

# NDCS - AFORCE FORNATURE? SECOND EDITION

# INTRODUCTION

**2020 will be a pivotal moment for the future of our world**. During that year the challenges of climate change, the health of our natural world and sustainable development will take centre stage, as world leaders meet to take critical decisions under the auspices of the Convention on Biological Diversity (CBD), the Paris Agreement under the UNFCCC and the UN's Sustainable Development Goals (SDGs) agreed in the 2030 Agenda for Sustainable Development.

All three areas are utterly fundamental for our future and intrinsically linked. To achieve the interconnected 2030 Agenda and its 17 SDGs, we must acknowledge that all of the SDGs (but especially SDG 6 - water, SDG 13 - climate change, SDG 14 – life in water, SDG15 – life on land) are related to nature and biodiversity. None of the SDGs can be achieved if we fail to deliver on their environmental targets. Climate change also impacts on humankind and other species alike; the recent IPCC Special report on 1.5° of global warming states that "global warming of 1.5°C is projected to shift the ranges of many marine species to higher latitudes as well as increase the amount of damage to many ecosystems". On land, "of 105, 000 species studied, 6% of insects, 8% of plants and 4% of vertebrates are projected to lose over half of their climatically determined geographic range"<sup>1</sup>.

Our species is on the brink of triggering a mass extinction event, the sixth in the Earth's long history. Global populations of wild animals have more than halved over the last 40 years<sup>2</sup>, and ecosystems have been devastated by the pursuit of development. The climate, too, is on a knife-edge. Without complementary and coordinated action across climate, development and nature at once it will not be possible to achieve success in any of them. In rising to these challenges, however, the biggest mistake would be to treat them as three separate problems that require three separate sets of solutions.

In 2020, countries have the chance to choose a better, integrated approach for international agreements and national commitments on climate, biodiversity and development. Addressing each of these areas in isolation would be failing to recognise how inter-related the challenges and potential solutions are. In particular, an integrated approach to climate, nature and development should be reflected at key moments in 2020; when the post-2020 biodiversity framework will be agreed at the CBD COP 15 in Beijing, when Parties to the Paris Agreement will update and enhance their Nationally Determined Contributions (NDCs) and when Governments agree on how to get new targets for the environmental SDGs, which currently have 2020 timeframes.

Fortunately there are signs that a trend to align international instruments on climate, nature and development<sup>3</sup> is emerging. To explore how this alignment can be sped up and improved, based on the strengths of various international instruments, **this paper** builds on existing studies of the synergies between the SDGs and NDCs<sup>45</sup> and of the SDGs and the Paris Agreement<sup>6</sup>. It **analyses the degree of alignment and integration of biodiversity concerns in the current Nationally Determined Contributions (NDCs) of 100 countries around the world**. This informs a set of recommendations on how improved integrated implementation across international instruments can be realised, at international as well as national level. Optimising synergies is critical to make the best use of scarce resources, promote efficiencies in actions, and increase information sharing to deliver effective, integrated outcomes.

# THE CASE FOR AN INTEGRATED APPROACH

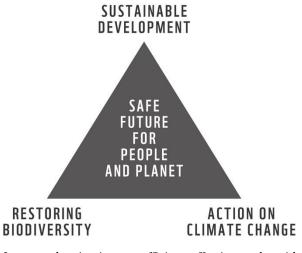
An integrated approach to implementation across climate, development and nature is essential to unlock co-benefits, and to avoid trade-offs between efforts to address climate change, reverse the loss of biodiversity and achieve sustainable development. Given that resources are finite and that action in one area can have a knock-on effect in another, the best way forward is to take integrated action on climate, development and nature.

This **integrated action** could be both **more efficient**, as pooled resources go further and cut out duplication and **more effective**, because it lessens negative trade-offs and encourages positive synergies between initiatives in different fields.

**Climate and biodiversity are intrinsically linked** as climate change is one of the underlying drivers of habitat and biodiversity loss, while the deterioration of ecosystems and their services contributes to rising greenhouse gas emissions. And healthy ecosystems underpin the resilience of people and nature to climate change impacts. Research on nature-based solutions\* has shown that ecosystem restoration can contribute much to climate change adaptation and mitigation7 whilst fostering and maintaining biodiversity. Not only is nature fundamental to our societies and economies but it also functions as a 'biological insurance policy'.

There is also a **growing appreciation of the benefits of aligning efforts** to achieve the SDGs with climate change action<sup>8</sup> in the NDCs. Analyses by the World Resources Institute (WRI)<sup>9</sup> and the Energy and Resources Institute (TERI)<sup>10</sup> found a relatively high degree of alignment between the SDG targets and the NDCs, although the direct links differed considerably between countries, reflecting different national circumstances and priorities. Previous studies have also found that the SDGs and the Aichi Biodiversity Targets are largely aligned<sup>11</sup>.

However, **less attention has been paid to the link between NDCs and the Aichi Biodiversity Targets** – a gap that this paper begins to address.



Integrated action is more efficient, effective, and avoids trade-offs between climate and biodiversity

<sup>\*</sup> Nature-based Solutions (NbS) are defined by IUCN 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".

# INTEGRATING BIODIVERSITY EFFORTS INTO NDCS

NDCs are voluntary country plans that were prepared based on a request from the UNFCCC decisions at COP19 in Warsaw two years ahead of the Paris COP in 2015. They represent strong political instruments because they send signals to other countries, to ministers, mayors and business leaders that the transition to a zero-carbon and resilient economy is underway.

There was no request or instruction from the UNFCCC for NDCs to include biodiversity, nature or linkages to the Aichi targets or the SDGs in their content. Despite this, many countries have demonstrated their understanding of the interrelationship between these issues and have, to a lesser or greater extent, incorporating actions that address climate change as well as biodiversity or nature protection. Many countries have reflected on the role of nature or biodiversity in their adaptation measures and mitigation targets, or in the consideration of their main source of emissions or the extent to which their ecosystems are vulnerable to climate change.

These efforts by countries allow this paper to provide an assessment of how countries have included nature and biodiversity related actions/strategies in their current NDCs, how often they are linking to the Aichi Targets and ultimately to what extent countries are pursuing an integrated approach to climate, nature and development.

Based on the findings of the analysis, the paper lays out a set of recommendations at the international and national level as well as for the longer term that can strengthen the biodiversity and nature agenda, and align climate, biodiversity and sustainable development targets for the next phase of updated, enhanced and improved NDCs.

