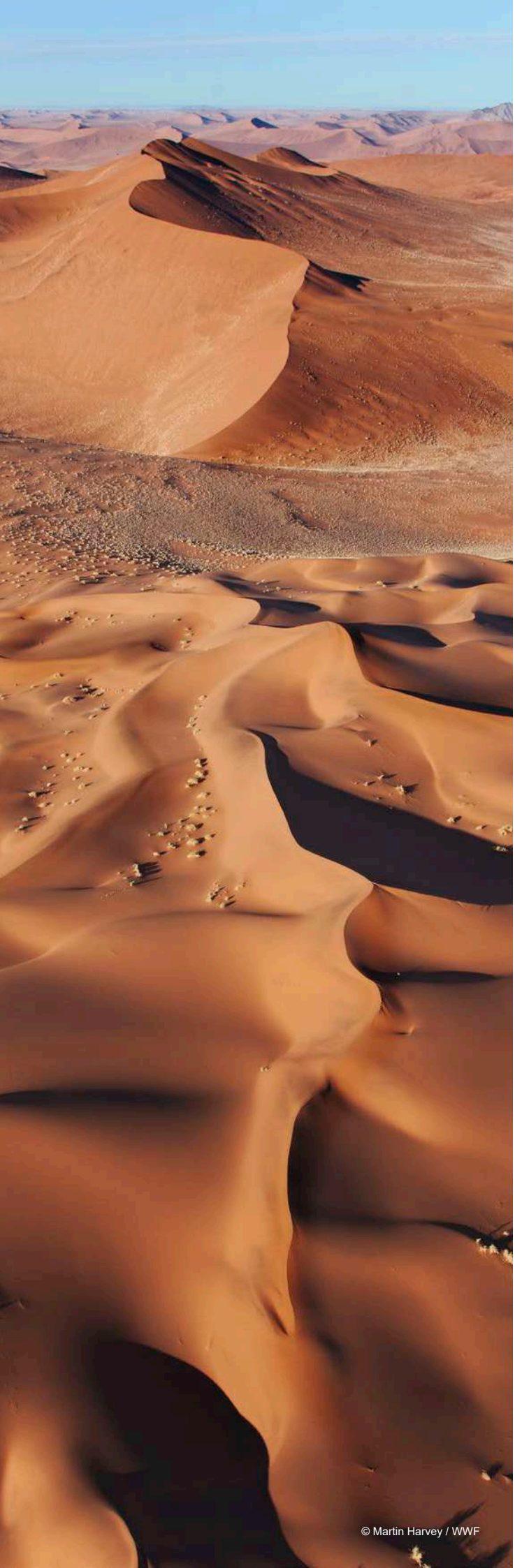
FOR YOUR WORLD

NDCs – A FORCE FOR NATURE?

4TH EDITION | NATURE IN ENHANCED NDCS

NOVEMBER 2021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1. EXECUTIVE SUMMARY

To stop the worst impacts of the climate crisis, governments set out in the Paris Agreement to limit global warming to 1.5°C above pre-industrial temperatures. This implies rapid and deep decarbonisation - a transition from fossil fuel to a renewable-energy based economy. It is also clear that deep cuts in greenhouse gas emission alone are not enough, and that nature with her ability to draw down carbon from the atmosphere is a great ally in the fight against climate change. This report shows that more and more countries are recognising through their international pledges that nature can be a climate hero.

Nature-based solutions (NbS) provide an opportunity we cannot afford to miss to have a chance at averting the worst impacts of climate change and ending the destruction of natural ecosystems and their essential services. Encompassing a wide range of interventions for ecosystem conservation, management and restoration, NbS will play an essential role to achieve the 1.5°C goal of the Paris Agreement.[1] They are also critical to stop and reverse the unprecedented loss of ecosystems and to build resilience against climate change impacts, while also providing additional benefits for sustainable development and the livelihoods of people across the world.

The Paris Agreement has been ratified by 192 out of 197 Parties to the United Nations Framework Convention on Climate Change (UNFCCC). It explicitly *recognises the importance of the conservation and enhancement, as appropriate, of sinks and reservoirs of greenhouse gases*, and *notes the importance of ensuring the integrity of all ecosystems, including oceans, and the protection of biodiversity* in its preamble and under its Article 5 states that *Parties should take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases as referred to in Article 4, paragraph 1 (d), of the Convention, including forests. Where these sinks and reservoirs includ[e] biomass, forests and oceans as well as other terrestrial, coastal and marine ecosystems.* This reflects the growing recognition that climate change, biodiversity loss and degradation of ecosystems are interconnected and have devastating consequences for our economic and social stability, health and well-being. The COVID-19 pandemic has made this fact clear, with a growing body of literature pointing to a direct link between the destruction of nature and disease outbreaks.[2]

Nationally determined contributions (NDCs) are a key vehicle for Parties to the Paris Agreement to communicate their climate plans and are critical to the achievement of its 1.5°C goals. Countries have been submitting new or updated NDCs over the past two years. NDCs are also an important platform to formulate country ambitions in relation to NbS for climate. WWF's #NDCsWeWant Checklist aims to shine a spotlight on all kinds of progress, encourage best practices, identify key challenges and call out laggards, with the goal of increasing the overall ambition of the NDC process. NbS are considered as an important area in a NDC's contribution to sustainable development, alongside linkages with the Sustainable Development Goals (SDGs).

To complement the work on the #NDCsWeWant, this report focuses on the integration of NbS in NDCs[3]. As of October 12, 2021, 140 Parties to the UNFCCC (which includes the EU-27 representing 27 member states of the European Union) have submitted 114 updated or revised NDCs[4]. Parties with an updated NDC assessed in this report represent 42% of global emissions and it is worth bearing in mind that there is still a big gap, both in big emitters stepping forward with ambitious targets and in closing the gap to pursuing efforts of keeping global warming to 1.5°C. This report assesses how these updated NDCs integrate NbS, and how this has changed compared to their previous versions.

Key findings from our assessment of integration of nature and nature-based solutions in NDCs:

Overall, we find a positive trend in terms of the recognition of nature as a climate hero. A majority of the 114 updated NDCs clearly reference nature-based solutions in their mitigation and/or adaptation measures. In 85 updated NDCs, we saw improved integration of NbS compared to previous versions, while for ten NDCs, there was no significant change, and for 19 we saw a decline.

1. **Clear increase from 82% to 92% of NDCs that included nature**
   105 out of 114 (92%) of enhanced NDCs include NbS: 96 in the context of mitigation measures, 91 in the context of adaptation plans, with an overlap of 82 in both mitigation and adaptation. This reflects a positive trend compared to previous submissions. The number of NDCs that make explicit reference to NbS approaches has increased from 94 to 105 (by 12%), most of them in mitigation measures.

2. **21 more countries include quantitative targets**
   Out of the 96 NDCs that include NbS for mitigation, 69 have quantified these as numerical targets, mostly for the forest sector. The comparison with previous submissions also shows a significant positive trend, with 21 additional countries including quantitative targets.

3. **Significant increase in inclusion of wetlands, mangroves and oceans**
   Most NDCs refer to a broad range of ecosystems, including forests, agricultural lands, mangroves, wetlands and marine ecosystems. There was a significant increase in the number of NDCs that mention wetlands, mangroves and marine ecosystems compared to previous version. 51 updated NDCs mentioned wetlands compared to 32 previous

NDCs, 43 mentioned mangroves compared to 29 previous NDCs, and 60 mentioned marine ecosystems compared to 47 previously.

4. **Some NDCs dropped, while additional updated NDCs included, nature in national plans** 87 updated NDCs present national plans and policies in relation to the implementation of NbS, mostly for the forest sector. Overall, this is nine more than in the previous NDCs. However, ten updated NDCs dropped references to national policies for NbS that were mentioned in the previous versions, while 19 updated NDCs added specific mention of national policies for NbS where they had not earlier.

5. **More than three times as many NDCs refer to the Sustainable Development Goals (SDGs), the Convention on Biological Diversity (CBD) or other global processes.** 46 NDCs refer to global processes and agreements, such as the SDGs, the Ramsar Convention on Wetlands or the United Nations Convention to Combat Desertification, in the context of NbS. This reflects a large increase compared to the previous round, with 32 additional NDCs making such references.

6. **The number of NDCs explicitly referring to Indigenous peoples and other local communities grew by 88%.** 30 NDCs explicitly refer to the Indigenous peoples and local communities in relation to the development and implementation of NbS. This is an increase of 14 NDCs, which demonstrates increasing attention to their essential role in the context of NbS.

CONCLUSIONS AND RECOMMENDATIONS

Nature plays a vital role in helping to deliver a 1.5°C world. Nature-based solutions, land use and agriculture must be put at the forefront of global efforts to tackle the climate crisis. **All countries should therefore continue to strengthen their national climate plans and help raise global ambition by better incorporating nature-based solutions, land use and agriculture in their enhanced NDCs in this and future rounds of 'ratcheting up' their NDCs**. Enhancing NDCs for nature should include the following steps:

A. Recommendations for the UNFCCC process and for COP26

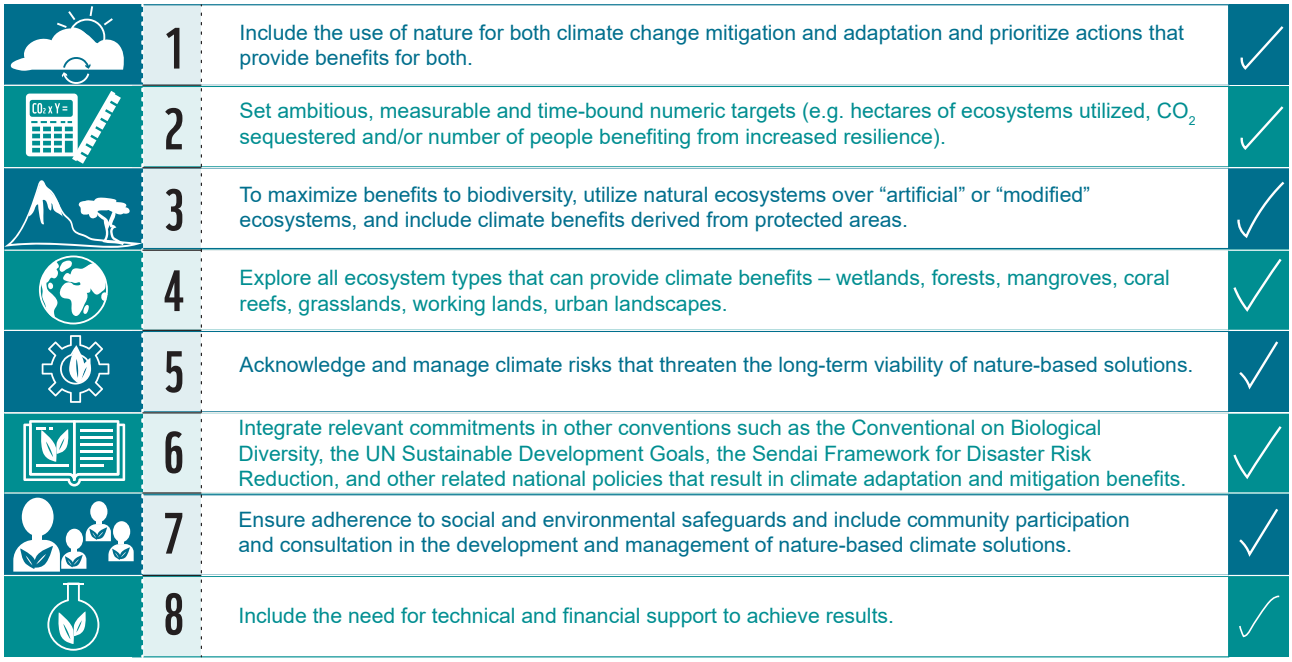
- Decisions adopted at COP26 should introduce a **clear request for countries to maximise the potential of nature in their enhanced NDCs and other national climate plans**, for example by including nature-based solutions, land use and agriculture.
- The **role of nature in NDCs** should be reflected in the decisions related to the Global Stocktake, including the guiding questions.
- COP26 should **give greater formal recognition to the role of nature** for climate adaptation and mitigation and further anchor nature in the UNFCCC process. COP26 decisions should:
  - Highlight the **need to protect and restore natural ecosystems**, and reverse biodiversity loss, **to achieve the 1.5°C goal**.
  - Recognize the **critical role** played by all ecosystems **for climate mitigation and adaptation.**
  - Provide a clear mandate and create a **process to anchor the role of oceans** and coastal ecosystems for mitigation and adaptation **in the UNFCCC regime.**
  - Further operationalize the references to ecosystems and biodiversity from Article 5 of the Paris Agreement and the COP25 decision.
  - Acknowledge the goal to be nature-positive by 2030.
- Governments must ensure the provision of **scaled up, new, and additional financing for nature-based solutions**. Funding for nature-based solutions should be increased to at least 30% of overall climate finance, as appropriate, both for adaptation and mitigation.

B. Recommendations to governments for national level implementation

- All enhanced NDCs should maximize the potential of nature-based solutions and land use in addressing the climate crisis. They should **prioritize nature-based solutions that address climate change mitigation and adaptation, while supporting sustainable development and biodiversity conservation**.
- Enhanced NDCs should clearly identify the **co-benefits of nature-based solutions for climate change**, such as addressing desertification, food security and livelihoods of local communities.

- Enhanced NDCs should be **aligned with other environmental policy instruments**, such as commitments for the Global Biodiversity Framework under the Convention on Biological Diversity (CBD), in particular **National Biodiversity Strategies and Action Plans (NBSAPs)**.
- Relevant stakeholders should be included in the design and implementation of enhanced NDCs that maximize the potential of nature-based solutions. **Participatory and rights-based approaches** are key when consulting and engaging with stakeholders to enhance an NDC.

C. Recommendations for integrating nature-based solutions for climate in enhanced NDCs:



2. BACKGROUND

The Paris Agreement sets an ambitious goal for climate change mitigation that requires urgent action in all sectors. Its Parties agreed to limit the increase in global average temperature to well below 2°C above pre-industrial levels, while pursuing efforts to limit warming below 1.5°C by the end of the century. It also aims to strengthen countries' ability to deal with the impacts of climate change and support them in their effort.

Under the Agreement, countries must present their plans, known as Nationally Determined Contributions (NDCs), to address the climate crisis, and revise those plans every five years with each new plan more ambitious than the previous one. The deadline for the revision of the first round of NDCs was 2020 but was delayed due the COVID-19 crisis, and while many countries have submitted an updated NDC, as of 12 October 2021, a number of countries are still to present their revised NDCs in the run-up to the UNFCCC 26th Conference of the Parties (COP26) in November 2021.

Box 1. What are NDCs?[5]

NATIONALLY DETERMINED CONTRIBUTIONS (NDCs)

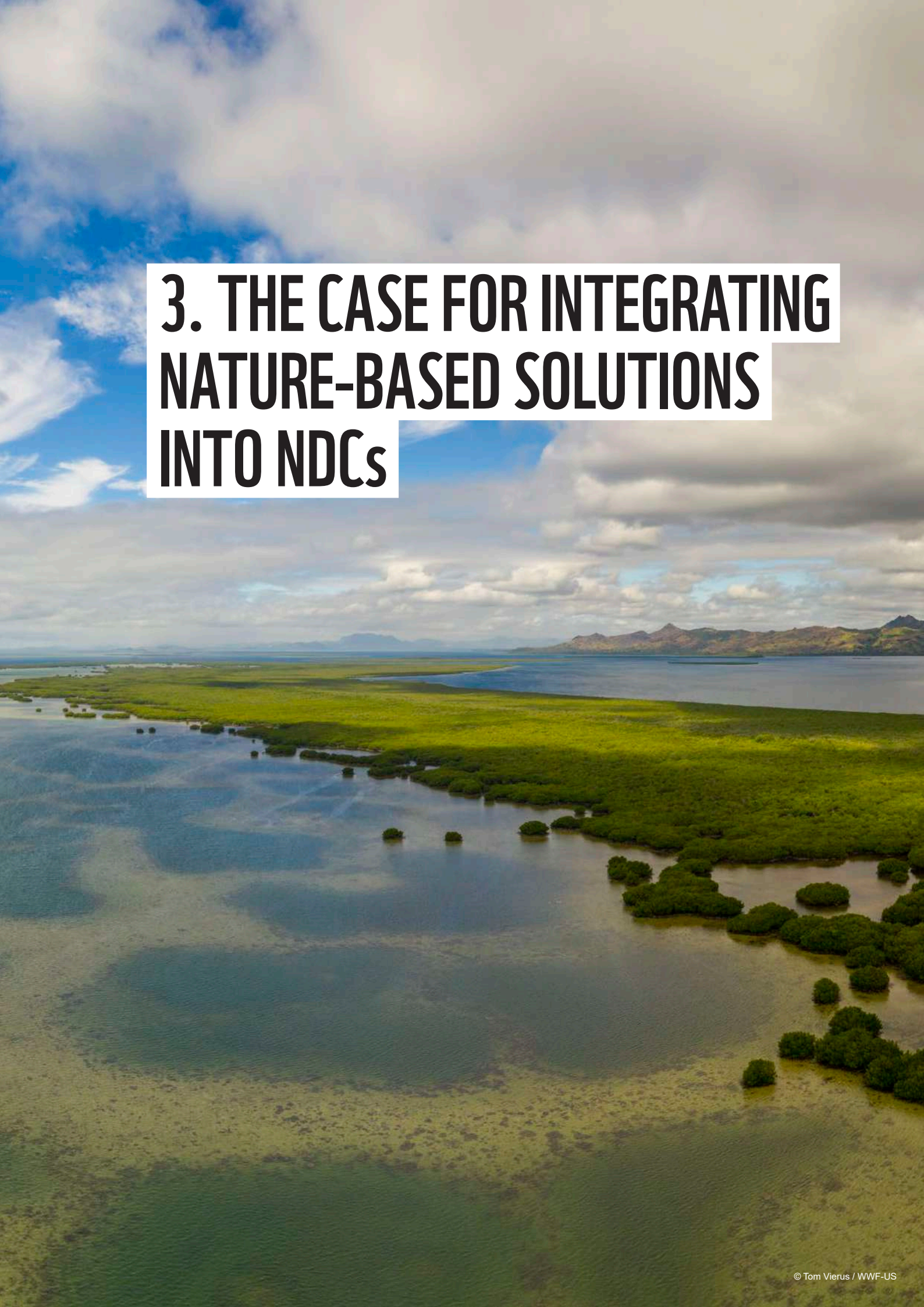
NDCs are at the heart of the Paris Agreement and the achievement of long-term climate goals. They embody efforts by each country to reduce national emissions and adapt to the impacts of climate change. The Paris Agreement (Article 4, paragraph 2) requires each Party to prepare, communicate and maintain successive NDCs that it intends to achieve. Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions.

