission)
Kazakhstan	27/06/2023	Second submission	Kazakhstan First NDC (Updated submission)
Nicaragua	24/12/2020	Second submission	Nicaragua First NDC (Updated submission)
Cuba	17/09/2020	Second submission	Cuba First NDC (Updated submission)
United Kingdom	22/09/2022	Third submission	United Kingdom of Great Britain and Northern Ireland updated 2030 NDC
Benin	12/10/2021	Second submission	Benin First NDC (Updated submission)
Costa Rica	29/12/2020	Third Submission	Costa Rica First NDC (Updated submission)
Georgia	05/05/2021	Second submission	Georgia First NDC (Updated submission)
Bhutan	24/06/2021	Second submission	Bhutan Second NDC
Côte d'Ivoire	09/05/2022	Second submission	NDC COTE D'IVOIRE SUBMISSION
Serbia	24/08/2022	Second submission	Updated NDC Serbia
Solomon Islands	19/07/2021	Second submission	Solomon Islands First NDC (Updated submission)
Sierra Leone	31/07/2021	Second submission	Sierra Leone First NDC (Updated submission)
Equatorial Guinea	24/10/2022	Second submission	Equatorial Guinea NDC 2022 Update
Uganda	12/09/2022	Third submission	Uganda's Updated NDC
Malawi	30/07/2021	Second submission	Malawi First NDC (Updated submission)
Bosnia and Herzegovina	20/04/2021	Second submission	Bosnia and Herzegovina First NDC (Updated submission)
Dominican Republic	29/12/2020	Second submission	Dominican Republic First NDC (Updated submission)
Sri Lanka	24/09/2021	Third submission	Sri Lanka First NDC (Updated submission)
Uruguay	30/12/2022	Second submission	Uruguay Second NDC
Guinea-Bissau	12/10/2021	Second submission	Guinea First NDC (Updated submission)
Algeria	20/10/2016	First submission	Algeria First NDC

Bangladesh	26/08/2021	Third submission	Bangladesh First NDC (Updated submission)
Kyrgyzstan	09/10/2021	Second submission	Kyrgyzstan First NDC (Updated submission)
Switzerland	17/12/2021	Third submission	Switzerland First NDC (Updated submission)
Belize	01/09/2021	Second submission	Belize First NDC (Updated submission)
Afghanistan	23/11/2016	First submission	Afghanistan First NDC
Togo	12/10/2021	Second submission	Togo First NDC (Updated submission)
Fiji	31/12/2020	Second submission	Fiji First NDC (Updated submission)
Azerbaijan	10/10/2023	Second submission	Updated Nationally Determined Contribution of the Republic of Azerbaijan
Niger	13/12/2021	Second submission	Niger First NDC (Updated submission)
Eritrea	19/06/2018	First submission	Eritrea First NDC
North Macedonia	16/04/2021	Second submission	The Republic of North Macedonia First NDC (Updated submission)
Saudi Arabia	23/10/2021	Second submission	Saudi Arabia First NDC (Updated submission)
Timor-Leste	08/11/2022	Second submission	Timor-Leste Updated NDC 2022-2030
Montenegro	15/06/2021	Second submission	Montenegro First NDC (Updated submission)
Iraq	15/10/2021	First submission	Iraq First NDC
Albania	12/10/2021	First submission	Albania First NDC (Updated submission)
Tunisia	10/10/2021	Second submission	Tunisia First NDC (Updated submission)
Jamaica	01/07/2020	Second submission	Jamaica First NDC (Updated submission)
El Salvador	04/01/2022	Third submission	El Salvador First NDC (Updated submission)
Syria	30/11/2018	First submission	Syrian Arab Republic First NDC
Eswatini	12/10/2021	Second submission	Eswatini First NDC (Updated submission)
Vanuatu	09/08/2022	Third submission	Vanuatu NDC Revised and Enhanced
Tajikistan	12/10/2021	Second submission	Tajikistan First NDC (Updated submission)
Moldova (Republic of)	04/03/2023	Second submission	Republic of Moldova First NDC (Updated submission)
Brunei Darussalam	31/12/2020	First submission	Brunei Darussalam First NDC
Haiti	01/06/2022	Second submission	NDC revised(Updated submission)
Armenia	05/05/2021	Second submission	Armenia First NDC (Updated submission)
United Arab Emirates	11/07/2023	Third submission	Third Update of Second Nationally Determined Contribution for the UAE
Mauritania	12/10/2021	Second submission	Mauritania First NDC (Updated submission)
Burundi	05/10/2021	Second submission	Burundi First NDC (Updated submission)
Rwanda	20/05/2020	Second submission	Rwanda First NDC (Updated submission)
Gambia	12/09/2021	Second submission	Gambia Second NDC
Trinidad and Tobago	22/02/2018	First submission	Trinidad and Tobago First NDC
Samoa	30/07/2021	Second submission	Samoa Second NDC
Lebanon	16/03/2021	Second submission	Lebanon First NDC (Updated submission)
Israel	29/07/2021	Second submission	Israel First NDC (Updated submission)

Bahamas	07/11/2022	Second submission	Bahamas Updated Nationally Determined Contributions, 2022

Annex Table 2 details the keywords employed in the search and analysis of the NDCs. Reviewers used 85 keywords to identify forest-related targets and measures across different sections of NDC documents.

ANNEX TABLE 2: LIST OF KEYWORDS

Forest-related targets and measures	Keywords used
Forest-related mitigation target	AFOLU, LULUCF, FOLU, forestry
Quantitative target on deforestation	Deforestation, tree cover loss, forest loss
Quantitative target on degradation	Degradation, degraded, forest degradation
Quantitative target on restoration	Restoration, reforestation, afforestation, forest restoration
Quantitative target on primary forests	Primary forests, old growth forests, old-growth forests, intact forest
Quantitative target on SFM	Sustainable forest management, sustainable forestry, SFM
Quantitative target on KBAs	Key biodiversity areas, KBA
Protected area measures	Protected areas, moratoria, moratorium
SFM measures	Sustainable forest management, sustainable forestry, SFM
PES measures	Payments for ecosystem services, PES, alternative income schemes
Forest governance measures	Corruption, illegal logging, illegal timber; land grabbing, land tenure, tenure rights
Community forest management measures	Community forest management, community forestry, participatory forest management, social forestry
DCF measures	DCF, deforestation-free, deforestation free, conversion-free, zero-deforestation, zero deforestation, zero conversion, zero-conversion, due diligence, imported deforestation, EUDR
REDD+ measures	REDD+, Reducing Emissions from Deforestation and Forest Degradation
Forests within MRV sections	Within MRV section: Forest, forestry, deforestation, degradation, tree cover, REDD+
Considerations of gender	Women, gender, gender-responsive
Considerations of Indigenous peoples and local communities	Indigenous, local, communities, IP, Indigenous peoples, LC, local communities, IPLC
Synergies with biodiversity	Biodiversity
Synergies with CBD, GBF, NBSAPs	Global Biodiversity Framework, GBF, Convention on Biological Diversity, CBD, National Biodiversity Strategy and Action Plan, NBSAP
Synergies with SDGs	Sustainable Development Goals, SDG, SDGs
Synergies with NAPs	National Adaptation Plans, NAP, NAPs
Synergies with UNCCD	UNCCD, United Nations Convention to Combat Desertification

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ENDNOTES

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RAISING THE BAR: STRENGTHENING FOREST AMBITION IN NATIONALLY DETERMINED CONTRIBUTIONS (NDCS) 2024