With implementation of the Paris Agreement underway and a rulebook and guidelines set to be adopted at UNFCCC COP24 in 2018, signatory countries are taking action to deliver on their pledges. Some have already started to update their NDCs<sup>12</sup> to submit them to UNFCCC in 2020. At the same time, the Convention for Biological Diversity (CBD) is ramping up negotiations at the COP-14 in Egypt in 2018. Leading governments as well as non-state actors are driving political ambition to deliver a strong updated biodiversity framework in 2020.

Given those two global processes are gathering momentum in the run up to 2020, there is an opportunity for greater integration reflected in the updated NDCs. Especially since there is precedence in existing NDCs and even with no mandate to do so, countries are already considering biodiversity related matters as part of their climate change solutions.

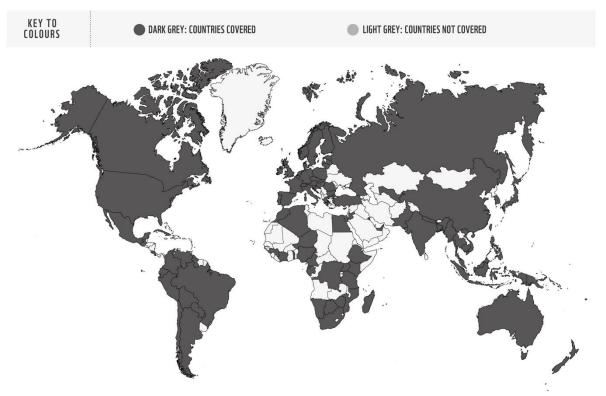
# **METHODOLOGY**

A total of 73 **NDCs encompassing 100 countries** have been analysed in two phases of 29 and 44 NDCs respectively. The countries were chosen to reflect geographical range, membership of different negotiating blocs and levels of economic development. The analysis includes **24 NDCs from Africa**, **19 from Asia**, **4 from Europe**, **15 from Latin America and the Caribbean**, **3 from North America and 8 from Oceania**. That includes 38 Annex I parties<sup>13</sup> (including the European Union and its 28 Member States), 11 Small Island Developing States (SIDS)<sup>14</sup>, 16 Least Developed Countries (LDCs)<sup>15</sup> and all 17 megadiverse countries<sup>16</sup>.

Using the **method of text analysis, each NDC was rated, for each of the 20 Aichi Targets,** as strong or less strong (dark or light grey, respectively) based on the level of relevant detail provided in the NDC, taking into account whether the action was already enshrined in policies or laws, the level of detail given on the planned actions, and whether the relevant information was included in the NDC itself, or in supplementary information.

The analysed NDCs are very diverse because the documents differ not only in content but also in structure and length (3 to 40 pages). As mentioned before, the objective of the NDCs was not to address nature or development related issues. Therefore, very few countries made explicit linkages to the Aichi Targets. Subsequently, the text analysis focused on content matches rather than exact word matches. When a match was found, it was specified which area it relates to out of forest, marine, indigenous peoples, agriculture, ecosystems, mangroves, freshwater and 'unspecified'.

In addition, overall comments on the level of detail and approach in which each NDC refers to biodiversity and ecosystems, as well as to the SDGs, Disaster Risk Reduction and other terms, has been provided.



A total of 73 NDCs from 100 countries around the globe were analysed

# **RESULTS BY REGION AND COUNTRY GROUPING**

In their brief NDCs, the 6 analysed countries of **Oceania** as well as **Australia and New Zealand** concentrated mostly on energy and related sectors, like transportation. However, **Fiji** and the **Marshall Islands** articulated vulnerability of their biodiversity and coastal zones and planned planting and rehabilitation of mangrove areas. **Papua New Guinea** pointed out that its primary mitigation effort is reducing deforestation and promoting sustainable management and conservation of forests.

Most of the Latin American and Caribbean NDCs referred to the importance of biodiversity and ecosystems in climate change-related issues, as well as to the possible synergies between mitigation and adaptation measures. South and Central American countries concentrated on action within the forestry sector. Notably, Bolivia, Cuba, Ecuador and Venezuela reflected that environmental rights are part of their constitutional laws, clearly indicating ecosystem's importance to them. Colombia aligned its climate action with the implementation of the Aichi Targets, mentioning not only CBD but also the SDGs, UNCCD and Sendai Framework for Disaster Risk Reduction. Brazil, Guatemala, Guyana, Peru and Venezuela included integrating values of indigenous people's rights in its mitigation and adaptation measures to rescue and apply the ancestral knowledge of productive processes and conservation practices. These countries set a leading example by addressing biodiversity loss as an essential part of mitigating climate change. Finally, Antigua and Barbuda and Jamaica were the only countries in this group that noted their climate change vulnerability, but that did not exploit the potential of biodiversity in their NDCs as part of their climate response.

In the **Middle East** region, **Jordan** stands out by reflecting on its climate change strategy from a broad perspective and planning to review its National Network of Protected Areas, as well as explicitly referring to the National Biodiversity Strategy and Action Plan aligned with the CBD 10-Year Strategy, this high level of alignment is expected to greatly improve implementation.

The countries analysed in the region of **South-East** and **South Asia** also assigned considerable significance to nature and biodiversity related matters in their NDCs. **Bangladesh, India**, **Myanmar, Thailand** and **Viet Nam** incorporated adaptation action for vulnerable mangroves. Some countries, like **Pakistan**, included conservation actions but mostly did so with a human benefit framing only. **Bangladesh, Cambodia, Malaysia**, **Myanmar** and **Nepal** explored the potential of possible co-benefits of employment activities. Finally, **India, Indonesia, Nepal, Philippines** and **Viet Nam** considered ways of including indigenous people and local communities (IPLC), either in the consultation phase of preparation of NDCs or by including certain actions that will protect them in the implementation process.

The analysed NDCs of **African countries** are characterized by frequent references to, and reliance on, forest-related measures, especially reforestation and afforestation. They expect an increase of carbon sequestration through these activities which will help to balance out future GHG emissions growth caused by development. Other common measures on this continent involve the agriculture sector. **Cameroon, Gabon, Guinea, Madagascar** and **Tanzania** are introducing actions to protect mangroves and coastal ecosystems. **Morocco** pointed out that its security and stability will be threatened without conserved biodiversity, forests and marine/coastal ecosystems. **Morocco** particularly demonstrated an understanding of the interrelated challenges by combining its NDC efforts with the priorities of the other Rio conventions on biological diversity and desertification. **Morocco** and Thailand are also the only countries that mentioned protection of endangered species in their NDCs. **Ethiopia** has set goals to reforest the country, introduce sustainable management practices in forestry and agriculture and minimize biodiversity loss. **Madagascar** planned reforestation using its national species, including mangroves, and development of habitat connectivity.