NDCs are submitted every five years to the UNFCCC secretariat. In order to enhance ambition over time, successive NDCs shall represent a progression compared to the previous NDC and reflect each Party's highest possible ambition. Parties are requested to submit the next round of NDCs (new NDCs or updated NDCs) by 2020 and every five years thereafter (e.g., by 2020, 2025, 2030), regardless of their respective implementation time frames.

NbS have attracted a growing interest, gained momentum in international fora like the UNFCCC and are a key theme in the upcoming COP26. They can provide a cost-effective mitigation opportunity to remove carbon dioxide from the atmosphere and store carbon at large scales, while also offering important benefits for resilience and adaptation to climate change impacts. From a climate perspective, it is important to leverage their cost-effective potential in the short term while accelerating long-term transitions in the energy and transport sectors, where additional and aggressive emission reductions are urgently required. NbS offers solutions not only for efforts to tackle climate change, but also for avoiding and reversing the loss of natural ecosystems and their essential functions for life on this planet.

Since 2017, WWF has published a series of policy papers titled "NDCs – a Force for Nature?". The first edition of the series, published in November 2017, assessed how NDCs contribute to tackling the biodiversity crisis and achieving the Sustainable Development Goals (SDGs). The second edition, published in October 2018, focused on the integration of biodiversity in NDCs. A third edition of the series assessed the integration of NbS in the enhanced NDCs that were published up to 1 May 2021, and compared this integration of NbS with the first round of NDCs. This updated fourth edition takes into account NDCs published by 12 October 2021, in line with the UNFCCC updated synthesis report in preparation for COP26.[6]

3. THE CASE FOR INTEGRATING NATURE-BASED SOLUTIONS INTO NDCs



WHAT ARE NATURE-BASED SOLUTIONS FOR CLIMATE CHANGE?

WWF definition of nature-based solutions:

"ecosystem conservation, management and restoration interventions that are intentionally designed to deliver measurable climate change adaptation and/or mitigation outcomes while delivering co-benefits for human development and biodiversity, and managing anticipated climate risks to nature that can undermine their long-term effectiveness."[7]

This WWF definition builds on and is complementary to the IUCN definition of NbS as

"actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits."[8]

WWF outlines the following five Principles for NbS for Climate Change:

1. Result in increased climate ambition and ecosystem functionality: Nature-based Solutions interventions contribute to increased climate change adaptation and/or mitigation rather than compensating for low ambition in other sectors, ensuring that needed energy, food, urban and infrastructure net-zero transformations support one another. Improving ecosystem functionality involves assessing how climate change will affect nature and taking steps to better manage these risks.
2. Informed by science: use the best available climate, biological and social sciences to set achievable and measurable targets.
3. Synergistic: help reduce and/or avoid emissions and/ or reduce human vulnerability while conserving nature and minimizing trade-offs among other societal goals as well as avoiding adverse impacts on biodiversity e.g., through broad, single-species restoration.
4. Co-designed and co-implemented with Indigenous Peoples and local stakeholders as both a way to understand their most pressing challenges and building co-responsibility.
5. Measurable and traceable: Outcomes can be quantified and attributed to interventions through robust monitoring, evaluation and reporting frameworks.

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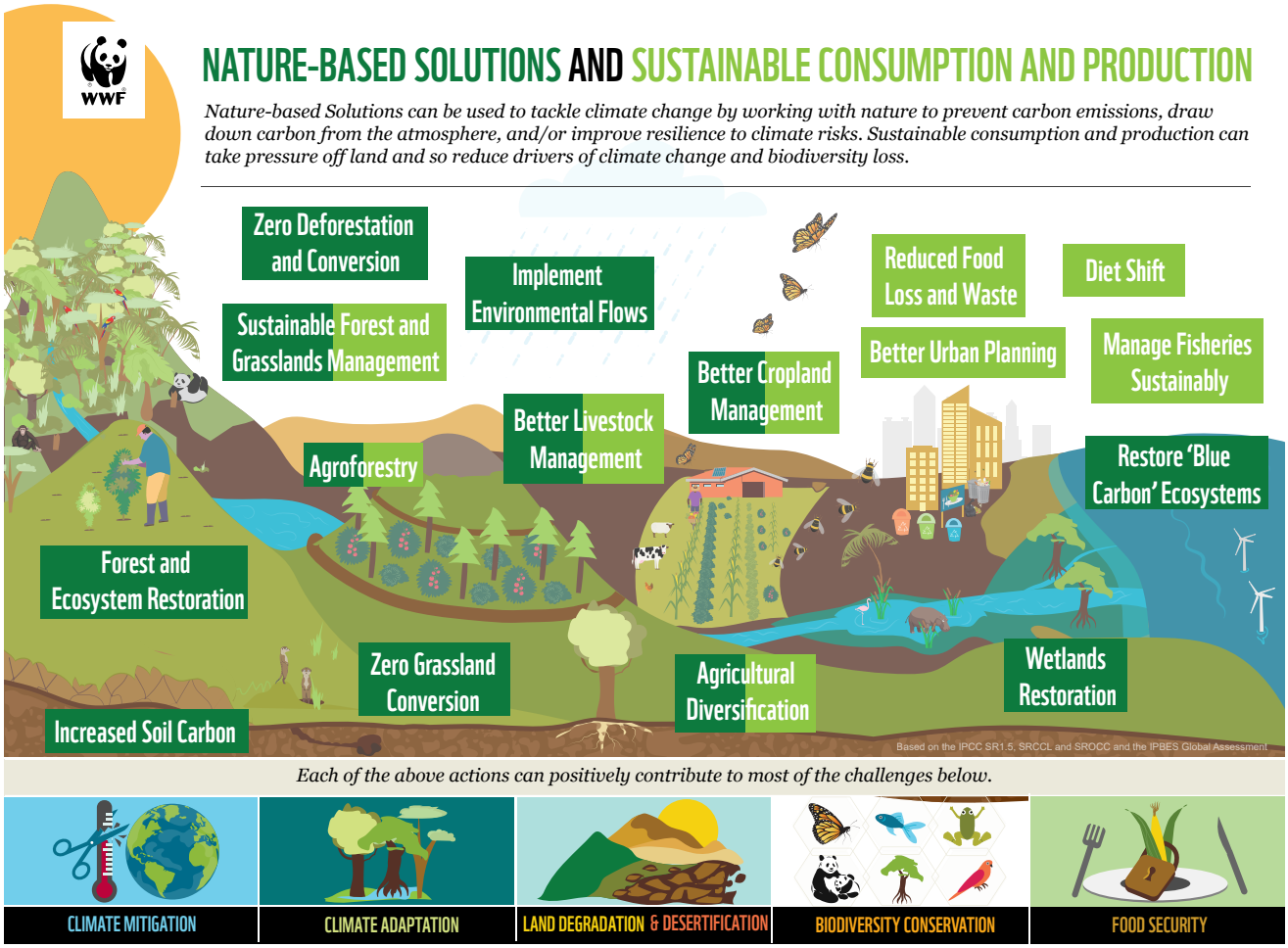
Figure 1. Nature-based Solutions for Climate Change. Source: (WWF 2019) Climate, Nature and our 1.5°C Future: A Synthesis of IPCC and IPBES Reports



MITIGATION POTENTIAL OF NATURE-BASED SOLUTIONS

Natural ecosystems such as forests and peatlands are both a source of and a sink for greenhouse gas emissions and as such play an essential role in regulating our climate and provide essential ecosystem services to local communities. Since 1990, global net conversion of forests alone has annually emitted 3.7 billion of carbon dioxide ($GtCO_2$) while remaining forests have removed $3.3GtCO_2$ from the atmosphere, resulting in annual average net emissions of $0.4GtCO_2$.[9] Other ecosystems such as coastal and marine ecosystems act as 'blue carbon' sinks that can sequester even larger amounts, up to ten times more carbon dioxide than boreal, temperate or tropical forests.[10] For example, seagrass meadows have the potential to sequester large amounts of organic carbon and account for 10% of the ocean's capacity to store carbon while occupying only 0.2% of the sea floor.[11] Mitigation actions within food systems, including addressing land-use change and agricultural emissions as well as reducing food loss and waste and shifting towards sustainable and healthy diets, could contribute about 20% of the global mitigation needed in 2050 to deliver on the 1.5°C target.[12]

However, natural ecosystems are being degraded and lost at an alarming rate due to human activities, not only releasing stored carbon into the atmosphere but also losing their function as sinks. According to WWF Living Planet Report 2020, "75% of the Earth's ice-free land surface has already been significantly altered, most of the oceans are polluted, and more than 85% of the area of wetlands has been lost threatening 1 million species (500,000 animals and plants, and 500,000 insects) with extinction over the coming decades to centuries".[13]

Reversing this trend by protecting and enhancing these natural ecosystems through NbS is essential, and offers a major opportunity for climate change mitigation. Encompassing a wide range of interventions for ecosystem conservation, management and restoration, NbS could offer up to one third of climate change mitigation needed between now and 2030 to achieve the targets of the Paris Agreement.[14]

ADAPTATION BENEFITS OF NATURE-BASED SOLUTIONS

NbS are also an essential way to improve the resilience of societies to climate change by providing ecosystem goods and services that support food and financial security, by empowering local communities to manage natural resources and to participate in the design, implementation and management of these solutions.[15,16] Protecting and restoring natural forests and wetlands help to retain water supplies, reduce flood risk and prevent soil erosion and landslides.[17,18] Similarly, coastal ecosystems provide protection against sea-level rise, storm surges and erosion while offering critical habitat for marine species.[19] Improved agricultural practices such as crop diversification can enhance resilience of food supplies to pests, diseases and climatic extremes.[20]

OTHER BENEFITS AND TRADE-OFFS

NbS have the capacity to address societal challenges by fostering synergies among the SDGs.[21] Improved practices in agriculture and forestry, for example, can help enhance biodiversity and food security by increasing the number of species, functional diversity, and plant and animal productivity.[22,23] They can also deliver social outcomes and economic benefits such as food and water security, livelihood diversification, recreation opportunities, capacity building and empowerment as well as social cohesion.[24] NbS can create jobs and alleviate poverty by increasing the productivity of agriculture in developing countries. In the fishery and forestry sectors the use of NbS can sustain or enhance jobs and productivity. Around the world, for example, close to 46 million workers are dependent on fisheries and aquaculture.[25] Improving the state of nature can also boost the tourism sector and consequently create jobs.[26]

By definition, NbS interventions should contribute to sustainable development and provide benefits for human wellbeing and biodiversity. They should not lead to harm by replacing natural ecosystems with non-native species or failing to respect the rights, knowledge and culture of local communities. For example, poorly adapted monoculture plantations of non-native species can lead to water scarcity for local food production and few biodiversity benefits.

Even where planning and implementation account for local conditions and follow best practices, NbS can involve trade-offs and difficult decisions, for example, between developing a forest area for food production or conserving its essential ecosystem functions. To fully embrace sustainable development goals and minimize these trade-offs, decision-makers need to balance different, and sometimes competing priorities. Any given decision may be framed as a choice between, on the one hand, protecting, restoring and enhancing nature for climate, biodiversity and other essential services, on the other hand, promoting economic development, poverty reduction, food security, and infrastructure development.

To address the triple challenge of climate change crisis, the biodiversity loss crisis and meet the needs of our growing global population in an integrated way, NbS must be designed, implemented and overseen in a way that recognises and minimises these trade-offs.

4. METHODOLOGY

For this analysis, we reviewed the NDCs of 114 Parties who made an updated submission between September 19, 2019 and October 12, 2021, and compared them with their previous versions.[27] The 114 Parties include the European Union (EU 27) for a total of 140 countries covered. In this report, we refer to the most recent submitted NDC as 'updated NDC' and to the NDC that immediately preceded it as 'previous NDC'[28].

The analysis involved three steps:

1. **Identifying references to 'nature' and 'nature-based solutions' in NDCs**

   We reviewed the texts of the updated and previous NDC documents of Parties that have made more than one submission. The NDC documents varied in length and level of detail. In each NDC document, we looked for references to "nature" and "nature-based solutions" by searching for keywords like "nature-based solutions", "NbS", "ecosystems", "forests", "wetlands", "mangroves", "protected areas", "agriculture", "peatlands", "oceans", "deforestation", "afforestation", "restoration", "reforestation", "rivers", "coastal zones", "grasslands", "land-use", and "conservation".

2. **Assessing quality of references to 'nature' and 'nature-based solutions' in NDCs**

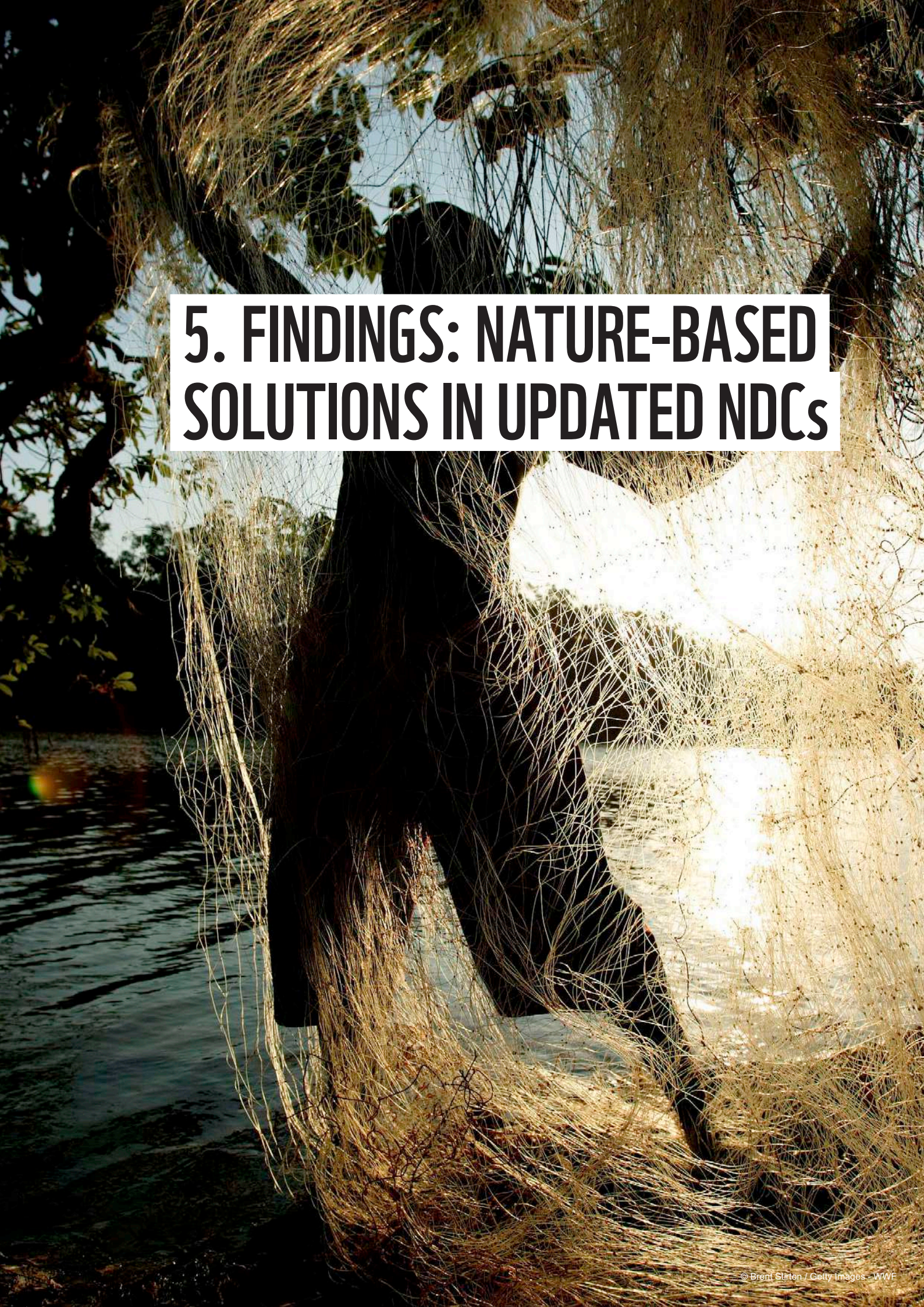
   We extracted relevant information for each of these Parties when we found references to nature and NbS related terms (see Step 1). To assess how they included nature and NbS in their NDCs and how they are referenced in climate change adaptation and mitigation goals, we relied on the following assessment criteria based on the "recommendations for integrating NbS for climate change in revised NDCs" outlined by WWF:

   - Include the use of nature for both climate change mitigation and adaptation and prioritize actions that provide benefits for both;
   - Set ambitious, measurable and time-bound numeric (quantitative) targets;
   - Explore all ecosystem types that can provide climate benefits;
   - Integrate commitments to other international conventions and relevant national policies; and
   - Include community participation and consultation in the development and management of NbS

3. **Assessing progress in integrating 'nature' and 'nature-based solutions' in updated NDCs**

   After assessing the references to nature and NbS in both updated and previous NDCs, we compared how the quality of these references has changed over time based on the assessment criteria in Step 2. The findings of this comparison are presented for each Party in Table 1 on page 23.