Finally, in the group of **North American** countries, **Mexico** stands out by naming ecosystem-based adaptation as the core of its NDC and having prepared the NDC through considering synergies between adaptation and mitigation. Moreover, Mexico incorporated conservation and restoration of "marine and terrestrial coastal ecosystems and their biodiversity" as well as capacity building and participation of local communities and indigenous people. Mexico also presented aims in the forestry sector with a special attention to riparian zones and native species along with improvement of connectivity of National Protected Areas and other conservation schemes.

Looking at the negotiation blocks, the analysis indicates that **European** and other **Annex I countries'** NDCs include few explicit biodiversity-related actions. The majority concentrated on economy-wide targets and aimed mostly at the energy and transport sector but did not go into detail on planned actions. Most countries in this group did not refer to biodiversity, CBD, disaster risk reduction or SDGs and did not point out any co-benefits in the planned actions. These countries are likely to benefit from a dialogue between conventions to develop a common narrative on how to integrate action on climate, biodiversity and sustainable development.

**Venezuela** and **Brazil**, as well as other key **oil producing countries**, like **China**, **Kuwait** and **United Arab Emirates (UAE)** showed considerable recognition of the biodiversity related matters in their NDCs. **China** planned on an intensive afforestation and protection of existing forests to increase its carbon sinks. **Kuwait** mentioned the newly implemented Environment Protection Law and its concerns about the effect of the declining natural services and loss of biodiversity. **UAE** explicitly named its National Biodiversity Strategy and Action Plan, as well as the UAE Sustainable Fisheries Programme referring to the adaptation actions with mitigation co-benefits.

Most of the analysed **Small Island Developing States (SIDS)**<sup>17</sup> pointed out their low development level and lack of necessary resources (financial or technological) to convey greater mitigation and adaptation actions. Similar to the Annex I countries, the majority concentrated on measures within energy and related sectors. **Guyana** is the exception in that it refers directly to CBD and to integrating indigenous peoples planning and the creation of their NDC.

Most of the analysed **Least Developed Countries (LDCs)**<sup>18</sup> preferred ecosystem-based adaptation in their NDCs and saw mitigation potential in biodiversity-related measures. Similarly, many of the analysed **megadiverse countries** dedicated considerable space of their NDCs to biodiversityrelevant matters.

# **RESULTS BY BIODIVERSITY RELATED TOPICS**

Although the NDCs planning process calls for a multidimensional approach, there is no mandate to include actions or strategies on nature, Aichi targets or SDGs related issues. Despite this, 17 of the 73 NDCs analysed mentioned the **Sustainable Development Goals (SDGs)** as relevant in the context of climate change, with Morocco, Jordan and Uganda clearly naming particular SDGs, to which their NDCs will contribute. Almost half of the analysed NDCs touched on **disaster risk reduction** and potential **synergies** with related plans and activities (31 and 33 respectively).

84% of countries included in the analysis spoke of actions within the **forestry** sector either as halting deforestation, reforestation to boost carbon sequestration or sustainable forest management.

Considering that around 86% of analysed countries have a coast or are islands, there is a concerning low number of references to **oceans**, coasts and marine habitats in the analysed NDCs. Only 26 analysed countries (31.5%) mentioned adaptation or mitigation action within marine habitat/oceans and only 16 countries (22%) introduced **mangrove** conservation as a part of adaptation measures.

Around 62% of the analysed NDCs, including almost all the African countries, mentioned actions on **agriculture** either as adaptation or mitigation measures. Very often they mentioned that agriculture, forestry and other land use (AFOLU) is the main source of GHG emissions in their countries. However, due to the lack of access to technology, as well as difficulties in management of remote areas of their territory, they are not able to collect enough data to include the AFOLU sector in the calculations of GHG emissions reductions. This may be a reason why some of those countries put considerable efforts in the energy or transportation sectors, that are easier to manage and calculate.

The matter of **indigenous people and local communities (IPLC)** was only rarely considered in the preparation process or in the planned actions of the analysed NDCs. Only 10 countries included IPLC in the preparation of their NDCs. Some countries, like Indonesia and Peru, explicitly consulted indigenous people, others, like Venezuela and Guyana, planned measures particularly employing the traditional knowledge of local communities.

In summary, the inclusion of the **Aichi Targets**' provisions in the analysed NDCs concentrates mostly on forestry and to a lesser extent on agriculture, followed by oceans and mangroves. As stated on the premise of this analysis, few of the assessed NDCs included **biodiversity-related measures**, but that does not mean that there are no domestic biodiversity actions introduced in each country, in the form of laws, policies, instruments, plans or strategies. Countries are not encouraged to include biodiversity-related measures in their NDCs nor is there a reporting system to motivate countries to increase their contributions, such as a ratcheting mechanism.

A multidimensional approach is being addressed by some countries which are already doing sustainable development planning which incorporates biodiversity, the Aichi targets and the SDGs in an integrated manner, and have reported this in their NDC; such as Colombia and Jordan. Most of these countries focus only on the sectors related to their major source of emissions. There could be multiple reason why various sectors were or were not included in each country's NDCs, which this analysis does not go into. It is however clear that too few countries have made explicit efforts to connect the implementation of CBD and the Paris Agreement, and would benefit from guidelines or reporting structures provided by these conventions that support an integrated approach

# RECOMMENDATIONS

Countries' NDCs are the national policy framework to implement the Paris Agreement, determined by national priorities, circumstances and capabilities. NDCs have no mandate to include biodiversity and sustainable development in their content, yet our analysis shows that many countries are already seeking to be more coherent and efficient in their implementation of climate change action by including biodiversity related matters. Some have even explicitly considered the Aichi Targets in their NDCs. It is clear that an integrated response can be delivered through the NDCs.

Based on the example set by some countries, the opportunity for countries to submit updated and enhanced NDCs before 2020 could be used for greater integration of nature and alignment of the Rio conventions when crucial decisions on climate, biodiversity and development will be taken in 2020.

### **RECOMMENDATIONS FOR THE INTERNATIONAL LEVEL**

The next step is to **initiate a dialogue to facilitate alignment and integration of international instruments and conventions no later than 2019** considering the SDGs as well as the CBD post-2020 biodiversity framework. As a result of this dialogue, **concrete decisions for strong alignment should be taken in 2020**.

# The Parties to the UNFCCC and CBD should look for ways to better harmonise and coordinate their frameworks and better support the SDGs by:

- <u>initiating a dialogue</u> to strengthen, align and enhance climate and biodiversity-related action to raise ambition and strengthen implementation by 2020 (when updated NDCs will be due for submission) and environmental related SDGs will be reviewed.
- requesting the Secretariats of both the CBD and UNFCCC to <u>provide joint technical guidance (e.g.</u> papers and working groups) on the potential of an integrated approach, how to overcome institutional and other barriers, how to manage trade-offs and how to capitalize on co-benefits.

### Both conventions could more efficiently assist their parties with implementation by:

- leveraging the power of non-state actors to drive implementation across both conventions.
- aligning the CBD implementation process with the Paris Agreement by <u>introducing a ratcheting</u> <u>mechanism, similar to the periodic pledge and review of NDCs, into CBD implementation</u> so that – like in the Paris Agreements – Parties should periodically increase ambition and action.
- building a <u>common narrative</u> that supports mutual understanding through joint communication strategies and campaigns on how reversing biodiversity loss can support the 1.5°C and vice versa.
- <u>aligning technical support</u>, financial assistance and investment for implementation at the domestic level in developing countries.
- guiding the creation of enabling conditions to <u>mainstream climate and biodiversity into national</u> <u>planning</u> to help translate those commitments into national legislation and policies.
- <u>aligning reporting structures and cycles</u> and requiring countries to report on integrated action, developing common indicators and sharing information on financing and resource mobilization.

### **RECOMMENDATIONS FOR THE NATIONAL LEVEL**

The Parties to the Paris Agreement and CBD could improve their national planning and implementation by:

- incorporating in all planning processes the understanding <u>that reversing biodiversity loss is</u> an important strategy for staying well below 2°C of warming, and <u>essential for 1.5°C</u>, and that mitigating climate change helps sustain the natural systems our societies and economies rely on.
- <u>aligning their NDCs with their National Biodiversity Strategies and Action Plans (NBSAPs)</u> as much as feasible.
- including targets in their NDCs to tackle emissions from land use and agriculture in a biodiversityfriendly manner and <u>implementing nature-based solutions to climate mitigation and adaptation</u>.
- <u>including relevant stakeholders</u>, such as the private sector, sub-national governments, academia, civil society and indigenous peoples, youth and women <u>in the design and implementation of NDCs</u> <u>and NBSAPs</u>.
- <u>upscaling investment</u> in climate change related innovation in non-energy sectors e.g. in sustainable agriculture, nature conservation, forest restoration, and other nature-based solutions.
- including a broader perspective to their climate change and biodiversity-related reporting and showcasing the activities that are benefiting both areas.
- when allocating <u>resources</u>, favour activities that address more than one area across climate, development and nature.

### **RECOMMENDATIONS FOR THE LONG-TERM**

The Paris Agreement invited countries to communicate their "mid-century long-term low GHG emissions development strategies," or "long-term strategies" by 2020. The CBD is working towards a vision of 'living in harmony with nature' by 2050. These long-term visions help guide short-term strategies and actions already set for 2020 and 2030. They should – in the mid-term – guide a better alignment towards these common objectives. In the long run, there should be one integrated approach to planning and implementation to address climate change, nature loss and unsustainable development together. Recommendations include:

- In 2020, <u>develop the elements for updated NDCs</u> to account for nature-based solutions and conservation measures as well as a <u>strong and well aligned post-2020 biodiversity framework</u> <u>under the CBD</u> and agree on how to <u>extend the environmental SDG targets that expire in 2020</u>.
- In 2022, Rio +30 and Stockholm +50 are opportunities to create renewed political momentum, to strengthen and improve existing commitments and undertake new and better aligned action.
- **In 2030**, the SDGs should be achieved as well as the new CBD biodiversity framework and most of the NDCs. <u>This is the opportunity to move forward with *one* integrated approach across climate, <u>nature and development</u>.</u>
- Now: If the Paris Agreement goal of keeping global warming well below 2°C, striving for 1.5°C, and the CBD vision of living in harmony with nature is to be achieved countries need to start planning now as they need to initiate a transformational change of their economies and create the enabling conditions (within their national circumstances).

# **OVERALL COMMENTS ON NDCS**

In the process of creating its NDC, Algeria included different levels of national stakeholders and the media, as a part of the public awareness chapter. The NDC clearly outlines the main activities in the adaptation and mitigation efforts, unfortunately including mostly forestry.



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The climate strategy of Algeria is defined in the National Climate Plan. It aims, notably, at reinforcing water resources mobilization, controlling flood, protecting the coastline, combating drought and desertification and increasing the ecosystems and agriculture resilience and facing climate change. 99



In this brief document, Antigua and Barbuda presented few activities, of which most are conditional to external support. The country recognized the co-benefits between adaptation and mitigation, however most of the presented measures AND BARBUDA demonstrate little biodiversity-related potential.

ARGENTINA

Argentina is admirably explicit about the importance of integrating biodiversity into climate planning, both for adaptation (including ecosystembased adaptation) and mitigation, noting that 21% of the country's emissions are from land use, with a further 28% from agriculture.



Australia's NDC is brief and focused on economy wide targets, rather than detailed plan implementation. In 2015 the government released their National Climate Resilience Strategy, which better reflects an integration of biodiversity considerations into climate policy.



The NDC of Bangladesh shows little biodiversity potential. It concentrates on energy, transport and industry sectors. The only mitigation activities within the scope of Aichi Targets are afforestation and reforestation program, as well as mangrove plantation. Adaptation measures include ecosystem-based solutions, such as biodiversity and ecosystem conservation, however no evident

activities are specified.

Although Bolivia's NDC is clearly a political statement, it combines relevant observations about the environmental issues and worldwide insufficient reaction to climate change. Bolivia links climate issues with biodiversity loss and development, mentioning both Convention on Biological Diversity and Sustainable Development Goals. It introduces a concept of "rights of Mother Earth" based on biodiversity values. The country sees potential in synergies between mitigation and adaptation, on which it wants to build its sustainable development.