5. FINDINGS: NATURE-BASED SOLUTIONS IN UPDATED NDCs

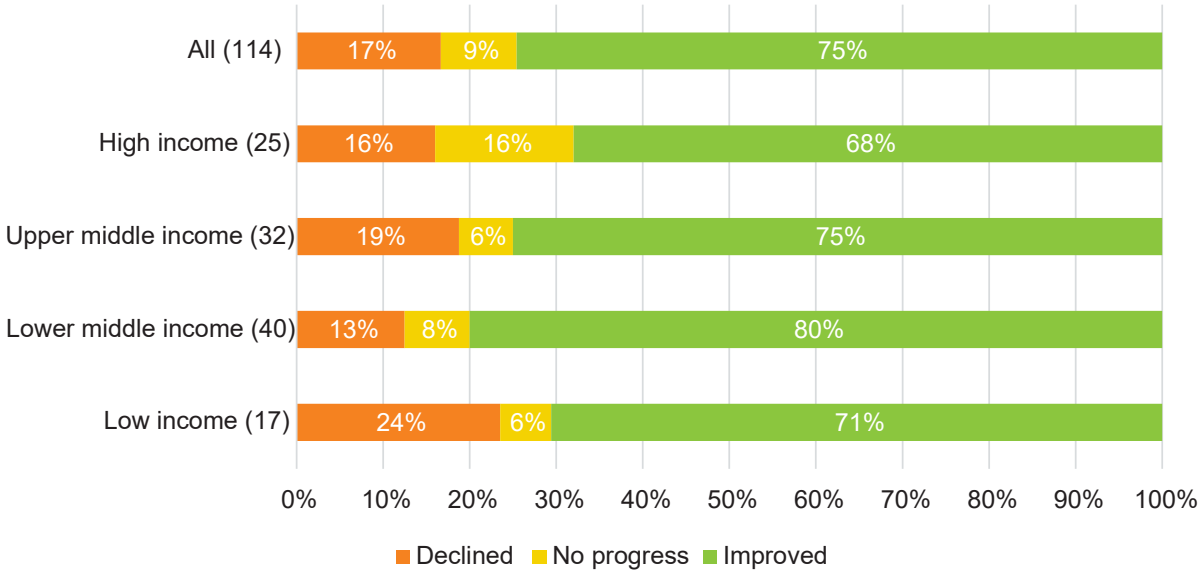


Overall, the inclusion of NbS has improved in the majority of updated NDCs.

We assessed whether NbS were mentioned for both mitigation and adaptation, whether ambitious quantitative targets were specified, how many different ecosystems were incorporated, whether reference was made to global processes and domestic policies, and whether the role of Indigenous peoples and local communities was mentioned and recognized. For 85 Parties, we saw an improved integration of NbS in updated NDCs compared to previous NDCs, while for ten there was no change, and for 19 Parties we saw a decline.

Progress is similar across continents and income groups. This indicates increased attention to NbS for climate change mitigation and adaptation as well as sharing of technical and financial capacities and support among countries in revising and enhancing NDCs. Among the low and middle-income countries that submitted significantly improved NDCs, some had received technical or financial support from international development partners in enhancing their NDCs which likely contributed to improvements of updated NDCs. For example, the process of updating Cambodia's NDC was funded by the European Union, Sweden, and UNDP, and supported by the World Bank, and the NDC Partnership[29], among other development partners.

Figure 2 Progress in integration of NbS in NDCs by income groups (may not add up due to rounding)



105 updated NDCs out of 114 included NbS in some way.

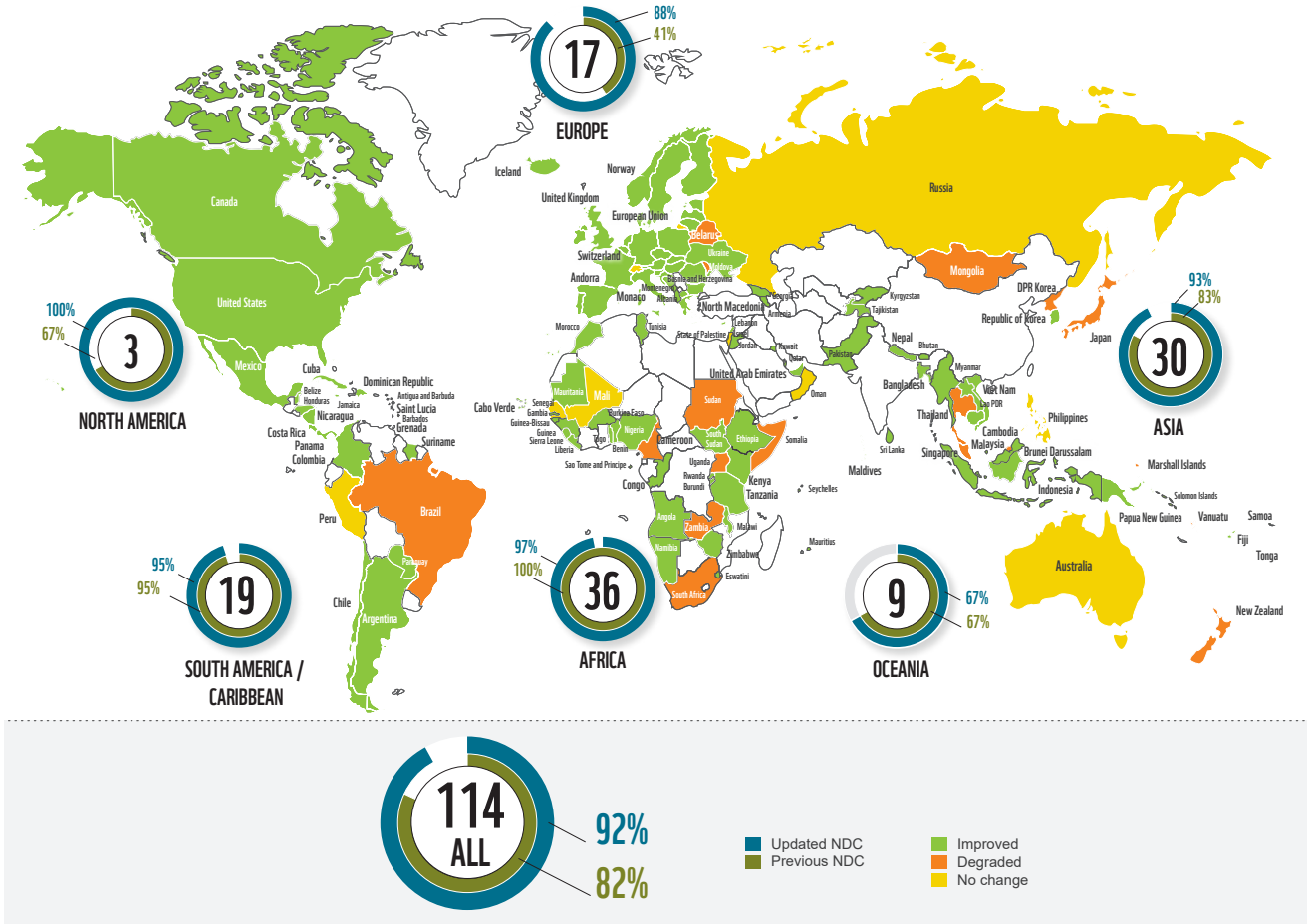
Of the 114 updated NDCs submitted by October 12, 2021, 105 included NbS in some way compared to 94 in the previous round of submissions. Many of these NDCs made specific mention of the concept of 'nature-based solutions'. For example, the updated NDC of **Cabo Verde** states, "*There is often no clear boundary between adaptation and mitigation, which can overlap and which should be ideally mutually beneficial. This is why Cabo Verde favours, where possible, 'green' nature-based solutions (NbS) over 'grey', engineered, solutions. … They are more cost-effective and hold larger co-benefits than engineered solutions which demand permanent maintenance.*" And the updated NDC of **Suriname** states, "*Suriname is strengthening coastal protection through nature-based solutions, such as mangrove planting, which beyond improved resilience brings significant co-benefits in the form of carbon sequestration and enhanced food security*." Honduras "*has prioritized the promotion of adaptation measures and actions based on ecosystem and community approaches, enhancing the promotion of nature-based solutions to face the challenges of climate change*". Countries also included NbS approaches such as ecosystem restoration (e.g., reforestation and restoration), ecosystem-based management (e.g., agroforestry,) and ecosystem protection (e.g., marine ecosystem conservation and forest protection).

A big part of the increase is due to updated NDCs of Parties in Europe making references to nature-based solutions (see Figure 3). The **European Union's** updated NDC, for example, noted that "*nature-based solutions play an important role to solve global challenges such as biodiversity loss and ecosystems degradation, poverty, hunger, health, water scarcity and drought, gender inequality, disaster risk reduction and climate change.*" In its initial NDC, the European Union had no reference to the concept. Besides the European Union, Parties that did not mention NbS at all in their previous NDCs but did in their updated NDCs were **Albania, Andorra, Barbados, Bosnia and Herzegovina, Kyrgyzstan, Monaco, Montenegro, North Macedonia, Norway**, **Qatar, Samoa, the UK**, **the United States**, and the **Republic of Korea**. For example, the **United States** NDC states, "*the United States will support scaling of climate smart agricultural practices (including, for example, cover crops), reforestation, rotational grazing, and nutrient management practices. In addition, federal and state governments will invest in forest protection and forest*

management, and engage in intensive efforts to reduce the scope and intensity of catastrophic wildfires, and to restore fire-damaged forest lands. Alongside these efforts, the United States will support nature- based coastal resilience projects including pre-disaster planning as well as efforts to increase sequestration in waterways and oceans by pursuing 'blue carbon.'" Another example of improvement is **Moldova's** updated NDC which states its intention to "*incorporate nature-based solutions into adaptation planning and policy development, with a focus on biodiversity conservation, ecosystem services management, and disaster risk reduction.*"

Three Parties included NbS in their previous but not in their updated NDCs. **Marshall Islands'** previous NDC mentioned mitigation co-benefits of adaptation actions including efforts such as mangrove and agriculture rehabilitation programs likely to enhance carbon sinks as well as assist with protection of water resources and the health of the Republic of Marshall Islands' people. In contrast, the updated NDC refers to mitigation opportunities in other sectors, including, for example, increased efficiency in the electricity, transport and waste sectors. This may reflect that most emissions in the country come from these sectors. The updated NDC however does mention that Marshall Islands could consider carbon sinks and offsets to meet any residual emissions in order to meet the target of net zero emissions by 2050. Similarly, the previous NDC of **Grenada** mentions NbS both in mitigation and adaptation actions. For mitigation the focus was on the protection of forest areas and replacing bamboo with indigenous tree species that are likely to sequester more carbon; for adaptation the previous NDC focused on preservation of coastal ecosystems, including through coral restoration and mangrove rehabilitation. The updated NDC however does not provide details of NbS mitigation and adaptation actions and measures. Instead, it indicates that Grenada will develop an implementation plan with concrete measures and timelines, which will be communicated separately. **South Africa** mentioned NbS only briefly in its previous NDC, through mentioning a wetlands restoration project under the financial section of its NDC. In its updated NDC, this reference is no longer present and no other NbS measures are specifically mentioned, although the NDC does make general reference to biodiversity as a priority.

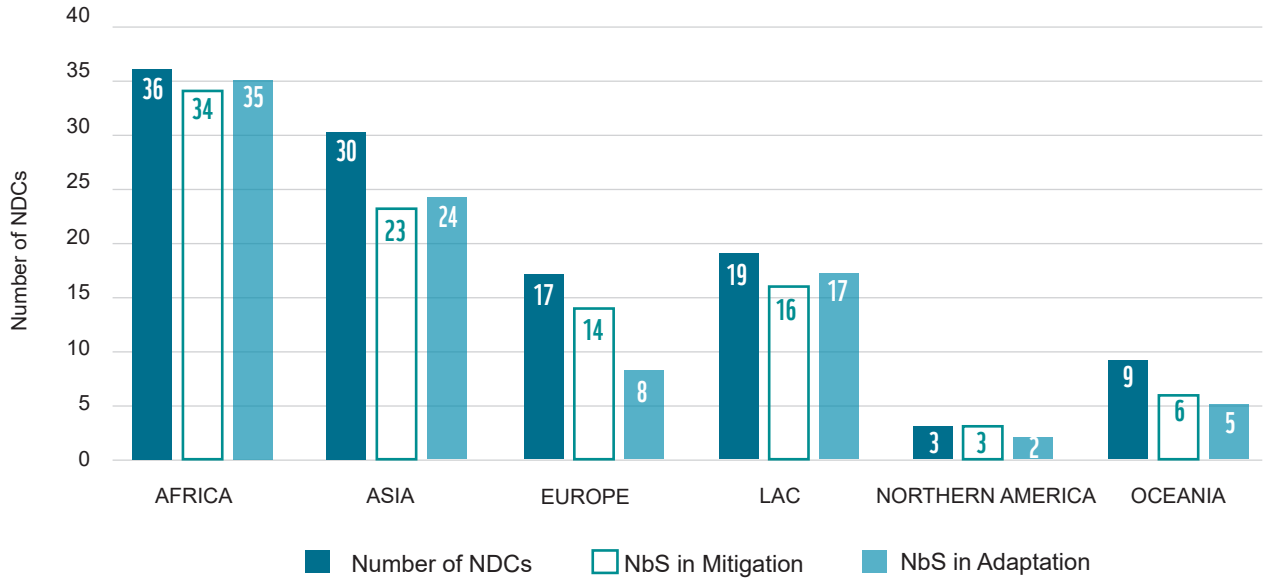
Figure 3 References to NbS in NDCs as a percentage of updated NDCs by region. Total Parties (114): Africa 36, Asia 30, Europe (16 country + EU27), LAC 19, NA 3 and Oceania 9



96 updated NDCs mention NbS approaches in the context of mitigation measures and 91 in the context of adaptation plans, which is an increase compared to previous NDCs.

The increased references to NbS can mostly be seen in mitigation measures. 96 updated NDCs mentioned nature-based mitigation, compared to 80 previous NDCs. The number of submissions mentioning NbS in relation to adaptation increased, from 85 to 91. There are clear geographical differences in the uptake of NbS for mitigation and adaptation. For example, while 35 out of 36 NDCs from Africa included NbS for adaptation, only 8 of the 17 updated NDCs from Europe did the same (see Figure 4).

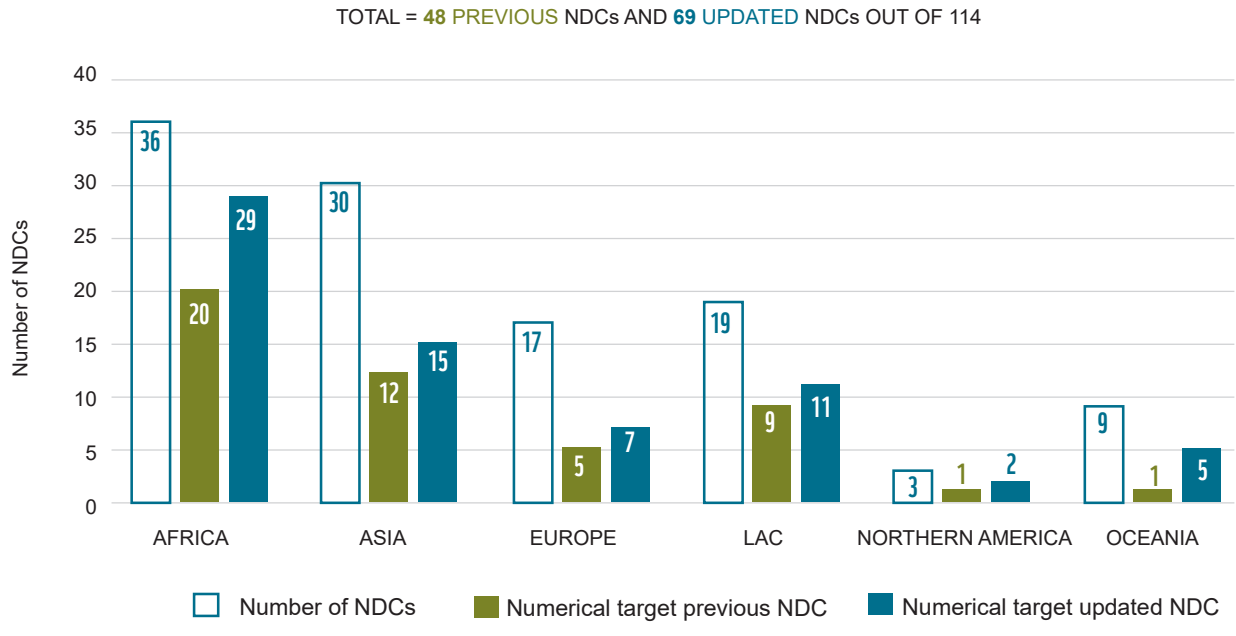
Figure 4 References to NbS in mitigation and adaptation measures in the updated NDCs. Total Parties: Africa 36, Asia 30, Europe (16+ EU27), LAC 19, NA 3 and Oceania 9.



Out of the 96 NDCs that include NbS mitigation measures, 69 have quantified these as numerical targets, mostly for the forest sector. The comparison with previous submissions also shows a positive trend, with 21 additional Parties including quantified targets.

In addition to the increase in the number of Parties that included NbS in their NDCs, there is a clear trend towards a more detailed and precise inclusion of NbS approaches. 69 of updated NDCs included a numerical mitigation target related to NbS compared to 48 of previous NDCs. The prevalence of numerical targets increased on all continents, with the sharpest increase observed in **Oceania** (see Figure 5).

Figure 5 Numerical targets for NbS in the updated NDC and previous NDCs by regions. Total Parties: Africa 36, Asia 30, Europe (16+ EU27), LAC 19, NA 3 and Oceania 9.



29 Parties included a numerical target for nature-based mitigation in their updated NDCs for the first time, while 8 Parties had included numerical targets for NbS in their previous NDCs that were not repeated in the updated submissions. Of the 40 Parties that included numerical NbS targets in both their updated and previous NDCs, twenty increased the ambition of their targets. For example, in their previous NDC, **Costa Rica** targeted to increase forest cover to 60% from 54.4% in 2013; in their updated NDC, they included additional targets of zero deforestation rate in mature forests (by 2030), applying silvo-pastoral and agroforestry systems in additional 69,500 hectares (by 2030), and sustainable management of 1 million hectare (by 2030). Similarly, **Chile** had set a target of 100,000 hectares of reforestation by 2030 in their previous NDC. In their updated NDC, they included sustainable management and recovery of 200,000 hectares of native forests, of which at least 100,000 hectares will comprise permanent forest cover, with at least 70,000 hectares of native species, by 2030; and 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.

The **United Kingdom** (UK) did not include any numerical targets for NbS in their first NDC submitted after leaving the EU. This is despite the fact that a WWF-UK and the Royal Society for the Protection of Birds study last year showed the UK's large mitigation potential through NbS. Protecting existing carbon stocks in the UK land sector has a cumulative climate change mitigation potential of between 75-123 million tonnes of CO_2e through further actions over the period 2017-2030.[30]

Five Parties decreased their level of ambition. **Cabo Verde** had an unconditional target of 10,000 hectares and a conditional target of 20,000 hectares of afforestation/reforestation by 2030 in their previous NDC, while in their updated NDC, the conditional target is not included. In their previous NDC, **Viet Nam** had a target of increasing forest coverage to 45% by 2030; this target was reduced to 42-42.5% in the updated NDC.