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Bolivia considers that the joint approach between mitigation and adaptation in the context of overall development plans, is the only way to systematically address climate change, including the links between the different social, economic and environmental dimensions. "



Botswana's NDC is a very general document that doesn't reflect on climate change in depth. Despite including sustainable agriculture and land management, as one of the adaptation measures, there is no clear action plan included.

Brazil is admirably explicit about its aim to pursue adaptation measures to build the resilience of ecosystems, in particular restoring forests, and has already considered existing national policies and laws on forests, protected areas and climate change in developing its NDC.



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### BRAZIL

Coastal zone resources already face a number of pressures, including from over-fishing, overexploitation of forest resources and mangrove ecosystems leading to increased erosion. Climate change adds to these existing challenges through sea level rise, shrinking arable land and decreasing availability of drinking water. "



Cambodia clearly stated that it seeks to maximize synergies between mitigation and adaptation making increase of forest cover one of its main mitigation measures. The document has a great biodiversity potential, regrettably Cambodia did not develop further on possible actions in e.g. coastal zone areas.



Cameroon favors mitigation actions with high co-benefits. It proposes limited measures within agriculture and broader ones in forestry (remaining ones concerning energy). The country points out to biodiversity conservation as a potential benefit of its climate change related actions, however not contrariwise.



In its revised NDC, Canada presented targets concentrated on industry, especially energy and transportation sectors. It noted briefly the potential of its natural resources, especially in carbon sequestration, however it did not include it in its mitigation measures.



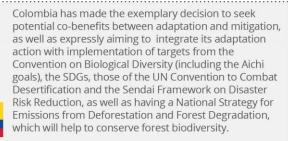
Chile aspires to be a leader in the international fight against climate change, therefore presents a long document highlighting new institutions and processes, including public consultations, that led to the creation of this NDC. It sets a goal of 30% GHG reduction and points out to the possible synergies between mitigation and adaptation measures.

China makes frequent linkages between climate issues and those affecting natural systems, including a national strategic goal of being an "ecological civilisation" and following a green and low carbon development path.

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CHINA

China has defined as its strategic goals to complete the construction of a moderately prosperous society in an all-round way by 2020... It has identified transforming the economic development pattern, constructing ecological civilization and holding to a green, low-carbon and recycled development path as its policy orientation. "



### COLOMBIA 66

It was defined that the country will focus its efforts to 2030 jointly with other global targets that contribute to increasing resilience, such as those of the Convention on Biological Diversity (CBD), the 2030 Development Agenda, and the UN Convention to Combat Desertification (UNCCD), as well as the Sendai Framework for Disaster Risk Reduction 2015-2030



Costa Rica's NDC is clearly stating the country's long-term, prior Paris Agreement commitments to environmental and ecosystem-based adaptation and mitigation policies. Costa Rica concentrates its efforts among others on enhancing carbon sinks in land-use and reforestation. Especially the latter plays a key role in its path to become Carbon Neutral economy starting in 2021.



Cote d'Ivoire is concentrating on mitigation measures with high co-benefits. Considerable part of the actions is devoted to sustainable agriculture and forestry, as well as conservation.



Cuba's NDC is another political statement that urges other states to support LDCs and SIDS in their fight against climate change, by transfer of technologies and more international financing. Regrettably in this long document, Cuba referred mostly to accomplished actions and didn't outline many future ones that would have more apparent reference to biodiversity.



DRC is one of the least developed countries in the world and at the same time a host to one of the most environmentally rich places on the planet. This difficult relationship has been taken into account in its NDC. DRC plans on introducing national strategies including one on biodiversity and has identified sustainable development as its priority. Although those commitments present a lot of potential, the document

doesn't present many details.

In 2008 Ecuador included in its constitution a concept of "Good Living" - a societal paradigm, according to which the country is committed to defend the right of its population to live in a healthy environment and respect the rights of nature. Consequently, this NDC contains a broad spectrum of mitigation and adaptation activities committing to further reforestation and forest restoration. Moreover, it clearly recognizes mitigation cobenefits of many ecosystem-based adaptation measures.



**66** ...Nature, or "Pacha Mama", where life transpires and is reproduced, has the right to integral respect for its existence, maintenance and regeneration of its life cycles, structure, functions and evolutionary processes; and it has the right to restoration **99** 



In Egypt's NDC there is a great amount of reference to biodiversity-related issues, such as degradation of coral reef or agriculture and aquaculture negatively affected by climate change effects.

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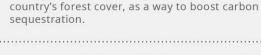


Equatorial Guinea is one of the countries where forestry, agriculture and land use change sector is responsible for the greatest GHG emissions. Nevertheless, having a lot of potential the NDC doesn't contain many details.



**ETHIOPIA** 

Ethiopia clearly recognizes the importance of ecosystem services and the vulnerability of biodiversity against challenges caused by climate change. Taking into account that Ethiopia's GHG emissions will most probably keep on growing, the key measure of its NDC is an increase of





The EU, like other industrialized countries, has focused on the mitigation target in its NDC, and although some biodiversity-relevant sectors for action to reduce emissions are listed, there is no clarity that policies will indeed integrate the Aichi targets.



Fiji is acutely aware of the vulnerability of its biodiversity and ecosystems, especially marine and coastal ones, to climate change. However, the NDC focuses on the energy, rather than biological sectors for mitigation, although adaptation efforts include the planting of traditional tree and root crops to minimize soil erosion.

Even though, Gabon acknowledges its role of a carbon sink, as it absorbs 4 times more CO2 than it emits, it doesn't involve any related actions in its NDC commitments. As mitigation measures it included land use and land-use change as the crucial sector in the emissions cuts. Gabon makes a linkage between the fight against climate change and biodiversity, however it doesn't explore that synergy.

GABON 66

The general guidelines of this strategy call for the development of a coastal urban development plan and the promotion of income-generating activities related to marine and coastal ecosystems.



Guatemala is making strong and concerted efforts to integrate its national plan for biodiversity with its actions to mitigate and adapt to climate change. The country was one of the first to create a climate change law, and this has established a National Climate Change Council, which brings together many interested parties, including local government and indigenous peoples. Guinea clearly recognizes the importance of its natural resources that are under continuous threat from climate change. Although the country shows understanding of synergies between other conventions on combatting desertification, soil degradation and biodiversity loss within adaptation measures, it doesn't introduce them in its NDC (apart from the forestry sector).