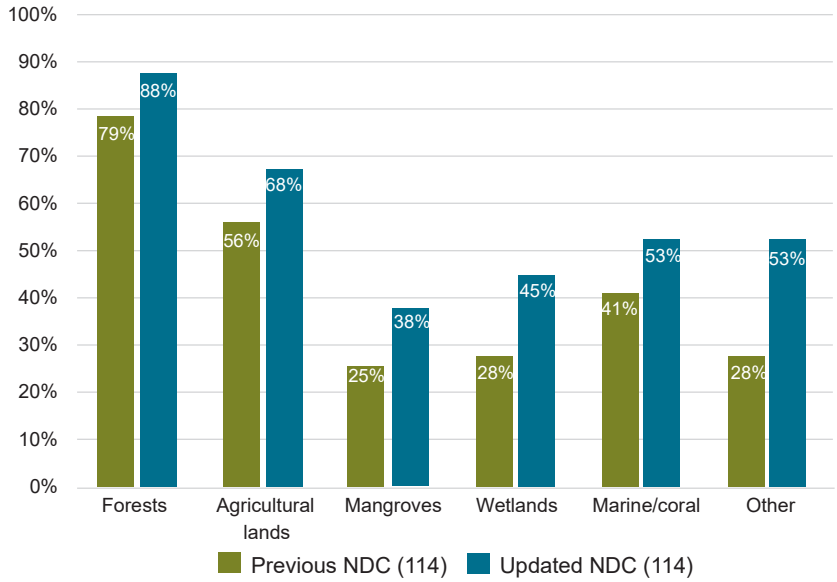
Most numerical targets in the updated NDCs are set for the forest sector. These targets range from tree planting commitments and increasing forest coverage as a share of land to commitments to significantly reduce deforestation. For example, **Brunei Darussalam** has pledged to plant 500,000 trees, **Tonga** targets planting one million trees by 2023, and **Cuba** aims to increase forest coverage to 33% of total land by 2030. **Mexico** and **Cambodia** have pledged to significantly reduce deforestation. Other countries have set targets more directly measured against mitigation, expressing intended removals in the forestry sector in tonnes of CO_2. Examples of such targets can be found in NDCs of **Bosnia and Herzegovina**, **Chile** and **Moldova**, among others.

Few Parties set numerical targets for other ecosystems. Nine updated NDCs include a target to establish a certain amount of marine protected areas, in order to better preserve blue ecosystems. **Costa Rica**, for example, pledged to put 30% of its ocean area under protection by 2022 and 100% of coastal wetlands by 2025 and to stop the net loss of coastal wetlands by 2030. **Tonga** aims to expand the area covered by Marine Protected Areas (MPAs) and Special Management Areas (SMAs) to 30% of country's Exclusive Economic Zone (EEZ). Many countries are still in an early stage of assessing the possibilities and mitigation potential of ocean ecosystems.

Out of 114 NDCs, 108 make reference to at least one ecosystem while 65 countries mention more ecosystems in their updated NDCs than in their previous submissions. Most Parties refer to a broad range of ecosystems, including forests, agricultural lands, mangroves, wetlands and marine ecosystems and inclusion of each ecosystem type increased.

Forests are the most commonly mentioned ecosystems in commitments to counter climate change, but there is increasing diversity in ecosystems mentioned in NDCs (see Figure 6).

Figure 6. References to different ecosystems in updated and previous NDCs. Total Parties (114): Africa 36, Asia 30, Europe (16 country + EU27), LAC 19, NA 3 and Oceania 9



For example, there was an increase in the number of Parties that mention wetlands, marine ecosystems, and mangroves in their updated NDCs. The increase may be partly due to an expanding awareness in recent years of the mitigation and adaptation potential of these ecosystems and available guidance and support for governments to include these in their climate goals and measures. 51 Parties mentioned wetlands compared to 32 in their previous NDCs, 43 mentioned mangroves compared to 29, and 60 mentioned marine ecosystems compared to 47 previously. Mangroves were most often mentioned in updated NDCs of **South American, African** and **Asian** countries, while wetlands are mentioned across most continents. Another notable ecosystem that is increasingly mentioned is seagrass, which was mentioned in only six of the previous NDCs but in 14 of the updated NDCs. The implementation of NbS on agricultural lands also received notable attention, with many Parties presenting plans for agroforestry or climate-smart agriculture.

Marine ecosystems, including coral reefs, are also mentioned relatively frequently (in 60 updated NDCs) and are the second most common subject of numerical targets. Ten updated NDCs include a target to establish a certain amount of marine protected areas, in order to better preserve blue ecosystems. The use of blue ecosystems appeared in both adaptation and mitigation commitments. Many countries are still in an early stage of assessing the mitigation potential of these ecosystems. The **UAE** indicates in its updated NDC that it is researching the soil carbon sequestration rates of mangroves, and **Kenya** will conduct a blue carbon readiness assessment with the purpose of fully integrating blue carbon/ocean climate actions into NDCs. **Sri Lanka** targets restoration of at least 25 percent of wetland landscapes including coastal and marine habitats prioritized according to biodiversity value, ecosystem values and climate change vulnerability.

In their updated NDCs, 87 Parties present national plans and policies in relation to the implementation of NbS, mostly for the forest sector.

Several Parties indicate a concrete commitment to an ecosystems approach to the climate crisis by linking their commitments to national strategies and plans. Around three quarters of updated NDCs contain direct linkages between NbS and national policies. While 19 countries added specific mention of national policies for NbS where they had not earlier, ten Parties dropped those references in their updated NDC - overall, this is nine more than in the previous NDCs. Most commonly, NDCs referred to national plans for reducing emissions from deforestation and forest degradation (REDD+) or other forest sectoral plans. Other national policies include national adaptation plans, biodiversity strategies, and agriculture and land-use policies. The number of different policies mentioned increased in updated NDCs, and national forest sector policies other than REDD+ implementation plans became even more prevalent. Examples of other national policies include **Bangladesh**'s Forest Investment Plan, Zero Deforestation Agreements in **Colombia**, National Reforestation and Afforestation Strategies in **Papua New Guinea**, and National Strategy for Forest Fire Management in **Lebanon.**

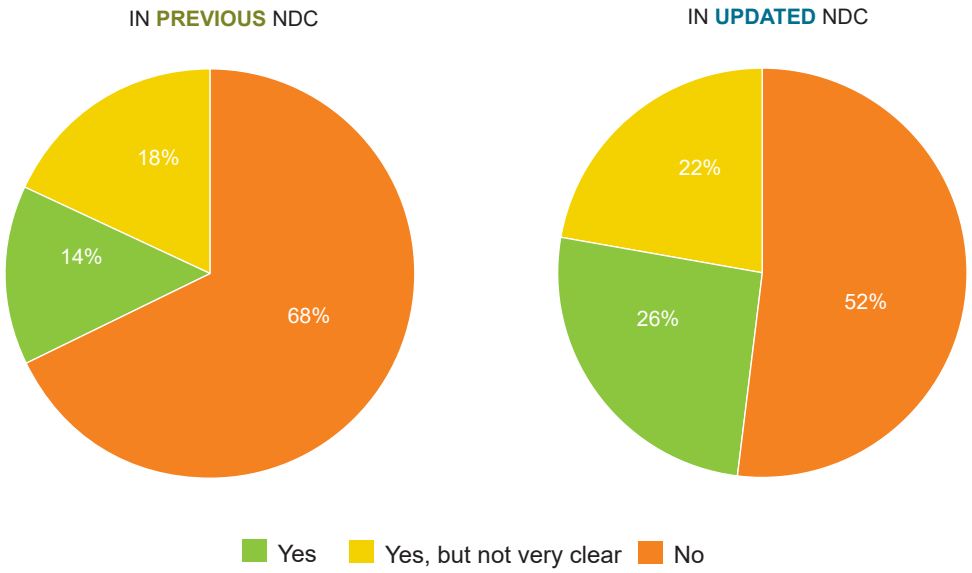
From the 114 NDCs reviewed, 46 have references to global processes and agreements in the context of NbS. This reflects an increase compared to the previous round, with 32 additional Parties making such references.

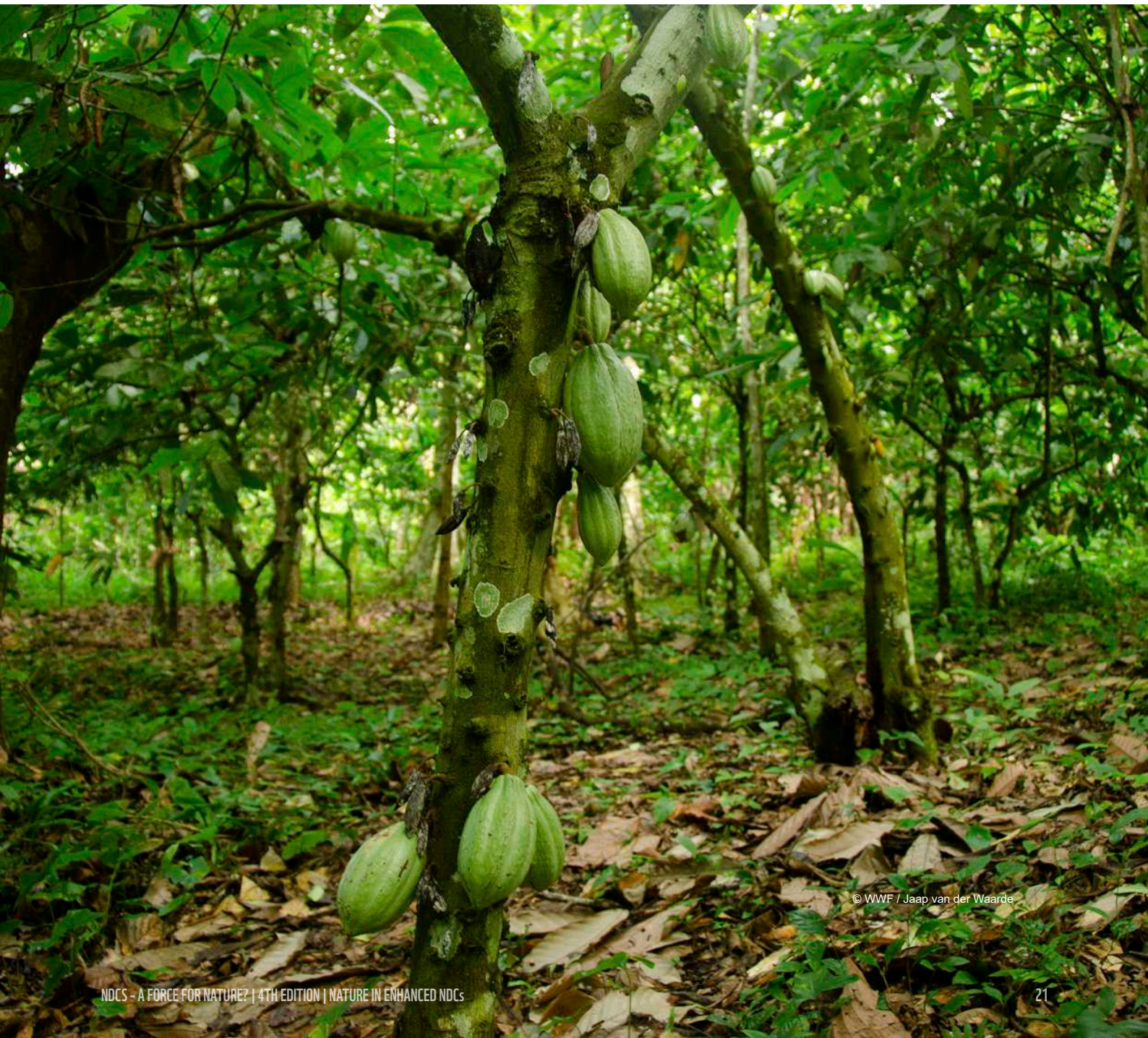
Most commonly referenced were the UN Convention on Biodiversity, the Sustainable Development Goals, and the Sendai Framework for Disaster Reduction. Other treaties mentioned included the UN Convention to Combat Desertification and the Ramsar Convention on Wetlands. For example, the **UK** NDC states, "*The UK will fulfil its responsibilities under the Convention on Biological Diversity, the Ramsar Convention and the Leaders' Pledge for Nature; and implement the Convention on Biological Diversity's vision that by 2050 biodiversity is valued, conserved, restored and wisely used, maintains ecosystem services, sustains a healthy planet and delivers benefits essential for all people. This will provide significant climate mitigation and adaptation benefits.*" Similarly, the updated NDC of **Thailand** mentions, "*Thailand's NAP has taken into account the linkages between climate change adaptation under UNFCCC and other Conventions and agreements, such as the UNCCD, CBD, SDGs, Sendai Framework, and the Convention on Wetland (Ramsar Convention).*"

30 Parties explicitly refer to the role of Indigenous peoples and other local communities in planning and implementing NbS measures. This is an increase by 14 NDCs, reflecting increasing attention to their essential role in the context of NbS.

In addition, from the text of the NDCs, it is not always clear what role these groups play in relation to NbS interventions. While almost half of the updated NDCs mention the role of Indigenous peoples and other local communities, only 26% of them make this clear. **Suriname's** updated NDC states, for example, that *"Indigenous peoples and tribal communities play an important role in the sustainable management and maintenance of the integrity of these forests*." And the **Colombian** updated NDC points to the particularly important role of Indigenous and Afro-Colombian communities in forest conservation. Their updated NDC underlines that Colombia recognises the crucial role of involving local communities to define climate actions, strengthen climate governance and meet deforestation reduction targets, while also engaging rural communities to transform agricultural practices. For updating the NDC, dialogues with ten different community groups took place, including Indigenous, Afro-descendant and rural communities. Similarly, the updated NDC of **Costa Rica** states that the updated NDC was informed by Indigenous and Afro-descendant communities' contributions and respects their worldviews and their rights.[31] The NDC declares the intention of carrying out a consultation process with Indigenous communities for implementing the National REDD+ Strategy and national forestry plans.

Figure 7. References to Indigenous peoples and/or local communities in relation to NbS





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6. SUMMARY OVERVIEW OF ALL REVIEWED NDCs

KEYS

WWF'S NDC RATING GRADES

- NDC We Want
- Short Way to Go
- Some Way to Go
- Long Way to Go
- NDC We Don't Want

ECOSYSTEMS

STATUS OF INTEGRATION OF NATURE IN NDC

Trend over time

- UPDATED NDC IMPROVED
- NO CHANGE IN THE UPDATED NDC
- UPDATED NDC DECLINED

Quality of the updated NDC

- NATURE WELL INTEGRATED IN THE UPDATED NDC
- NATURE SOMEWHAT INTEGRATED IN THE UPDATED NDC
- NATURE INSUFFICIENTLY INTEGRATED IN THE UPDATED NDC

Table 1 references to 'nature' and 'nature-based solutions' in Nationally Determined Contributions

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
ALBANIA	Previous NDC	✗	✗	None	None	✗		↑	Albania's previous NDC only covered mitigation in the Energy and Industrial Processes sectors and did include adaptation measures and therefore made no mention of ecosystems or NbS. Albania's updated NDC is more elaborate, including several key ecosystems and their potential for carbon sequestration such as forests and the soil of pastoral lands. Under the adaptation component, adopting nature-based solutions is listed as a very high priority and detailed plans are included for forests, wetlands and the greening of urban spaces
	Updated NDC	✓	✓		Draft Environmental Cross-cutting Strategy, National Territorial Plan, Inter-sectoral Strategy for Agriculture and Rural Development, Draft law on the administration of the national forest and pasture fund in the republic of Albania, National Strategy on Climate Change	✗	⋮		
ANDORRA	Previous NDC	✗	✗	None	None	✗		↑	Andorra's previous NDC did not mention nature-based solutions at all, but its updated NDC includes a numerical target to maintain a minimum sink capacity of the country's forest mass in 2017. It also mentions the CBD and Andorra's national biodiversity strategy.
	Updated NDC	✓	✓		CBD, National Strategic Plan for the implementation of the 2030 Agenda, Andorran National Biodiversity Strategy (ENBA)	✗	⋮		

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
ANGOLA	Previous NDC	✓	✓		REDD+, National Adaptation Programme of Action (NAPA), National Strategy for Climate Change (2008), National Afforestation and Reforestation Strategy (2010), Strategic Plan of Disaster Risk Management (2011), National Action Programme to fight Desertification (2014); Strategy of Long-term Development for Angola (2025)	✗		↑	Angola's previous NDC outlined several projects in the sectors of agriculture, forestry and coastal zones with numerical targets. In its updated NDC, Angola highlights the importance of ecosystems and the protection of coastal zones. The focus of the updated NDC is on adaptation measures with no numerical targets.
	Updated NDC	✓	✓		United Nations Convention on Combating Drought and Desertification (UNCCD), Convention on the Conservation of Wild Migratory Species (CMS), the Convention on Biological Diversity (CBD) , SDGs, National Adaptation Action Plan (NAPA), National Strategy for Afforestation and Reforestation (2010), Strategic Plan for Disaster Risk Management(2011) and Program of Action National Plan to Combat Desertification (2014)	✗			
ANTIGUA AND BARBUDA	Previous NDC	✓	✗		Environmental Protection and Management Act of 2015	✗		↑	Antigua and Barbuda's previous NDC did not provide a lot of detail on policy. The only nature-based intervention that was included was the protection of wetlands for both mitigation and adaptation. The updated NDC does not include NbS in its main commitments, but specific projects included in the NDC do take an ecosystem-based approach with community involvement, including in the protection of wetlands and watersheds and in soil management. Project descriptions indicate that communities will be involved and will benefit, but it is not made very clear how exactly.
	Updated NDC	✓	✗		None	✓ not clearly			

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
ARGENTINA	Previous NDC	✓	✗		National Adaptation Plan	✓ not clearly			
	Updated NDC	✓	✗		CBD, SDGs, Sendai Framework, UNCCD, REDD+, National Adaptation and Mitigation Plan, Law for Minimum Budgets for Environmental Protection of Native Forests, Forest Watershed Plans, Comprehensive Community Plans, National Forest Management Plan with Integrated Livestock	✓ clearly			In its second NDC, Argentina expansively includes nature-based solutions. Among mitigation plans is the enhancement of policies to protect carbon-rich ecosystems such as forests, wetlands, and natural grasslands. The adaptation communication includes as core principles to take a community-based and ecosystem-based approach.
ARMENIA	Previous NDC	✓	✓ 		Government Decision No 1232 of 21 July 2005 "On Adoption of the National Forest Program of the Republic of Armenia	✗			Armenia mentions repeatedly in both its previous and updated NDC that the country intends to take an ecosystem-based approach to adaptation and to maximize synergies between mitigation and adaptation. Both versions of the NDC include the national forestry and a numerical target for forests, which is more well-defined in the updated NDC.
	Updated NDC	✓	✓ 		National forestry programme, sectoral policy for forestry, sectoral policy for agriculture, National Adaptation Plan	✗			
AUSTRALIA	Previous NDC	Mitigation only	✗		None	✗			Both previous and updated NDC of Australia include agriculture and land use, land use change and forestry sectors in the economy-wide target but neither of them incorporates nature-based solutions in the text of the NDC.
	Updated NDC	Mitigation only	✗		None	✗			

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
BANGLADESH	Previous NDC	✓	✗		National Adaptation Plan (under development), National afforestation programme	✗			Bangladesh's previous NDC mentioned several NbS as part of mitigation and adaptation measures. Bangladesh's updated NDC also includes nature-based mitigation and adaptation measures, mostly focused on afforestation. Targets are set for restoring forests and increasing the tree cover and the NDC gives detailed descriptions of ongoing forestry projects and how they integrate and benefit local communities. However, whereas the previous NDC mentioned the plantation of mangroves, this ecosystem is not present at all in the updated NDC.
	Updated NDC	✓	✓		Mujib Climate Prosperity Plan, Bangladesh National REDD+ Strategy (BNRS), Bangladesh Climate Change Strategy and Action Plan (BCCSAP), Forest Investment Plan, Sustainable Forests & Livelihoods Project (SUFAL)	✓ clearly			
BARBADOS	Previous NDC	✓	✗	None	None	✗			Barbados' previous NDC did not mention NbS. Barbados' second NDC mentions nature-based adaptation in the marine environment through the protection and restoration of coral, seagrass and mangroves. The NDC also mentions the importance of blue carbon for mitigation, although it does not include this as a policy/intention of the country.
	Updated NDC	Adaptation only	✗		Sendai Framework on Disaster Risk Reduction, SDGs, Roofs-to-reefs programme, Debt for Nature Swap, Water Protection and Land Use Policy (2020)	✗			
BELARUS	Previous NDC	✓	✓ 		UNCCD, Ramsar Convention, National Sustainable Development Strategy, National Strategy for the Development of the System of Strictly Protected Areas, Strategy for the Adaptation of Forestry to Climate Change until 2050,	✗			The previous NDC of Belarus did not include forestry and land use in its mitigation targets, but did present separate targets for the sustainable management and restoration of forests and peatlands/bogs and connected these commitments to global processes and national policies. Although Belarus's updated NDC does include the LULUCF sector in the overall mitigation target, it includes less NbS than the previous NDC. References to restoring peatlands are no longer included and only brief mention is made of forestry measures.
	Updated NDC	Mitigation only	✗		Forest Code of the Republic of Belarus and the Strategic Plan for the Development of the Forestry Sector for 2015-2030	✗			

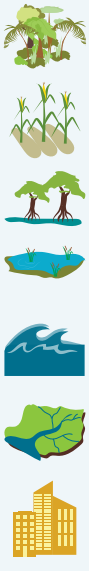
Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
BELIZE	Previous NDC	✓	✓		EIA regulation requirements for coastal mangroves alterations, Belize's Climate Change Action Plan, Belize Integrated Coastal Zone Management Plan	✗		↑	Belize's previous NDC integrated NbS in mitigation and adaptation policies, including through reducing deforestation, restoring mangroves and protecting marine environments. Numerical estimates are given for the nature-based mitigation actions. Nature-based solutions are also at the core of Belize's updated NDC, with special attention paid to blue carbon stocks. The island's mangroves are seen as a key resource in being a carbon sink and protecting the coast. The NDC sets numerical mitigation targets, connects policy initiatives to national laws and to SDG outcomes, and involves local communities and indigenous people in nature protection projects.
	Updated NDC	✓	✓		SDGs, National REDD+ strategy, Integrated Coastal Zone Management (ICZM) Plan, the Forests (Protection of Mangroves) Regulations of 2018, draft National Land Use policy (2019), National Biodiversity Strategy and Action Plan (2016)	✓ clearly			
BENIN	Previous NDC	✓	✓		Project `"Supporting the transition towards an agriculture and food systems related to climate-smart agriculture" (AIC), Project for building climate resilience for the vulnerable populations and ecosystems of the drainage basin of the Ouémé River through the AIC and the sustainable management of soils and water resources	✗		↑	Benin's previous NDC integrated NbS in both mitigation and adaptation, including contributions in agriculture and in forestry, through the roll-out of Climate-Smart Agriculture, improved soil and water management, and avoided deforestation and afforestation. Benin's adaptation plans have an NbS implementation focus for protecting coastal areas against erosion and predicted sea level rise. Benin's updated first NDC presents a wide range of newly introduced national plans for NbS, in the agriculture and LULUCF sector, as well as for marine and coastal ecosystems. There are several plans both for mitigation and adaptation. The importance of reducing the vulnerability of local communities through the protection of forest and coastal ecosystems is also included.
	Updated NDC	✓	✓		National Programme for Sustainable Management of Natural Resources, Capacity building strategy on wildland fire management for better adaptation to adaptation to climate change, Strategic plan for the development of mangrove ecosystems, Strategic plan for the development of non-timber forest products, Report on the State of the Marine Environment in Benin, Multi-sectoral plan for adaptation to coastal risks in the face of climate change climate change in Benin	✓ clearly			

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
BHUTAN	Previous NDC	✓	✗		National Environment Protection Act (NEPA), NAP, NAPA, REDD+, National Strategy and Action Plan for Low Carbon Development (2012), Economic Development Policy (2010 and draft 2015), Bhutan Transport 2040: Integrated Strategic Vision, National Forest Policy, and other sectoral plans and strategies	✓ not clearly		↑	Forests are a crucial resource for Bhutan. The previous NDC already outlined several concrete action plans to sustainably manage and protect the country's forests. The 60% coverage of forest in Bhutan is constitutionally anchored and is central to Bhutan's ambition to remain carbon neutral. In its updated NDC, Bhutan translates this ambition into numerical targets for sustainable forest management and forest restoration.
	Updated NDC	Mitigation only	✓ 		SDGs, NAP, REDD+, Renewable Natural Resources (RNR) Strategy 2040, National Strategy for Sustainable Socio-economic Development through the Commercialization of Organic Farming 2019, "Enhancing Sustainability and Climate Resilience of Forest and Agricultural Landscape and Community Livelihoods in Bhutan" (2017-2023)	✓ not clearly			
BOSNIA AND HERZEGOVINA	Previous NDC	✗	✗	None	None	✗		↑	Bosnia and Herzegovina did not include nature-based solutions at all in its previous NDC, but in its updated NDC it sets a specific target to increase sinks from the forestry sector by 93 GgCO2e by 2030.
	Updated NDC	Mitigation only	✓ 		None	✗			
BRAZIL	Previous NDC	✓	✓ 		National Policy on Climate Change (Law 12,187/2009), Law on the Protection of Native Forests (Law 12,651/2012, Forest Code), National Strategic Plan for Protected Areas	✓ not clearly		↓	Whereas Brazil's previous NDC included extensive plans for the prevention of deforestation and ensuring the continued provision of ecosystem services, its updated NDC does not include nature-based solutions to the same extent. The updated NDC mentions plans for forest planting, but only in the context of an agricultural policy.
	Updated NDC	Mitigation only	✗		Low Carbon Agriculture Plan (ABC), Floresta+ Program	✓ not clearly	⊗		

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
BRUNEI DARUSSALAM	Previous NDC	✓	✓		CBD, National Biological Resources (biodiversity) Policy and Strategic Plan of Action, 'Heart of 'Borneo' Initiative	✓ not clearly		↓	Brunei Darussalam integrates nature-based solutions in its NDC, with a focus on forests and marine ecosystems. The previous NDC set numerical targets for forest reserves and the establishment of marine protected areas. In the updated NDC, a numerical target is set for planting 500,000 trees. The updated NDC does not mention any global processes relevant to NbS, while the previous NDC mentioned the CBD.
	Updated NDC	✓	✓		Brunei Darussalam National Climate Change Policy (BNCCP), Wawasan Brunei 2035	✓ not clearly			
BURKINA FASO	Previous NDC	✓	✓		REDD+, Strategic Framework for Investment in Sustainable Land Management (SFI-SLM), Forest Investment Programme	✓ clearly		↑	Burkina Faso's previous NDC had a focus on the AFOLU sectors and mitigation co-benefits of actions within these sectors. It included plans for the restoration of degraded lands, forest investment, and a green belt around the capital. Burkina Faso's updated NDC again highlights the importance of the AFOLU sector for carbon sequestration. It sets a sector-specific GHG mitigation target for AFOLU and includes numerous policies for the restoration and sustainable management of forests and other land ecosystems.
	Updated NDC	✓	✓		SDGs, REDD+	✓ not clearly			

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
BURUNDI	Previous NDC	✓	✓		National Forestry Policy of Burundi (2012), National Adaptation Programme of Action (NAPA, 2007), National Climate Change Policy (2012), National Strategy and Action Plan on Climate Change (2012). National Reforestation Programme	✗		↑	Burundi's previous NDC included promoting the development of forest ecosystem services as a core part of its mitigation contribution. Numerical targets and national policies were presented for reforestation and adaptation measures, too, included plans for forest protection, as well as for agroforestry, soil conservation and the protection of aquatic and land-based ecosystems. Burundi's updated NDC includes plans to plant forests and bamboo as mitigation measures, with numerical targets set for the number of hectares to be planted. Under adaptation measures, ecosystems and forests are presented as a priority sector. However, no specific adaptation policies are included that involve ecosystems. The NDC specifically notes the importance of using indigenous knowledge for forest protection.
	Updated NDC	✓	✓		CBD, UNCCD, Ramsar, REDD+, La Stratégie forestière nationale (2021), Stratégie Nationale et Plan d'Action sur la Biodiversité 2013-2020, Le Plan National de Développement 2018-2027, Le Document d'Orientation de la Politique de l'Environnement, de l'Agriculture et de l'Elevage, La Politique forestière nationale, La Politique Nationale sur le changement climatique	✓ clearly			
CABO VERDE	Previous NDC	✓	✓		Economic Transformation Strategy (TEE), National Forestry Action Plan (NFAP), Strategy Document on Growth and Poverty Reduction	✓ clearly		↑	Cabo Verde already included NbS quite extensively in its previous NDC, but deepened and broadened its commitments in its updated NDC, going beyond the forestry sector to include plans for NbS across the board, such as in blue carbon sequestration, nature-based coastal protection, and the empowerment of communities in ecosystem conservation.
	Updated NDC	✓	✓		Sendai Framework, National Forest Law, National Strategy and Action Plan for Biodiversity Conservation, National Blue Economy Investment Plan (PNIEA), Blue Economy Promotion Program (PROMEA), Unified Strategic Framework for the Blue Economy (QEUEA)	✓ clearly			

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
CAMBODIA	Previous NDC	✓	✓		National REDD+ strategy, National Forest Monitoring System (NFMS), FLEGT 7 programme	✓ not clearly			While Cambodia already included NbS in its previous NDC, in its updated NDC NbS are integrated in all key components. Several ecosystems (forests, agricultural land, coastal zones, mangrove ecosystems, oceans, wetlands and rivers) are included in the mitigation and adaptation actions. The NDC lays out detailed plans and scenarios for the implementation of these interventions including the role of IPLCs, women and youth. An ambitious target is set for the forestry sector, which is to be the main contributor to the country's mitigation target.
	Updated NDC	✓	✓		SDGs, Sendai Framework, REDD+, National Protected Area Strategic Management Plan 2017-2031, National Cooling Plan	✓ clearly			
CAMEROON	Previous NDC	✓	✗		REDD+, Schéma national d'aménagement et du développement durable du territoire, National Adaptation Plan	✓ clearly			Cameroon's first NDC incorporated NbS with a focus on forestry and land-use measures for mitigation and their benefits for local communities. Under adaptation, the previous NDC also incorporated the restoration of mangroves for coastal protection. In the updated NDC, Cameroon limits mention of NbS to reforestation and forest restoration and no longer mentions the restoration of mangroves or the involvement of local communities in land restoration.
	Updated NDC	✓	✗		SDG	✗			
CANADA	Previous NDC	Mitigation only	✗		National: Pan-Canadian Framework on Clean Growth and Climate Change	✗			Canada's previous NDC mentioned the importance of carbon sinks, both forests and wetlands, but did not specify any numerical targets or specific measures to preserve or expand these sinks. Canada's updated NDC makes the importance of NbS for mitigation more concrete, incorporating programs such as Canada's Nature Legacy Initiative and measures in the agriculture sector, to preserve ecosystems and increase carbon sequestration in natural sinks. However, the potential for nature-based solutions in adaptation is not yet explored.
	Updated NDC	Mitigation only	✓		Agricultural Climate Solutions Program, Agricultural Clean Technology Program, Canada's Nature Legacy Initiative	✓ clearly			

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
CHILE	Previous NDC	✓	✓		Sectoral adaptation plans	✓ not clearly			Chile's updated NDC favours the use of NbS, especially through the use of forestry and marine ecosystems, for which numerical targets are set. The NDC takes an integrated approach to mitigation and adaptation measures for forests, oceans and wetlands as key ecosystems while making references to co-benefits of these measures including linkages to SDGs and other international commitments. In the design and implementation of measures included in the NDC, special consideration is given to the roles of communities vulnerable to climate change impacts.
	Updated NDC	✓	✓		SDGs, Sendai Framework, National Strategy for Climate Change and Vegetation Resources, National Policy for Disaster Risk Reduction 2019-2030	✓ not clearly			
COLOMBIA	Previous NDC	Mitigation only	✓		CBD, UNCCD, REDD+, National Adaptation Plan	✓ not clearly			Colombia's previous NDC already recognized the importance of its forests and biodiversity, but its updated NDC makes the use of nature-based solutions for climate action much more concrete, providing an extensive list of nature-based measures for both mitigation and adaptation as well as numerical targets for the forestry sector. Particular attention is paid to measures for avoiding deforestation associated with food production, but also to the importance of protecting and restoring other ecosystems, such as blue carbon ecosystems, and to the involvement of local communities.
	Updated NDC	✓	✓		SDGs, Sendai Framework, REDD+, National Adaptation Plan, Zero Deforestation Agreements (meat, dairy, Palm Oil and Cocoa), Intersectoral Pact for Legal Wood in Colombia.	✓ clearly			

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
CONGO	Previous NDC	✓	✓		Plan National d'Affectation des Terres	✗			Congo's previous NDC included measures for afforestation and agroforestry under its mitigation contribution and for the protection of ecosystems such as mangroves under its adaptation contribution. A numerical target was set for afforestation. Congo's updated NDC includes a number of nature-based approaches for both mitigation and adaptation, including in the forestry and agriculture sectors as well as a plan to plant mangroves for coastal protection. It also includes examples of projects where local communities get involved in ecosystem-based adaptation.
	Updated NDC	✓	✓		SDGs, REDD+	✓ clearly			
COSTA RICA	Previous NDC	✓	✓ 		REDD+, National Adaptation Plan, National Protected Area System (SINAC), FONAFIFO's Environmental Services Payments program, Forest Certification Program & National Biological Corridor System and the National Protected Areas System (SINAC)	✓ clearly			Costa Rica already displayed a strong commitment to a nature-based approach in its previous NDC, with ecosystem-based adaptation measures and a numerical target for forest coverage. The updated NDC deepens this approach. It includes coastal wetlands as a carbon sink in mitigation measures and targets, refers to relevant global processes and conventions, and stresses the important role that Indigenous People play in ecosystem conservation.
	Updated NDC	✓	✓  		SDGs, Sendai Framework, UNCCD, CBD, REDD+, National Composting Strategy, National Strategy for Landscape Restoration	✓ clearly	✓		

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CUBA	Previous NDC	Adaptation only	✗		CBD	✓			In its updated NDC, Cuba sets a target to increase the island's forest cover to 33% by 2030. While nature-based mitigation focuses on forests, adaptation measures also include the restoration of coastal ecosystems, such as mangroves, to restore their naturally protective qualities as well as the protection of coral reefs.
	Updated NDC	✓	✓ 		Economic and Social National Development Plan, State Plan to confront Climate Change	✗			
DOMINICAN REPUBLIC	Previous NDC	Adaptation only	✗		National Adaptation Plan of Action	✗			Following their previous NDC that already highlighted the importance of ecosystem-based adaptation, the Dominican Republic has submitted an updated NDC with concrete plans to integrate nature and climate action, mentioning numerous different ecosystems. Particular attention is paid to the integration of ecosystem-based approaches in the agricultural sector.
	Updated NDC	✓	✓ 		SDGs, Sendai, CBD, REDD+, National adaptation plan, National development strategy, National adaptation strategy for agriculture	✓ not clearly			
DPR KOREA	Previous NDC	✓	✗		Law on Forest, Law on Land, Law on Land Use Planning, Land on Landscape, Law on Nature Reserve, Strategy for Agriculture Development	✗			The DPR Korea's previous NDC included plans for afforestation, the recovery of degraded forests, and ecosystem conservation. In its updated NDC, mention of nature-based solutions is limited to a brief mention of continued commitment to the country's forest restoration campaign.
	Updated NDC	Mitigation only	✗		None	✗			

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ESWATINI	Previous NDC	Adaptation only	✗		None	✓ not clearly		↑	Eswatini included ecosystems as an important part of the adaptation component of its previous NDC, with attention paid to forest, wetlands and grasslands. It did not include NbS for mitigation in its previous NDC, but did so in its updated NDC through the planting of trees. Eswatini's updated NDC again includes biodiversity & ecosystems as a core component of adaptation and expands the proposed adaptation action to include e.g. NbS in urban environments and in agriculture.
	Updated NDC	✓	✓		None	✗			
ETHIOPIA	Previous NDC	✓	✓		Climate Resilient Green Economy Strategy (CRGE), National Adaptation Programme of Action, Ethiopian Programme of Adaptation to Climate Change	✓ clearly		↑	In its previous NDC, Ethiopia already mentioned several NbS for forests and agricultural lands in its mitigation and especially for adaption contributions. Ethiopia's updated NDCs expand on these, including nature-based actions for both mitigation and adaptation. The focus is still on forestry and sustainable land management, with plans for forest and land restoration and afforestation.
	Updated NDC	✓	✓		REDD+, Ethiopia´s Forest Sector Development Plan, Lowlands Livelihoods Resilience Project, National Adaptation Plan, Climate Resilience Strategy for Agriculture and Forestry	✓ not clearly			
EUROPEAN UNION	Previous NDC	✗	✗		Legislation for land use, land-use change and forestry (EU Decision 529/2013)	✗		↑	The European Union did not mention nature-based solutions in its previous NDC. Although the NDC of the group of countries does not include specific strategies and policies, the updated NDC specifically highlights that "nature-based solutions play an important role to solve global challenges such as biodiversity loss and ecosystems degradation, poverty, hunger, health, water scarcity and drought, gender inequality, disaster risk reduction and climate change. "
	Updated NDC	✓	✗		None	✗	⋮		