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More than 1000 watercourses and four of the major West African rivers rise in the country. These resources are under severe threat from the impact of climate change and regional population flows are likely to increase the pressure.

Guyana directs its commitments to forestry and economic growth based on sustainable use of natural

GUYANA

resources. The country outlines its many already implemented programs that it would like to continue, as well as improve, and refers clearly to its engagement in CBD. Moreover, Guyana included indigenous people in the consultation process in the creation of this NDC and will draw from their knowledge of conservation and sustainable forest management.

India's NDC itself is a succinct statement of it targets, including afforestation and adapting in sectors and regions particularly vulnerable to climate change. There is a greater sense of the importance of India's considerations of biodiversity in the accompanying information, both in stating the wealth of the country's biodiversity and in the cultural attitudes to it: "Human beings here have regarded fauna and flora as part of their family."

### INDIA Em

Environmental sustainability, which involves both intragenerational and inter-generational equity, has been the approach of Indians for very long. Much before the climate change debate began, Mahatma Gandhi...said that we should act as 'trustees' and use natural resources wisely as it is our moral responsibility to ensure that we bequeath to the future generations a healthy planet.

Indonesia's NDC shows integrated thinking, stating

that the NDC took into account the SDGs and the

production, including from natural ecosystems, as

well as reversing land degradation and biodiversity

need for sustainable management of its natural

resources and sustainable consumption and

INDONESIA

IA loss. The overall approach to be taken is a landscape approach to help to address mitigation and adaptation, and covering terrestrial, marine and coastal ecosystems.



Jamaica as one of the SIDS is aware of its particular vulnerability to the impacts of climate change. Among its priorities for climate change adaptation strategies and action plans it includes biodiversity-relevant sectors, regrettably it doesn't include many details in its NDC.

.....



Japan has provided considerable detail about the actions that were considered as part of its bottom up analysis leading to the setting of its economy-wide target. While some have potential to have biodiversity co-benefits, this does not seem have been considered in depth as part of its NDC development. Jordan has integrated climate considerations into its National Biodiversity Strategy and Action Plan, which has itself been aligned with the Aichi goals. This integrated thinking is clear in Jordan's NDC which contains details of planned actions, including reforestation for mitigation and adaptation, and a whole section for adaptation on 'biodiversity, ecosystems and protected areas. The NDC lays out plans to identify vulnerable areas, and review protected areas with a view to extending conservations efforts in surrounding areas.



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Jordan also mainstreamed climate change into the National Biodiversity Strategy and Action Plan (2015-2020), which was also recently aligned with the global CBD-10 year Strategy.



Kenya's NDC is short and to the point. There are clear areas where ecosystems are considered, but these are not greatly elaborated on.

Despite the fact that 95% of Kuwait's total GHG emissions come from the energy sector, it has expressed concerns about the environment and included biodiversity measures in its environmental laws.



**KUWAIT** 

Madagascar aims to follow an ecosystem-based adaptation approach, and has plans for significant reforestation using native species, as well as enhancing its silviculture. It aims to restore natural forests, including mangroves, and increase habitat connectivity, which should help to build the resilience



of the ecosystems and of the country itself Malaysia clearly states that it has already taken climate friendly actions in previous years and due to its susceptibility to negative effects of climate change, it will continue to take further efforts. Nevertheless, Malaysia's NDC lacks a clear recognition of influence of healthy ecosystems in the connection to climate change.



The Marshall Islands recognize that adaptation action can have mitigation co-benefits, particularly in areas such as mangrove and agricultural rehabilitation. It is explicit in seeing the need for adaptation to protect ecosystem resources, but provides little detail on how this will be achieved. Plans to enhance the existing adaptation framework may offer an opportunity to ensure that actions do indeed reap co-benefits.

NARSHALL Islands

**66** *RMI* also considers that adaptation action will have mitigation co-benefits, with 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 RMI people. **99** 

کی Mexico

Mexico has put its environment, including its biodiversity, at the core of its NDC. As well as various sectors of land use and forestry included in the mitigation section, ecosystem-based adaptation is at the core of Mexico's planned resilience actions. The NDC is detailed on the importance of such biodiversity specific issues as reforesting riparian zones taking into account native species in the area, increasing connectivity of Natural Protected Areas, protecting priority species from climate impacts and recovery of marine ecosystems, including corals and mangroves.



Although Micronesia commits to an ambitious unconditional 28% reduction of its GHGs emissions by 2025 below emissions in year 2000, it is concentrating its efforts only on the energy sector, namely electricity generation and transport subsectors.



Mozambique recognizes the threat that climate change is posing not only to people, but also to other living organisms and ecosystems. It has already introduced a set of institutions and strategies that include adaptation efforts to protect biodiversity. However, it doesn't provide any details on foreseen actions.

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Forestry plays a key role in Myanmar's NDC, showing great co-benefit potential within both - mitigation and adaptation plans. Moreover, the NDC clearly demonstrates the connection of the climate changerelated activities to biodiversity and ecosystem services. The country puts an emphasis on external financing, as well as transfer of technology and know-how, in the process of achieving goals of this document.

MYANMAR

**66** Actions in the forestry sector will not only preserve one of the world's most important GHG sinks, but will also prevent soil erosion and therefore reduce the risk to the population of floods and landslides.



Forestry plays a key role in Myanmar's NDC, showing great co-benefit potential within both mitigation and adaptation plans. Moreover, the NDC clearly demonstrates the connection of the climate change-related activities to biodiversity and ecosystem services. The country puts an emphasis on external financing, as well as transfer of technology and know-how, in the process of

achieving goals of this document. Nepal's NDC shows that the country is aiming to realize adaptation and mitigation co-benefits, and also considering biodiversity together with its Forest Sector Strategy and national adaptation plans. The goal of keeping 40% of the country's land forested, and promotion of afforestation and the conservation of biodiversity demonstrate integrated thinking and planning.



**66** The Nepal Biodiversity Strategy and Action Plan (2014-2020) emphasize biodiversity conservation and ecosystem resilience as keys to national prosperity. The Strategy recognizes legitimate rights of all Nepali people including indigenous people and local communities, women, Dalits and other disadvantaged social groups over local biological resources.