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FIJI	Previous NDC	✓	✗		REDD+	✗			While Fiji's previous NDC focused on its forests as a carbon sink, the updated NDC expands the scope to contribute to the ocean as a carbon sink. Fiji's adaptation measures, including defence against natural disasters, prioritise nature-based solutions, such as the restoration of coastal ecosystems.
	Updated NDC	✓	✓ 		National Adaptation Plan	✗ not clearly	⊗		
GAMBIA	Previous NDC	✓	✓		Forestry Policy, National Environmental Management Act (NEMA)	✓ not clearly			The Gambia's previous NDC expressed the intention to plant trees to increase the country's carbon sink. A numerical estimate was included for expected GHG emissions from afforestation. Inclusion of NbS for adaptation was minimal, with for example coastal protection policies not including a nature-based approach. The Gambia's updated NDC includes forestry measures and nature-based agriculture policies for both mitigation and adaptation and sets a numerical target for mitigation in the LULUCF sector. It also mentions the protection of wetlands through national legislation.
	Updated NDC	✓	✓		National Environmental Management Act (NEMA)	✓ not clearly			
GEORGIA	Previous NDC	Mitigation only	✓ 		None	✗			Georgia's previous NDC included an annex on forests, which sets specific targets for sustainable forest management, afforestation/ reforestation, and the protection of forests, in order to increase the carbon sink capacity of the country's forests, but no mention of NbS in other ecosystems. Georgia's updated NDC also mentions forests as a carbon sink. Although a numerical target for increasing the forest carbon sink is set, no specific policies are included. The numerical target for forests specifies an emissions reduction, which is more precise than the targets in hectares in the previous NDC. The updated NDC mentions the effects of climate change on different ecosystems under adaptation, but does not include ecosystems as a strategy for adaptation themselves.
	Updated NDC	Mitigation only	✓ 		None	✗			

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GRENADA	Previous NDC	✓	✓		CBD, National Climate Change Policy and Action Plan (NCCPAP)	✓ clearly		↓	Grenada's previous NDC mentioned NbS both in mitigation and adaptation, with a focus on the protection of forest areas and native tree species for mitigation and a focus on coral restoration and mangrove rehabilitation for adaptation. The updated NDC is more of a technical document, not specifying any specific policies, and does not mention NbS at all.
	Updated NDC	✗	✗		None	✗			
GUINEA	Previous NDC	✓	✗		CBD, UNCCD, National Adaptation Plan of Action (NAPA), Mangrove Management and Development Plan (SDAM), Increased Resilience and Adaptation to Adverse Impacts of Climate Change in Guinea's Vulnerable Coastal Zones (RAZC) project, 1999 Forest Code and the Environment Code	✗		↑	Guinea's previous NDC incorporated the importance of forests, soil, and mangroves as carbon sinks and as contributions to adaptation. Guinea's updated NDC includes measures for preventing deforestation and forest degradation in its mitigation contribution, as well as a sectoral emission reduction target for LULUCF. In adaptation measures, Guinea's updated NDC pays due attention to the importance of mangroves, marine environment and river basins.
	Updated NDC	✓	✓		Bonn Challenge and the African Forest Restoration Initiative (AFR100), La Stratégie nationale changement climatique, Code de l'Environnement, Code forestier, Politique Nationale de l'Eau, plan de gestion intégrée de la zone côtière (GIZC), Planification Spatiale Marine (PSM), schéma directeur d'aménagement de la mangrove (SDAM),	✓ not clearly			
GUINEA-BISSAU	Previous NDC	✓	✓		REDD+, Forest Act	✗		↑	Guinea-Bissau's previous NDC presented reforestation as the main mitigation measure. In adaptation, too, there was a strong focus on sustainable forest management. The previous NDC also mentioned the country's high mangrove coverage, but did not include this type of ecosystem in its mitigation or adaptation plans. The updated NDC again sees the forestry sector as the main contributor to mitigation. Under adaptation, several ecosystems and their importance are included. However, the NDC does not include any specific adaptation measures and instead refers to the National Action Program on Adaptation.
	Updated NDC	✓	✓		SDGs, PNIA Plano National de Investimento Agrícola (2017), Hora Tchiga, Estratégia Nacional para as Áreas Protegidas (2015), Forest Code (Decreto-Lei n° 5/2011), proposed Partial Forest Moratorium decree	✓ not clearly			

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HONDURAS	Previous NDC	✓	✓		Ley General de Cambio Climático, la Estrategia Nacional sobre Cambio Climático, National REDD+ Strategy, National Adaptation Plan, Plan de Acción Nacional de Lucha Contra la Desertificación	✓ not clearly		↑	Honduras's previous NDC included the protection of forests for mitigation and mentions the importance of protecting marine ecosystems for adaptation. In its updated NDC, Honduras indicates that it has prioritized nature-based solutions for adaptation and pays due attention to local communities in this respect. In the mitigation component of the NDC, the conservation of ecosystems, most notably forests, plays an important role.
	Updated NDC	✓	✓		Bonn Challenge, Programa nacional de recuperación de bienes y servicios de ecosistemas degradados de Honduras - PNRBSED (ENREDD+); Plan Nacional de Adaptación (PNA)	✓ clearly			
ICELAND	Previous NDC	Mitigation only	✗		None	✗		↑	In both its previous and updated NDC, Iceland mentions afforestation and wetland restoration as important contributions to mitigation.
	Updated NDC	Mitigation only	✗		National Climate Action Plan	✗			
INDONESIA	Previous NDC	✓	✓		SDGs, REDD+, NAP, National Action Plan on Climate Change Adaptation (RAN-API), Law No. 37/2014 on Soil and water conservation, Government Regulation No. 37/2012 on Watershed Management, PROKLIM (joint adaptation and mitigation/JAM, Indonesian Environmental Protection and Management Law of 2009	✓ clearly		↑	Indonesia's previous NDC took a landscape/ecosystem approach, paying attention to the role of forests, watersheds and marine environments in both mitigation and adaptation. A sectoral emissions reductions target was set for the forestry sector and special attention was paid to indigenous and local communities in sustainable forest management. Indonesia's updated NDC takes this same approach. Attention is paid to a range of different ecosystems, from tropical rainforests and marine environments to wetlands, watersheds, mangroves and urban forests. The numerical target for emission reduction is increased and a new numerical target is established for the restoration of peatlands. The need for involvement of indigenous people and local communities in nature conservation is stressed and there is explicit mention of how global processes relate to the synergy between nature-based mitigation and adaptation.
	Updated NDC	✓	✓		SDGs, UNCCD, CBD, Ramsar Convention, Sendai Framework, REDD+	✓ clearly			

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ISRAEL	Previous NDC	✗	✗	None	None	✗		—	Israel's previous NDC did not mention NbS nor any ecosystems. Israel's updated NDC also does not mention NbS and instead only mentions that forest and land use sinks in the country are negligible.
	Updated NDC	✗	✗	None	None	✗			
JAMAICA	Previous NDC	Adaptation only	✗		Urban Ecosystem-Based Adaptation in collaboration with UNEP	✗		↑	Mention of NbS was very limited in Jamaica's previous NDC, mentioning only a project for ecosystem-based adaptation in the urban environment of Kingston. The updated NDC includes nature-based solutions more extensively, highlighting the importance of the country's forests and plans for avoided deforestation and the protection of watersheds.
	Updated NDC	✓	✗		The Climate Change Policy Framework for Jamaica (2015)	✗	⋮		
JAPAN	Previous NDC	Mitigation only	✓ 		None	✗		↓	Japan's previous NDC set specific targets for the use of NbS in mitigation, specifically through forestry and cropland and soil management. Japan has submitted an interim updated NDC (as of October 12th 2021), which does mention the use of Nature-based Solutions but does not specify any policies
	Updated NDC	Mitigation only	✗		None	✗	✗		
JORDAN	Previous NDC	✓	✗		UNCCD, CBD, National Strategy and Action Plan to Combat Desertification (2015-2020), National Biodiversity Strategy and Action Plan (2015-2020)	✓ not clearly		↑	Jordan's previous NDC included a section on ecosystem-based adaptation, but this priority was outlined more in general terms rather than presenting any concrete measures. Additionally, the NDC included plans for afforestation. Jordan's updated NDC extensively includes nature-based solutions, especially in the adaptation component. Plans are presented for increasing the adaptive capacity of cities through planting trees and creating green spaces, for restoring wetlands and coral and sustainably managing ecosystems in a way that provides jobs and opportunities for local communities and builds on indigenous knowledge.
	Updated NDC	✓	✗		National Green Growth Plan (NGGP), NDCP Action Plan	✓ clearly			

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KENYA	Previous NDC	✓	✓		National Climate Change Response Strategy (NCCRS 2010), National Climate Change Action Plan (NCCAP 2013), National Adaptation Plan, National CSA (Climate smart agriculture) Framework	✗		↑	Kenya's updated NDC contains extensive plans for the use of nature-based solutions, both for mitigation and adaption and DRR. Several numerical targets are set and plans are presented for forestry (including a national REDD+ strategy), climate-smart agriculture, blue carbon sinks, payment for coastal carbon ecosystem services, and other sectors impacted by climate change.
	Updated NDC	✓	✓		REDD+, SDGs Constitution of Kenya, 2010; Climate Change Act 2016, National Climate Change Action plan (2018-2022), NAP Agricultural Sector Transformation and Growth Strategy (ASTGS) (2019-2029), Kenya Climate-Smart Agriculture Strategy (2017-2028), National Drought Management Authority, Water Act, Forest Conversation and Management Act	✗ clearly	⋮		
KUWAIT	Previous NDC	Adaptation only	✗		Environmental Protection Law No. 42 of 2014	✗		↑	Kuwait's previous NDC included consideration of natural ecosystems in the adaptation component. To prevent desertification and soil erosion, sustainable land management and green belt programmes were proposed. Kuwait's updated NDC takes a similar approach to the first NDC, but adds the cultivation of mangroves for carbon sequestration, thereby extending the use of NbS to its mitigation contribution.
	Updated NDC	✓	✗		Environmental Protection Law No. 42 of 2014	✗			
KYRGYZSTAN	Previous NDC	✗	✗	None	None	✗		↑	Kyrgyzstan's previous NDC did not detail any specific plans for mitigation or adaptation and therefore does not include any NbS measures. It also does not mention any ecosystems. Kyrgyzstan's updated NDCs includes much more detail than the first NDC and includes nature-based initiatives for mitigation and adaptation in forestry, land-use and the greening of urban environments.
	Updated NDC	✓	✗		SDGs	✗			

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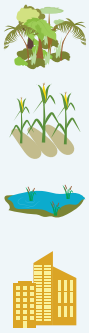
LAO PDR	Previous NDC	✓	✓		FLEGT, National Forestry Strategy	✓ clearly			Lao PDR extensively includes the importance of ecosystems in both its updated and previous NDCs. Forests are particularly present in the plans of the first NDC, with a numerical target, community forest management, agroforestry, and linkages to national and international policy. Wetlands were also already mentioned in the first NDC as a possibility for ecosystem-based adaptation. The updated NDC reaffirms forestry commitments and integrates an ecosystem-based approach into the plans for all areas, including forestry and agriculture, but also water management and urban areas.
	Updated NDC	✓	✓		Lao PDR Emission Reductions Programme through improved governance and sustainable forest landscape management", World Bank's "Lao Landscapes and Livelihoods Project (P170559); REDD+; Climate change adaptation has been integrated into high-level policy frameworks, including the 8th National Socio-Economic Development Plan (2016 – 2020), National Green Growth Strategy to 2030, and sectoral strategies such as the Ten-Year Natural Resources and Environment Strategy 2016 – 2025, a draft Urban Development Strategy to 2030, Agriculture Development Strategy to 2025 and Vision to 2030, and Strategy on Climate Change and Health Adaptation 2018 – 2025 and action plan 2018 – 2020	✓ clearly			
LEBANON	Previous NDC	✓	✗		National Biodiversity Strategy and Action Plan, National Water Sector Strategy, National Forest Plan	✗			Nature-based solutions play an important role in the adaptation priorities of Lebanon's updated NDC. It also puts focus on the mitigation co-benefits of these adaptation measures and mentions several ecosystems as well as relations to international conventions and national policies. However, there are no concrete targets for afforestation/reforestation in the NDC.
	Updated NDC	✓	✓		CBD, UNCCD, SDGs, Sendai Framework, National Adaptation Plan, Ministry of Agriculture's 2020-2025 Strategy, Ministry of Agriculture's National Forest Program (NFP), National Strategy for Forest Fire Management and the National Afforestation/ Reforestation Programme 40 Million Forest Trees Planting Programme (NARP), Ministry of Energy and Water's National Water Sector Strategy (NWSS), National Biodiversity Strategy and Action Plan (NBSAP)	✓ not clearly			

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LIBERIA	Previous NDC	Adaptation only	✗		REDD+, National Adaptation Programme of Action (NAPA)	✓ not clearly			Liberia's previous NDC included nature-based measures in forests, agroforestry, and mangrove rehabilitation in its adaptation contribution. Liberia's updated NDC expands on these measures and extends the use of NbS to the mitigation contributions. It includes numerical targets for reducing deforestation and forest conversion, reforestation and forest restoration, and planting urban green corridors. It also expands its scope to coastal ecosystems, with plans and targets to protect and restore mangroves and coastal wetlands.
	Updated NDC	✓	✓ 		REDD+, Coastal Add-On project (CAP), National Adaptation Program of Action (NAPA)	✓ clearly	⋮		
MALAWI	Previous NDC	✓	✓ 		Malawi REDD+ Programme Action Plan	✗			Malawi's previous NDC already included forestry measures for mitigation and adaptation with a numerical estimated emission reduction for forestry. Malawi's updated NDC includes NbS for mitigation and adaptation in the forestry and agriculture sectors, presenting plans to increase soil carbon in agricultural lands, plant urban forests, and expand the Greenbelt initiative. Clear links are made to the SDGs and to national policies and a numerical estimate for the emission reduction potential of these forest and land use measures.
	Updated NDC	✓	✓ 		SDGs, Nationally Appropriate Mitigation Actions (NAMAs), a National Climate Change Response Framework (NCCRF) and National Adaptation Plans (NAPs), REDD+, National Forest Policy, Malaw's REDD+ (Reducing Emissions from Deforestation and Forest Degradation) Strategy, the National Forest Landscape Restoration Strategy (NFLRS), and the National Charcoal Strategy and National Climate Change Investment Plan.	✗			

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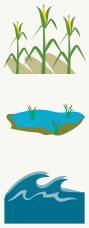
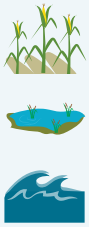
MALAYSIA	Previous NDC	Mitigation only	✗		Central Forest Spine (CFS), Heart of Borneo (HOB)	✗		↑	Malaysia's previous NDC mentioned two initiatives that were launched for sustainable forest management, but also mentioned the high cost and difficulty of restoring forests and peatlands. Malaysia's updated NDC includes NbS as a priority for adaptation in water management, coastal protection and flood management, as well as climate risk management in cities, limiting its NbS measures to the adaptation contribution.
	Updated NDC	Adaptation only	✗		Sendai Framework for Disaster Risk Reduction (SFDRR)	✗			
MALDIVES	Previous NDC	Adaptation only	✗		None	✗		↑	The Maldives' previous NDC included plans for coral reef restoration with an ecosystem-based approach. In the updated NDC, this is supplemented by plans for the restoration of mangroves, with special attention to the role of local communities.
	Updated NDC	Adaptation only	✗		None	✓ clearly	⋮		
MALI	Previous NDC	✓	✓ 		REDD+, National Forestry Plan, National Afforestation Plan (PNR), Climate Smart Agriculture Plan	✓ not clearly		↓	Mali's previous NDC presents a strong mitigation commitment in terms of NbS by setting afforestation and REDD+ targets. There is an NbS adaptation component with regard to fighting desertification by dunes fixation, afforestation, and improved pasture management, as well as mobilisation of local communities. These are supported by reference to national processes. Mali's updated NDC enhances the policy plans for the implementation of both mitigation and adaptation activities. The focus remains largely on efforts to stop desertification through afforestation and reforestation, combining adaptation and mitigation benefits
	Updated NDC	✓	✓ 		National Afforestation Plan (PNR), Climate Smart Agriculture Plan, National Environmental Protection Policy, National Forestry Policy, Five-year reforestation plans, The National Strategy for Biological Diversity, The National Strategy for the Management of Protected Areas	✓ not clearly			

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
MARSHALL ISLANDS	Previous NDC	✓	✗		Joint National Action Plan for Climate Change Adaptation and Disaster Risk Management	✗			Nature-based solutions were only briefly mentioned in the first NDC of the Marshall Islands, relating to the mitigation co-benefits of restoring mangroves and agricultural lands that function as carbon sinks. The updated NDC does not incorporate nature-based solutions at all, taking a more technology-based approach instead.
	Updated NDC	✗	✗		None	✗			
MAURITANIA	Previous NDC	✓	✓ 		None	✗			AFOLU is recognised as Mauritania's largest sector for emissions reductions. The previous NDC included a strong adaptation component, aimed at strengthening the resilience of all natural ecosystems present in the country. Mauritania's updated NDC raises its targets for AFOLU emissions reductions, both in forestry and agriculture. Adaptation projects include a wide range of ecosystem-based and community-based approaches. Synergies with global processes such as UNCCCD are mentioned with regard to adaptation plans and the NDC details national policies to implement these plans.
	Updated NDC	✓	✓ 		UNCCD, CBD, Sendai Framework, National Strategy for Accelerated Growth and Shared Prosperity (SCAPP), National Strategy for the Development of the Rural Sector (SNDSR), National Wetlands Conservation Strategy, National Agricultural Development Plan (PNDA)	✓ not clearly			
MAURITIUS	Previous NDC	✓	✗		None	✗			Although Mauritius' previous NDC did not go into much detail, it included the "rehabilitation of wetlands, sea-grass, mangrove plantation, increase in tree coverage areas and coral reef rehabilitation/ farming" among its adaptation measures and a tree planting programme among its mitigation measures. Mauritius' updated NDC, conversely, includes NbS throughout, with plans for the planting of trees and mangroves for mitigation, as well as research into blue carbon, and plans for ecosystem restoration for adaptation. Many different ecosystems are included and the NDC makes reference to global processes, national policies, and cooperation with local communities for the restoration of ecosystems.
	Updated NDC	✓	✗		Sendai Framework, UNCCD, CBD, SDGs, Strategic Plan for the Food Crop, Livestock and Forestry Sectors, National Biodiversity Strategies and Action Plans 2017-2025, Green Mauritius Programme, NCCAPF (2021)	✓ clearly			

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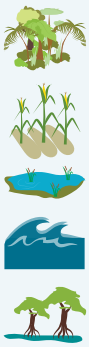
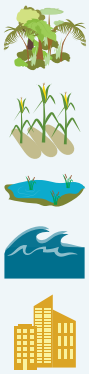
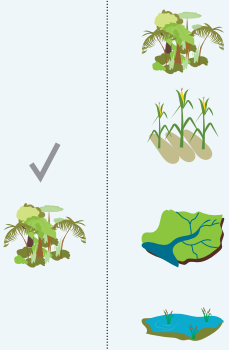
MEXICO	Previous NDC	✓	✓		None	✗			Mexico extensively incorporates nature-based solutions in its updated NDC, with a target for net-zero deforestation by 2030, plans for the conservation of blue carbon ecosystems, soil conservation, and a cross-cutting nature-based approach to adaptation. The previous NDC already included the protection and enhancement of ecosystems as an adaptation measure, but the inclusion of NbS has become more explicit in the updated NDC and there is increased focus on the contribution of blue carbon.
	Updated NDC	✓	✓		SDGs, national REDD+ strategy	✓ not clearly			
MOLDOVA	Previous NDC	✓	✓		National Adaptation Plan	✗			Moldova's NDC, both in its previous and updated version, includes plans for sustainable forest management. Its previous NDC included a target for increased removals from land use and forestry, which was not reiterated in its updated NDC.
	Updated NDC	✓	✗		National Adaptation Plan, National Development Strategy, Agriculture Sectoral Adaptation Plan	✓ not clearly			
MONACO	Previous NDC	✗	✗	None	None	✗			Monaco made substantial progress in the inclusion of nature-based solutions. Although NbS were not mentioned at all in the previous NDC, the updated NDC includes concrete targets to increase tree coverage, references to the national biodiversity strategy, and plans for fostering biodiversity in urban areas.
	Updated NDC	Adaptation only	✓		National Strategy for Biodiversity 2030	✗			

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
MONGOLIA	Previous NDC	✓	✓		None	✓ clearly			Mongolia's previous NDC included plans for improving pasture management and increasing forest area, mentioning mitigation co-benefits of these actions. It set a numerical target for protected areas and mentioned community-based forest management. The updated NDC also includes mitigation co-benefits of ecosystem-based adaptation and specifically mentions special consideration for nature-based solutions. However, no numerical targets or references to community-based forest management are included.
	Updated NDC	✓	✗		National Adaptation Plan	✗			
MONTENEGRO	Previous NDC	✗	✗	None	REDD+, Nepal Biodiversity Strategy and Action Plan (2014-2020), Environment-Friendly Local Governance (EFLG) Framework, Local Adaptation Plan for Action (LAPA), Forest decade 2014-2023	✗			Greenhouse gas emissions and removals from agriculture, forestry and other land uses are currently not included in the accounting of Montenegro's NDC, both in the previous and updated version, although an ambition is expressed to include these in the future. The updated NDC includes initiatives to prevent soil degradation with green-belt barriers and activities in the forestry sector.
	Updated NDC	Mitigation only	✗		CAMP Project	✗			

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
MOROCCO	Previous NDC	✓	✓		SDGs, UNCCD, CBD, National Strategy for Sustainable Development, Morocco's National Strategy to Combat Global Warming, National Strategy to Protect the Environment, Integrated Management Strategy for Coastal Areas, National Strategy for the Planning and Development of Oases, National Strategy for Integrated Coastal Management, National Strategy for the Conservation and Sustainable Use of Biological Diversity, Strategic Action Plan for the Preservation of Coastal and Sea Biodiversity in the Mediterranean, Morocco Green Plan, Halieutis Plan, National Strategy for Humid Areas, National Strategy for the Monitoring of Forest Health, Master Plan to Combat Wildfires, Master Plan for Reforestation, National Action Program to Combat Desertification, National Watershed Maintenance Plan, Master Plan for Protected Areas, National Development Strategy for the Development of the Aromatic and Medicinal Plant Sector	✓ not clearly		↑	Morocco integrates nature-based solutions throughout its NDCs. In its previous NDC, several projects and action plans for NbS were included, which were also translated into target and national policies. In its updated NDC, Morocco's NbS for mitigation focuses on forests and its adaptation component includes measures for protecting marine ecosystems, restoring dunes, and preventing urban heat islands through nature-based solutions.
	Updated NDC	✓	✓		SDGs, La Stratégie Forêts du Maroc, Stratégie Bois Énergie, Stratégie Nationale pour la Surveillance et le Suivi de la Santé des Forêts, Stratégie pour les Forêts Urbaines et Périurbaines, Plan Directeur de Lutte Contre les Incendies de Forêts, Plan Directeur de Reboisement, Programme Forestier National, Programme d'Action National de Lutte Contre la Déserti cation, Plan National d'Aménagement des Bassins Versants, Plan Directeur des Aires Protégées, Stratégie Nationale de Développement du Secteur des Plantes Aromatiques et Médicinales, Stratégie et Plan d'Action National de la Biodiversité du Maroc, Plan d'Action Stratégique pour la Conservation de la Biodiversité Marine et Côtière dans la Méditerranée, Programme de Développement des Oasis de Ta lalet à d'autres zones fragiles	✓ clearly			

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
MYANMAR	Previous NDC	✓	✓		30-Year National Forestry Master Plan (2001-30), REDD+, National Biodiversity Strategy and Action-Plan, European Union's Forest Law Enforcement Governance Trade (FLEGT) programme	✓ not clearly			Myanmar's previous NDC included NbS for mitigation and adaptation, in the form of forest protection and afforestation, agroforestry, and mangrove rehabilitation. Numerical targets were set for the share of land that is to be forested/protected. Myanmar's updated NDC also includes nature-based solutions extensively, including community-based approaches to agroforestry, afforestation and the restoration of mangroves and coral. Many different ecosystems are included in the NDC and connections are made to national policies relating to these ecosystems.
	Updated NDC	✓	✓		REDD+, Myanmar's National Forestry Master Plan (NFMP) (2001-2031) and Myanmar Reforestation and Rehabilitation Program (MRRP) (2017-2026), Myanmar"s Climate Change Master Plan (2018–2030), Climate-Smart Agriculture Strategy 2014 (CSA), Forest Law 2018, Myanmar"s 30- year National Forestry Master Plan, The Land-Use Policy (2016)	✓ clearly			
NAMIBIA	Previous NDC	✓	✓ 		None	✓ not clearly			Namibia's previous NDC featured a detailed inclusion of the AFOLU sector, with specific numerical estimates for the GHG reduction potential of each measure, such as of the country's plan of reforesting 20 kha per year. Namibia's updated NDC also includes NbS for both mitigation and adaptation, with a numerical mitigation target for the AFOLU sector. Proposed and executed policies focus mostly on forestry and land-use (including e.g. the restoration of degraded savannah) but the NDC also includes a section on the great potential of blue carbon in the country.
	Updated NDC	✓	✓ 		SDGs	✓ not clearly			
NEPAL	Previous NDC	✓	✓ 		REDD+, Nepal Biodiversity Strategy and Action Plan (2014-2020), Environment-Friendly Local Governance (EFLG) Framework, Local Adaptation Plan for Action (LAPA), Forest decade 2014-2023	✓ clearly			Nepal's previous NDC already had a clear focus on the potential of the country's forests, with numerical targets for forest coverage and protection, mentioning of national forestry policies, and community-based forest management. The updated NDC expands these commitments and adds the sustainable management of wetlands.
	Updated NDC	✓	✓ 		SDGs, Sendai Framework, Forest Development Fund	✓ clearly	⊘		

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
NEW ZEALAND	Previous NDC	✗	✗		None	✗		↓	New Zealand's NDC, in both its previous and updated version, does not specify any mitigation or adaptation measures and so does not include nature-based solutions.
	Updated NDC	✗	✗	None	None	✗			
NICARAGUA	Previous NDC	✓	✓ 		REDD+, Reforestation Master Plan, National strategy for the environment and climate change (2010), National Adaptation Plan, National Climate Change Policy	✓ clearly		↑	Nicaragua's previous NDCs included reforestation and the protection of wetlands and mangroves among its priorities. It also set numerical targets for the conservation of carbon sinks. The updated NDC reiterates and deepens this commitment to nature-based solutions, with an increased emphasis on the role of Indigenous People in forest conservation.
	Updated NDC	✓	✓ 		SDGs, Emissions Reduction Programme (2021), Resilient Management Program for prioritized ecosystems with a landscape approach and ecosystem-based adaptation, National plan for emissions management, National Adaptation Plan	✓ clearly	⊘		
NIGERIA	Previous NDC	✓	✗		National Forest Policy; Community-Based Forest Resources Management Programme; National Adaptation Strategy and Plan of Action for Climate Change Nigeria (NASPA-CCN)	✗ clearly		↑	Nigeria's previous NDC did not mention NbS explicitly but did include nature-based plans in the forestry and agriculture sector for both mitigation and adaptation, including community-based forest management and agroforestry. Nigeria's updated NDC highlights the role of NbS especially in the mitigation of climate change, and to a smaller degree for adaptation. Furthermore, co-benefits of NbS for the economy and community development are mentioned and numerical targets for forest protection, restoration and management, mangrove restoration and reduced fuelwood harvest are set. The link between the water sector and NbS is also highlighted.
	Updated NDC	✓	✓ 		SDGs, First National Implementation Plan (FNIP) incorporates a new REDD+ and green economy approach, National Forest Policy (2020) which includes a National Forest Investment Plan (2019-2023), FREL (Forest Reference Emissions Level), Nigeria's Agricultural Promotion Policy	✗ clearly			

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
NORTH MACEDONIA	Previous NDC	✗	✗	None	None	✗		↑	North Macedonia's mitigation target in its previous NDC excluded the forestry and land-use sector. In its updated submission, the county has included a specific target for the LULUCF sector, pledging to increase removals by 95% by 2030, compared to 1990 levels.
	Updated NDC	Mitigation only	✓		National plan on Land Use, Land Use Change and Forestry (LULUCF), National Adaptation Plan	✗			
NORWAY	Previous NDC	✗	✗		None	✗		↑	In Norway's previous NDC, the land use, land use change and forestry sectors are covered by the economy-wide target, but NbS are not explicitly mentioned. In its updated NDC, Norway commits to emission in the LULUCF sector not exceeding removals and makes references to national policies and plans.
	Updated NDC	Mitigation only	✗		Norwegian Climate Change Act, cooperation with the EU and Iceland for legislation in the period 2021-2030	✗	⊘		
OMAN	Previous NDC	✗	✗		None	✗		—	The previous NDC of Oman was very brief and organized in bullet points. It mentioned 'carbon sinks' but without specifying whether these would be nature-based. The previous NDC did not mention nature other than in highlighting the degradation of the marine environment as a consequence of climate change. Oman's updated NDC does not mention NbS. The mention of climate resilience and marine biodiversity in adaptation strategies hints at the importance of ecosystems, but does not meaningfully engage with natural ecosystems.
	Updated NDC	✗	✗		None	✗			

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PAKISTAN	Previous NDC	Mitigation only	✗		Khyber Pakhtunkhwa Province's afforestation programme, Green Pakistan Programme	✗		↑	Pakistan's previous NDC included afforestation and increased soil carbon storage in agricultural lands among its mitigation measures. It also recognized the high potential of wetlands for carbon sequestration, although no plans were presented in the previous NDC to protect or enhance these and ecosystems were not integrated into the adaptation component of the NDC. The abridged version of the updated NDC indicates that NbS are to be a focal point of Pakistan's Updated NDC. Tree planting is explicitly mentioned in relation to both mitigation and adaptation.
	Updated NDC	✓	✓		Ten Billion Tree Tsunami Programme (TBTTP), Recharge Pakistan, Protected Areas Initiative (PAI)	✗			
PANAMA	Previous NDC	✓	✓		REDD+, Governmental Strategic Plan (new Forestry Law, Alliance for 1 million ha reforested)	✗		↑	Panama's updated NDC expands the county's scope in ecosystems. Whereas the previous NDC only included measures and targets for forests and land use, the updated NDC also includes the intention to restore marine ecosystems and thereby enhance blue carbon sinks.
	Updated NDC	✓	✓		CBD, UNCCD, Sendai Framework, ODS, REDD+, Governmental Strategic Plan (2019, action 76 refers to National Reforestation Programme for the water basins),	✗	✓		
PAPUA NEW GUINEA	Previous NDC	Mitigation only	✗		REDD+	✗		↑	Papua New Guinea's second NDC focuses on mitigation actions in the energy and LULUCF sectors, with an ambitious numerical target to turn the LULUCF sector from a net GHG source into a net GHG sink. Power sector plans also include the possibility to offset emissions through increased forestation. Adaptation measures include mangrove planting, coastal rehabilitation, coral rehabilitation, the establishment of marine protected areas, locally managed marine areas, and working with local communities to establish agroforestry practices.
	Updated NDC	✓	✓		SDGs, REDD+, National Reforestation and Afforestation Strategies, National Reforestation and Afforestation Strategies, National Strategies on Domestic Processing of Forest Produce, Revised PNG Logging Code of Practice 2nd Edition, PNG Timber Legality Standard	✓ clearly			

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
PARAGUAY	Previous NDC	✓	✗		Plan Nacional de Forestación y Reforestación, Plan Nacional de Cambio Climático	✗		↑	Paraguay's first NDC includes measures for the protection of forests, but no other NbS. In its updated NDC, Paraguay explicitly recognizes the significant role of ecosystems and their environmental services and promotes the use of nature-based solutions. Presented plans go beyond forests, including for example the restoration of wetlands and greening of urban areas. The updated NDC also incorporates the need to pay due attention to indigenous communities in the protection of nature, e.g., through the notion of free, prior, and informed consent.
	Updated NDC	✓	✓		2030 Agenda for Sustainable Development, the Convention on Biological Diversity, the Convention to Combat Desertification, the Sendai Framework, the Warsaw	✓ clearly			
PERU	Previous NDC	Adaptation only	✗		National Adaptation Plan, REDD+	✗		—	Peru's previous NDC briefly mentioned the protection of forest ecosystem services and its REDD+ program. The updated NDC also mentions REDD+ and includes forests among the country's priority areas, but includes no specific measures or targets for forest protection or other nature-based solutions.
	Updated NDC	Adaptation only	✗		REDD+, National Adaptation Plan, Adaptation and Mitigation Action Plan Against Climate Change	✗	⊘		
PHILIPPINES	Previous NDC	✓	✗		REDD+, Philippine Biodiversity Strategy and Action Plan, Law 97 on Expanded National Integrated Protected Areas Systems	✗		—	The Philippines' previous NDC recognized the important role of forest and marine ecosystem in both adaptation and mitigation, specifically mentioning blue carbon, REDD+, and the country's strategies for biodiversity and protected areas. The updated NDC only briefly mentions forest protection, forest restoration and reforestation.
	Updated NDC	✓	✗		None	✗			
QATAR	Previous NDC	✗	✗		None	✗		↑	Qatar's previous NDC did not mention nature-based solutions. It mentioned that coral and the marine environment are threatened by climate change, but presented no policies to address these threats. In its updated NDC, Qatar presents some nature-based adaptation measures, including the restoration of marine habitats, growing mangrove trees, and planting trees in urban areas.
	Updated NDC	Adaptation only	✗		None	✗			

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
REPUBLIC OF KOREA	Previous NDC	✗	✗	None	None	✗		↑	The previous NDC of the Republic of Korea did not included nature-based solutions at all. Its updated NDC briefly mentions afforestation and sustainable forest management to increase the capacity of carbon sinks in the forest sector, but includes no other mention of NbS.
	Updated NDC	Mitigation only	✗		None	✗			
RUSSIA	Previous NDC	✓	✗		None	✗		—	In its previous NDC, Russia called forest management one of the most important elements of its emission reduction strategy. The updated NDC reiterates the importance of the absorbing capacity of forests and includes forest protection belts as a possibility for adaptation. However, no concrete targets or policies are set out for forest protection or other nature-based solutions.
	Updated NDC	✓	✗		None	✗			
RWANDA	Previous NDC	✓	✓ 		REDD+	✗		↑	Rwanda's both previous and updated NDCs focus on adaptation. In its updated NDC, it reiterates the goal set in its previous NDC of reaching a 30% forest cover and promote agroforestry and sustainable land management to increase carbon sequestration. In addition to forests, the updated NDC also mentions the restoration of wetlands.
	Updated NDC	✓	✓ 		SDGs	✗			
SAINT LUCIA	Previous NDC	✓	✗		National Resource Management Plan, Draft National Land Policy	✗		↑	Saint Lucia's previous NDC briefly mentioned the importance of forests as carbon sinks for mitigation (although LULUCF was not included in the overall mitigation target) and of land management and natural defenses (mangroves, wetlands) for adaptation. The updated NDC takes a similar approach, but presents more concrete measures, such as a national REDD+ strategy and attention to livelihood opportunities for local communities through forest management.
	Updated NDC	✓	✗		REDD+	✓ not clearly			