\*

NEW ZEALAND

With the land sector accounting of nearly half of New Zealand's emissions, the NDC's accompanying information contains strong references to action in the forest and agriculture sectors, but there is little linkage made to biodiversity, other than the recognition that managed forests can take pressure off of natural forests.



Niger is another of the LDCs, which AFOLU sector has a considerable share of total GHG emissions (89%). Therefore, it is undertaking adaptation actions within sustainable forest management that have high biodiversity potential and considerable mitigation co-benefits.



Nigeria identifies agriculture, forests and other ecosystems as one of the key sectors under sever threat from climate change and therefore proposes adaptation measures that encompass particularly sector of both - agriculture and forests. Regrettably, Nigeria's mitigation consists mostly of actions in usual areas: energy, transportation and related sectors.



Like other developed countries, Norway has focused its NDC solely on its economy-wide absolute target and provides no information on its adaptation contributions. Norway plans to implement its land use sector actions collectively with the EU and so its policies' impacts on biodiversity will be at least to some extent influenced by EU negotiations.

In a long and comprehensive document, Pakistan presents its national context and climate change countermeasures. The key aim - development of the country - determinates the adaptation and mitigation actions, that concentrate on energy, agriculture, waste and transportation.



**66** Pakistan's response to the challenges of global warming and climate change has been closely aligned with its strategies for sustainable development, environmental protection, sustainable development goals (SDGs) and objectives of the Convention on Climate Change.



Another of the SIDS that is concentrating on renewable energy and energy efficiency measures in its brief NDC. Nevertheless, in the background information Palau acknowledges the importance of coral reefs, fisheries, and other marine-based resources, as crucial to livelihoods, economy and culture of the country and adversely affected by ocean warming and acidification.



Papua New Guinea increased the scope of its NDC compare to other SIDS and included the forestry sector, as a part of the mitigation efforts within the REDD+ activities.



77

Most of Paraguay's NDC most relevant to biodiversity relates to the forest sector, in particular controlling deforestation, beyond its 1973 Forestry Law, and increasing revenues from carbon sinks, as well as plantations to reduce pressure on native forests, but there is little clear connection made between biodiversity and climate overall.

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In its NDC, Peru has considered the diversity of its ecosystems and seeks to draw synergies between mitigation and adaption actions where possible. The establishment of a high level Multi-sectoral Commission, which includes the environment ministry, affords an opportunity for biodiversity to be mainstreamed into climate planning. The Philippines' NDC demonstrates an aim to reap co-benefits where possible, including environmentally. The diversity and importance of the country's ecosystems, and their vulnerability to climate change, but also to help in mitigation and adaptation is well understood.

### **CC** The Philippines is endowed with diverse ecosystems,

PHILIPPINES

which are considered extremely important for enabling the country to develop resilience in the face of climate change. Among these are its forests and marine resources, which are seen as contributing to both adaptation and mitigation needs...The Philippine legislature is poised to declare by law 97 protected areas as national parks under the Expanded National Integrated Protected Areas Systems, which could contribute to increasing resiliency against climate change.

Russia's brief NDC refers only shortly to forests and the services that they provide, especially in GHG emissions reduction. However, as the document doesn't present any clear measures, it is not possible to assess if the country intends to develop any biodiversity-based actions.



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Russian boreal forests have global significance for mitigating climate change, protecting water resources, preventing soil erosion and conserving biodiversity on the planet.



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STP brings to attention that it is already an absolute sink of greenhouse gases and in the future will introduce program for sustainable forest management that shall reduce illegal felling of trees. Future actions will also include sustainable agriculture, however not many details are presented. On the basis of its LDC status, STP submit only conditional contributions.



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South Africa's NDC contains details of planned policies and measure for both adaptation and mitigation, focusing on more on the social, rather than environmental aspects of sustainable development. The NDC includes biodiversity and forestry in developing a vulnerability assessment and adaptation needs framework, but there is little detail on plans in these sectors.



South Korea appears to be making linkages to biodiversity in its national thinking, as the NDC defines 'developing a climate-resilient ecosystem' as one of its five strategic actions for adaptation, but these linkages are not reflected in the NDC, which reflects the targets and sectors included, but with relatively little accompanying detail.

SOUTH KOREA



Like that of many other developed countries, Switzerland's NDC focuses solely on the mitigation target, and does not consider potential synergies with other processes, or with adaptation. The NDC notes that a report on non-forested land was on-going and this may provide an opportunity for consideration of planning for co-benefits.

Thailand addresses the fact that it is considered one of the sixteen countries in the "extreme risk" category that are most vulnerable to the climate change impacts over the next thirty years. Thailand proposes adaptation measures with a great biodiversity potential like sustainable agriculture and land management, reforestation or protection of marine ecosystem.

### 66

THAILAND

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Adaptation undertakings of developing countries do not provide benefits only at the local and national scales, but also contribute to the resilience of global food production system, enable ecosystem and biodiversity protection, enhance the livelihood particularly of low-income population and contribute to the achievement of the global millennium and sustainable development goals, as well as the objective of the UNFCCC set forth in its Article 2.



Within its NDC, Togo names a set of adaptation actions taking into consideration the mitigation cobenefits. The NDC contains detailed plans that focus more on the social sustainable development, rather than on the environmental part of it. Nevertheless, it includes certain forest and agriculture policies that might have the biodiversity potential.



Turkey provides information only on its mitigation target and its planned policies and measure to achieve it. While there is potential for biodiversity co-benefits to be realized through its plans, especially in the agriculture and forestry sectors, these have not been expressed in the NDC.



As an LDC reliant on its natural resources, Uganda's stated focus is on adaptation to climate impacts. The country has clearly through through expected impacts on its key sectors and is thinking of how to integrate action to gain development, adaptation and reduce greenhouse gas emissions.



In a brief document UAE presents mitigation measures that include only energy, transportation and waste sector. However, the NDC relates to Biodiversity Strategy and restoration of wetlands as adaptation measures. Undeniably important are the plans of promoting environmental awareness through education and training.



Tanzania clearly places forestry as a priority in both mitigation and adaptation, the NDC encompasses also agriculture, coastal and marine environment in the latter category. This brief document clearly states actions and their objectives, as well as the climate change realia.



The US has expressed its NDC as an economy-wide absolute target, and although it has indicated that the land use sector will be included in the target, no information is provided as to what actions - and their potential impacts on biodiversity - are planned.

Uzbekistan clearly recognizes the foundational role

.....