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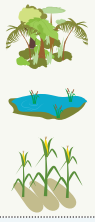
SAMOA	Previous NDC	✗	✗		None	✗			Samoa's previous NDC focused on the energy and particularly electricity sector. Although brief mention of the forestry sector was made in the adaptation contribution, no plans were outlined for NbS. Samoa's updated NDC significantly improves in the inclusion of nature, presenting a numerical mitigation target for the AFOLU sector and plans for the restoration of forests and mangroves, agroforestry and sustainable forest management.
	Updated NDC	✓	✓ 		Samoa Ocean Strategy (SOS) 2020-2030, Agriculture Sector Plan 2016-2020 (ASP), Samoa 2040 (2021), Samoa Climate Change Policy 2020, Low Carbon Development Strategy 2020-2030 (draft 2021), National Environment Sector Plan (2019)	✗			
SAO TOME AND PRINCIPE	Previous NDC	Adaptation only	✗		None	✗			Sao Tome and Principe included forestry measures for adaptation in its previous NDC, emphasizing that the country is already a net sink. The updated NDC mentions the forestry sector in its adaptation measures and highlights the fact that the country is a net sink, but still does not include any mitigation measures for forestry or other NbS.
	Updated NDC	Adaptation only	✗		National Adaptation Plan (NAP)	✗			
SENEGAL	Previous NDC	✓	✓ 		National Biodiversity Strategy and Action Plan (SPNAB), National Wetlands Management Policy (NWMP), New Forestry Policy (2005-2025).	✗		—	Senegal's previous NDC included plans for reforestation, participatory forest management, and protecting mangroves. It also specified numerical targets for reforestation and forest protection. The updated NDC reiterated this approach and these targets and added targets for marine protected areas.
	Updated NDC	✓	✓ 		National Adaptation Plan	✗			

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
SEYCHELLES	Previous NDC	Adaptation only	✗		Seychelles Strategic Plan, Seychelles Biodiversity Strategy and Action Plan, Food and Nutrition Security Policy	✗			The previous NDC of the Seychelles included ecosystem-based adaptation, such as ecosystem-based watershed management. However, it explicitly excluded the possibility of protecting the forest sink and did not include strategies for nature-based mitigation. The Seychelles' updated NDC, puts a heavy emphasis on nature-based solutions in the blue economy. There is especially a focus on improving coastal resilience through mangroves, wetlands, and coral reefs. Numerical targets are set for seagrass and mangroves. These adaptation measures are also expected to have mitigation co-benefits. Sustainable agriculture is mentioned, but no plans are defined for the forestry sector.
	Updated NDC	✓	✓		Seychelles Marine Spatial Plan, the Coastal Management Plan, the Blue Economy Roadmap, the National Biodiversity Strategy and Action Plan, Seychelles National Climate Change Policy	✗			
SIERRA LEONE	Previous NDC	Adaptation only	✗		None	✗			Sierra Leone's previous NDC did not really include NbS. Under the adaptation component, brief reference was made to the rehabilitation of pasture lands. The mitigation component included the intention to explore the possibilities of REDD+ mechanisms. Sierra Leone's updated NDC, on the other hand, extensively includes NbS for both mitigation and adaptation, not only for forests and agriculture but also presenting plans for enhancing blue carbon sinks and restoring mangroves.
	Updated NDC	✓	✓		REDD+	✗			

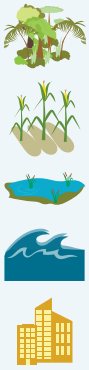
Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
SINGAPORE	Previous NDC	Adaptation only	✗		CBD, SGBioAtlas smartphone application	✗			Singapore expects nature-based solutions to play a small role in mitigation. However, its NDC it does include nature-based adaptation measures. In its previous NDC, nature-based approaches were included for moderating temperatures in the city and conserving biodiversity. In its updated NDC, it also included nature-based approaches to coastal protection and tree management programs.
	Updated NDC	Adaptation only	✓ 		Coastal and Flood Protection Fund, Tree Management Measures by the National Parks Board Singapore	✗			
SOLOMON ISLANDS	Previous NDC	Adaptation only	✗		National Adaptation Programme of Action	✗			The previous NDC of the Solomon Islands mentioned the importance of the conservation of ecosystems under adaptation measures, but no clear targets or policies were formulated. The updated NDC presents an improvement compared to the previous NDC. Carbon sequestration by forests is included in this NDC, as well as numerical targets for the protection and conservation of terrestrial and ocean ecosystems.
	Updated NDC	✓	✓ 		SDGs, NAPA, NAP, REDD+, The National Climate Change Policy 2012-2017 (MECDM 2011) , Sustainable Logging Policy 2018, The National Biodiversity Strategic Action Plan 2016-2020, National Forestry Policy 2020	✗			
SOMALIA	Previous NDC	✓	✗		UN Joint Programme on Sustainable Charcoal Production and Alternative Livelihoods (PROSCAL) to Mitigate Against Deforestation.	✓ clearly			Somalia's previous NDC included several projects for adaptation in the forest and land sectors that use nature-based approaches, such as the rehabilitation of degraded ecosystems. It also mentioned efforts to restore coral and mangrove and improve coastal management. These projects included a detailed description of how the community will be involved. A project to mitigate deforestation through decreased reliance on charcoal and reforestation and afforestation of land was also included, although the focus of the previous NDC was heavily on adaptation. Somalia's updated NDC generally provides less details about mitigation and adaptation projects, but still includes nature-based agriculture and forestry efforts for both mitigation and adaptation, as well as the restoration of mangroves and shorelines. Mitigation through reducing deforestation and forest degradation is more clearly included in the updated NDC.
	Updated NDC	✓	✗		National REDD+ Strategy	not clearly			

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
SOUTH AFRICA	Previous NDC	Adaptation only	✗		Working on Wetlands	✗		↓	South Africa's previous NDC only mentioned NbS indirectly in allotted finance for wetland restoration projects. South Africa's updated NDC does not include NbS. It does mention biodiversity and ecosystems as adaptation priorities but does not set out any policy measures or goals.
	Updated NDC	✗	✗		None	✗			
SOUTH SUDAN	Previous NDC	✓	✓		Ramsar, National Environmental Policy	✗		↑	South Sudan's previous NDC emphasized the ecosystem services provided by forests and wetlands in the country and included ambitious afforestation measures for mitigation, as well as nature-based agricultural policies for adaptation. Although the NDC generally did not include GHG emission reduction targets (due to a lack of data), a numerical target was set to plant 20 million trees over the next decade. South Sudan's updated NDC builds on this effort and extensively includes nature-based solutions for forestry and agriculture, as well as for wetlands and water management. A numerical mitigation target is set for sequestration from avoided deforestation. Plans are included for community-based forest management under REDD+ and for using indigenous knowledge to identify opportunities for forestry and agroforestry.
	Updated NDC	✓	✓		Ramsar, National REDD+ strategy, National Forest Policy, NAPA, Wildlife Conservation and Protected Area Policy	✓ clearly			
SRI LANKA	Previous NDC	✓	✓ 		REDD+, Forestry Sector Master Plan 1995-2020	✗		↑	NSri Lanka's previous NDC incorporated nature-based solutions for adaptation, especially for mangroves, dunes, and coral reefs. The NDC was also concerned with preserving biodiversity and increasing the forest cover to contribute to mitigation. The updated NDC builds on this effort, by adding a numerical target on wetlands in addition to the forestry target. Other instances of NbS in Sri Lanka's updated NDC include the prevention of coastal degradation through mangroves, nature-based solutions for water retention, and adaptation in cities through forest parks.
	Updated NDC	✓	✓ 		SDGs, National REDD+ Investment Framework and Action Plan (NRIFAP) 2017, The Fauna and Flora Protection Ordinance (1993), Sri Lanka Forestry Sector Master Plan 1995-2020, National Environmental Act (1980), National Action Plan for combating land degradation in Sri Lanka 2015-2024, National Biodiversity Strategic Action Plan 2016-2022, Forest Conservation and Development Plan, Sustainable Land Management Programme	✓ not clearly			

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
STATE OF PALESTINE	Previous NDC	✓	✓		National Adaptation Plan	✗		—	The first NDC of the State of Palestine paid due attention to the importance of soil restoration and greening of the country in increasing carbon sequestration and providing adaptation services. Numerical targets were set for an increase in forested land. The updated NDC pays less attention to the potential for carbon sequestration in soil and forests, although both are still briefly mentioned. Despite marine ecosystems being mentioned, their potential for nature-based mitigation and adaptation remains unexplored.
	Updated NDC	✓	✓		National Adaptation Plan	✗			
SUDAN	Previous NDC	✓	✓		MDGs, SDGs, Green Climate Fund (GCF), GEF, REDD+, Agricultural Revival Program (ARP), The Forest Policy (2006), The Natural Resource Management policy	✗		↓	In Sudan's previous NDC, NbS mitigation measures were concentrated in the forestry sector and NbS adaptation measures in the agricultural and coastal zones sector. The interim updated NDC focuses on detailed adaptation measures, especially in the agricultural sector.
	Updated NDC	✓	✓		National Adaptation Plan	✗			
SURINAME	Previous NDC	✓	✗		CDB, REDD+, Forest Management Act (1992), National Forest Policy, Interim Strategic Action Plan for the Forest Sector (2008)	✗		↑	Suriname's second NDC extensively discusses the role of forests as a carbon sink contributing to mitigation. It also discusses strengthening coastal protection through NbS such as mangrove planting and wetlands, and the development of a sustainable agriculture and land-use plan. Numerical targets are set for forest coverage and protected areas and attention is paid to the important role of Indigenous communities in forest protection.
	Updated NDC	✓	✓		REDD+, National Biodiversity Action Plan, National Forest Policy, Nature Conservation Law	✓ clearly	✓		

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
SWITZERLAND	Previous NDC	✗	✗	None	None	✗		—	Switzerland's NDC, in both its previous and updated version, include LULUCF in the economy-wide target but does not include any clear NbS measures.
	Updated NDC	✗	✗	None	None	✗			
TAJIKISTAN	Previous NDC	Mitigation only	✗		None	✗		↑	Tajikistan's previous NDC highlighted the importance of its ecosystems (particularly forests) in mitigating climate change, but did not present any concrete policies. Tajikistan's updated NDC includes a number of nature-based adaptation measures with mitigation co-benefits. It also includes links with international processes, such as the CBD, UNCCD, and the Astana Resolution, through which Central Asian and Caucasus countries have committed to restore about 2.7 million hectares of degraded forest landscapes.
	Updated NDC	✓	✗		CBD, UNCCD, SDGs, Sendai, Astana Resolution, Draft Strategy for the Development of Forestry for the period 2016–2030, National Biodiversity Strategy	✗			
TANZANIA	Previous NDC	✓	✓ 		National Forestry Policy, National Adaptation Programme of Action, National REDD+ Strategy and Action Plan	✓ not clearly		↑	Tanzania's previous NDC included plans for forest conservation, afforestation and reforestation, as well as for mangrove restoration. Tanzania's updated NDC still presents a strong contribution on forest conservation, afforestation and reforestation for mitigation and adaptation measures for the forestry sectors and adds plans for sustainable agriculture and land-management. However, mangroves are mentioned but not explicitly incorporated in any plans in the updated NDC
	Updated NDC	✓	✓ 		SDGs, Sendai Framework on Disaster Risk Reduction, National Climate Change Response Strategy (2021), the Zanzibar Climate Change Strategy (2014)	✓ not clearly			
THAILAND	Previous NDC	✓	✓ 		REDD+	✓ clearly		↓	Thailand's previous NDC included nature-based solutions in the form of its national REDD+ readiness assessment and in setting a target for increased forest cover through local community participation. The updated NDC, on the other hand, mentions that ecosystem-based adaptation is one of the main principles, but does not include any concrete measures or targets for NbS.
	Updated NDC	Adaptation only	✗	None	CBD, UNCCD, SDGs, Sendai Framework, Ramsar Convention on Wetlands, National Adaptation Policy,	✓ not clearly	⊘		

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
TOGO	Previous NDC	✓	✗		CBD, UNCCD, REDD+, National Action Plan for Marine and Coastal Environmental Resources Management, Strategy for Accelerated Growth and Employment Promotion (SCAPE) 2013-2017, National Forest Action Plan (PAFN) 1994, Togo's Forest Policy (PFT)	✓ not clearly		↑	Togo's previous NDC included some nature-based policies for the LULUCF sector, although the inclusion of NbS was quite limited when it came to adaptation measures. The NDC did mention many national policies for nature management and protection. Togo's updated NDC describes the implementation of nature-based solutions for mitigation and adaptation in detail, especially for the forestry sector. The rehabilitation of mangroves and wetlands are mentioned, but only briefly. Due attention is paid to the involvement of local communities in forest protection.
	Updated NDC	✓	✓		CBD, UNCCD, SDGs, REDD+, Programme National de Reboisement, Programme d'Appui à la lutte contre le Changement Climatique, Programme de définition des cibles de neutralité en matière de dégradation des terres (NDT)	✓ clearly			
TONGA	Previous NDC	✓	✓		None	✗		↑	Tonga's previous NDC mentioned the importance of forest management and preventing deforestation and set a target for marine protected areas. The updated NDC reiterated this importance and also set a numerical target for afforestation.
	Updated NDC	✓	✓		Joint National Action Plan 2 on Climate Change and Disaster Risk Management 2018-2028 (JNAP 2), National Forestry Policy	✗			

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
TUNISIA	Previous NDC	✗	✗		None	✗			Tunisia's previous NDC included the restoration of forests and grazing areas, although to a limited extent. No concrete targets or policies were announced. Tunisia's updated NDC extensively incorporates NbS in its adaptation component, through the protection and restoration of ecosystems. These plans are connected to SDG outcomes and to the process under the CBD. Under mitigation actions, the NDC also includes sustainable forest management and payment for ecosystem services.
	Updated NDC	✓	✓ 		SDGs, CBD, Stratégie et le Plan d'Action National pour la Biodiversité (SPANB)	✓ not clearly			
UGANDA	Previous NDC	✓	✓ 		REDD+, National Climate Change Policy	✓ not clearly			Uganda's previous NDC recognised that the country's mitigation potential mostly lies in addressing Land Use, Land Use Change and Forestry. In response the NDC sets numerical targets for NbS, including reforestation and an increase in wetland coverage from 10.9% to 12% as an important carbon sink. In its updated NDC, Uganda restates its NbS-related emissions targets, but does not improve on them.
	Updated NDC	✓	✗		National Climate Change Act 2021, National Forest Plan, Uganda National Climate Change Learning Strategy 2013 – 2022, National Adaptation Plan for the Agricultural Sector	✗			
UKRAINE	Previous NDC	✗	✗	None	None	✗			Ukraine's previous NDC does not mention NbS, nor any ecosystems. Ukraine's updated NDC also does not mention NbS in any way. It only mentions the country's forest coverage in the description of national circumstances.
	Updated NDC	✗	✗		None	✗			

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
UNITED ARAB EMIRATES	Previous NDC	✓	✗		National Blue Carbon Project	✗			The UAE's previous NDC described its blue carbon strategy, the restoration and plantation of mangroves and seagrass, and improved understanding of the potential of wetlands. The updated NDC builds on this effort, including numerical targets for planting mangroves and protecting blue carbon areas. It also includes the protection of coral reefs.
	Updated NDC	✓	✓		National Biodiversity Strategy	✗			
UNITED KINGDOM	Previous (EU) NDC	✗	✗		Legislation for land use, land-use change and forestry (EU Decision 529/2013)	✗			The UK's NDC after Brexit pays specific attention to the conservation of biodiversity and responsibilities under international conventions, such as the CBD and the Ramsar Convention. It also highlights the importance of the "sustainable use, protection and restoration of the UK's marine environment." However, the NDC does not present specific targets for nature-based mitigation or adaptation.
	Updated NDC	✓	✗		CBD, Ramsar Convention, National Adaptation Plan, Wales Nature Recovery Action Plan (NRAP)	✗			
UNITED STATES	Previous NDC	✗	✗	None	None	✗			The United States new NDC after re-joining the Paris Agreement shows a clear appreciation for the importance of NbS, mentioning the implementation of programs including climate smart agricultural practices, reforestation, rotational grazing, nutrient management practices, forest protection and forest management, nature-based coastal resilience projects, and efforts to increase sequestration in waterways and oceans by pursuing blue carbon.
	Updated NDC	✓	✗		None	✗			
VANUATU	Previous NDC	✓	✗		REDD+, Land Use Planning Policy, Foreshore Development Act, Physical Planning Act	✗			Vanuatu's previous NDC included plans for reduced deforestation through REDD+ and mentioned the use of ecosystem-based approaches to adaptation, although without detailing specific plans. The updated NDC does not really mention NbS, stating only that forestry plans are not covered under the NDC as they are specified in the country's REDD+ strategy.
	Updated NDC	Mitigation only	✗		REDD+	✗			

Country	NDC version	NbS in mitigation and adaptation measures	Numerical mitigation targets	Ecosystems mentioned	Global processes and domestic policies mentioned	Role of IP/LCs mentioned	WWF overall assessment of the latest NDC	Status of integration of nature in NDC	Summary assessment findings
VIET NAM	Previous NDC	✓	✓		REDD+	✓ not clearly			Forest conservation, afforestation, reforestations are core components of Vietnam's mitigation and adaptation plans, as presented in both its previous and updated NDC. Its updated NDC also pays specific attention to forest management at a local level, with the involvement of communities. However, the country's forest coverage has slightly decreased in ambition. Whereas the target in the previous NDC was to increase forest coverage to 45% by 2030, the updated NDC sets this at 42%-42.5%.
	Updated NDC	✓	✓		REDD+, 2011-2020 National Action Programme on Reduction of GHG Emissions through Efforts to Reduce Deforestation and Forest Degradation, Sustainable Management of Forest Resources, Conservation and Enhancement of Forest Carbon Stocks (2017)	✓ clearly	⊘		
ZAMBIA	Previous NDC	✓	✗		REDD+	✓ clearly			Zambia's previous NDC presented sustainable forest management and agroforestry as main strategies for both mitigation and adaptation. Zambia's updated NDC barely mentions NbS. There is brief mention of sustainable forest management, the country's REDD+ programs, and plans for sustainable agriculture and fisheries and watersheds but the exact use and protection of nature is unclear.
	Updated NDC	✓	✗		National REDD+ Strategy	✗			
ZIMBABWE	Previous NDC	✓	✗		REDD+	✓ clearly			Zimbabwe's previous NDC did not include NbS extensively. Under mitigation, it only mentioned the implementation of REDD+ and under adaptation, it included agroforestry and forest-based adaptation, as well as the use of indigenous knowledge for climate-smart agriculture. Zimbabwe's updated NDC includes an ambitious target for emission reductions in the AFOLU sector, with plans for afforestation, preventing forest degradation, and nature-based approaches to agriculture. Although the importance of wetlands in the country is highlighted, no policies for wetlands or other ecosystems other than forests and agricultural lands are mentioned.
	Updated NDC	✓	✓		SDGs, National Development Strategy, National Climate Change Response Strategy, draft National Forest Policy	✗			

ENDNOTES

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