UZBEKISTAN

nature plays in providing services essential to human life, and has also seen first hand what happens when that foundation is undermined through human action, The rehabilitation of the Aral Sea area for local people and for aqueous and forest ecosystems, is a clear goal for the country, but conservation of the flora and fauna of Piedmont and mountain areas and the life in deserts and semi-deserts are also goals that serve biodiversity and climate action.

VENEZUELA

As the foundations of its NDC, Venezuela presents a concept of eco-socialism, which evidently incorporates values of biodiversity and environmental protection. The basis of those principles has been included in country's constitution and other important laws. Venezuela names National Strategy for Biological Diversity as one of the ways to achieve the goals of Paris Agreement and in the creation process of this document included local communities and civil society, as well as created new institutions dedicated to tackle that matter.

Viet Nam has presented a coherent and thorough NDC, with a clear overview of its climate change related activities. As key sectors, it includes forestry and agriculture in both adaptation and mitigation measures, stressing out particularly the importance of forests in carbon sequestration. However, as a developing country it determines most of its contributions on the external financial and technological support.

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VIETNAM

The increasing impact of climate change on residential areas, economic zones, and ecosystems will lead to unavoidable losses. "

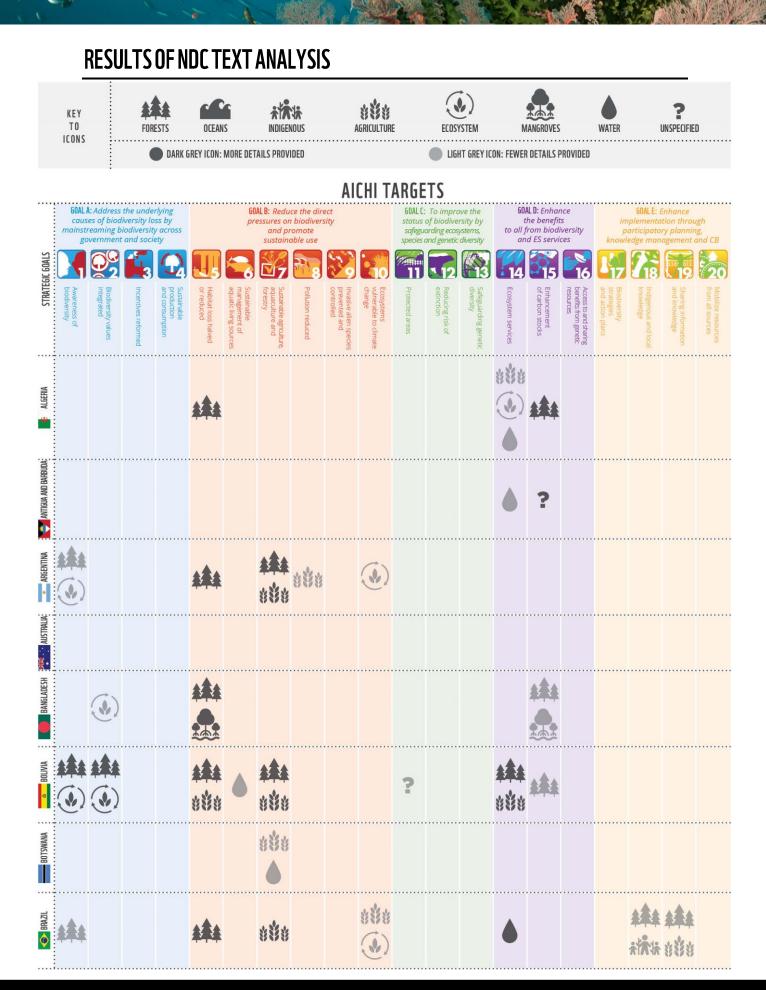
Even though Zimbabwe included environmental rights in the constitution adopted in 2013, encompassing potentially ecosystem-related measures, its NDC shows little potential of employing biodiversity co-benefits. The country recognizes the importance of forests solely in carbon sequestration and covers only a few sustainable agriculture measures.



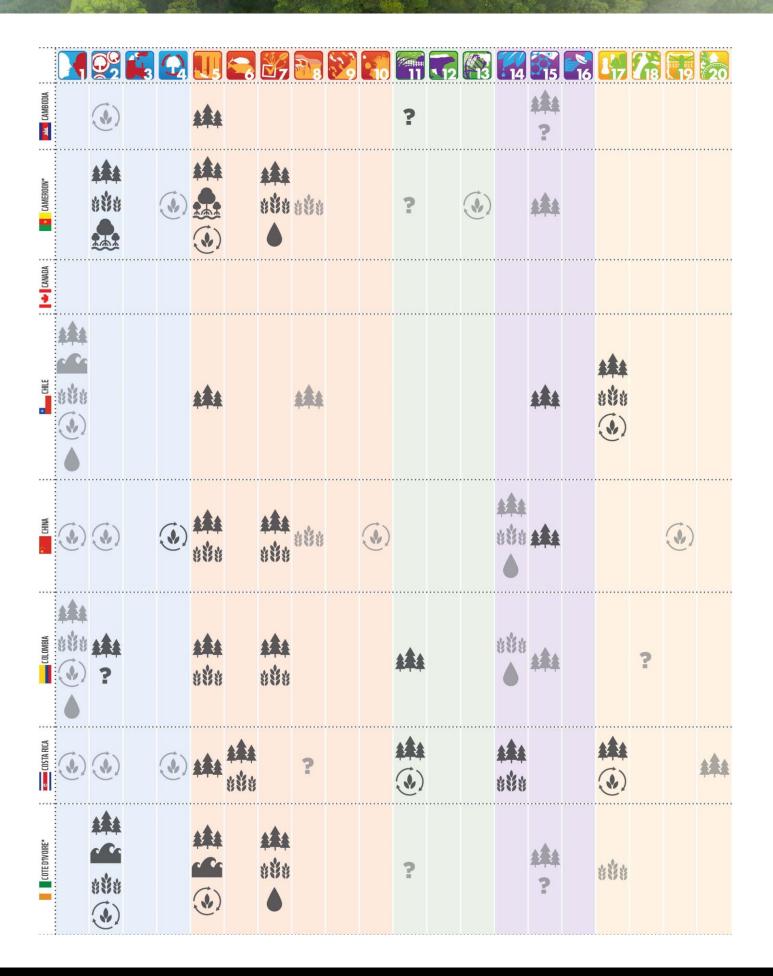
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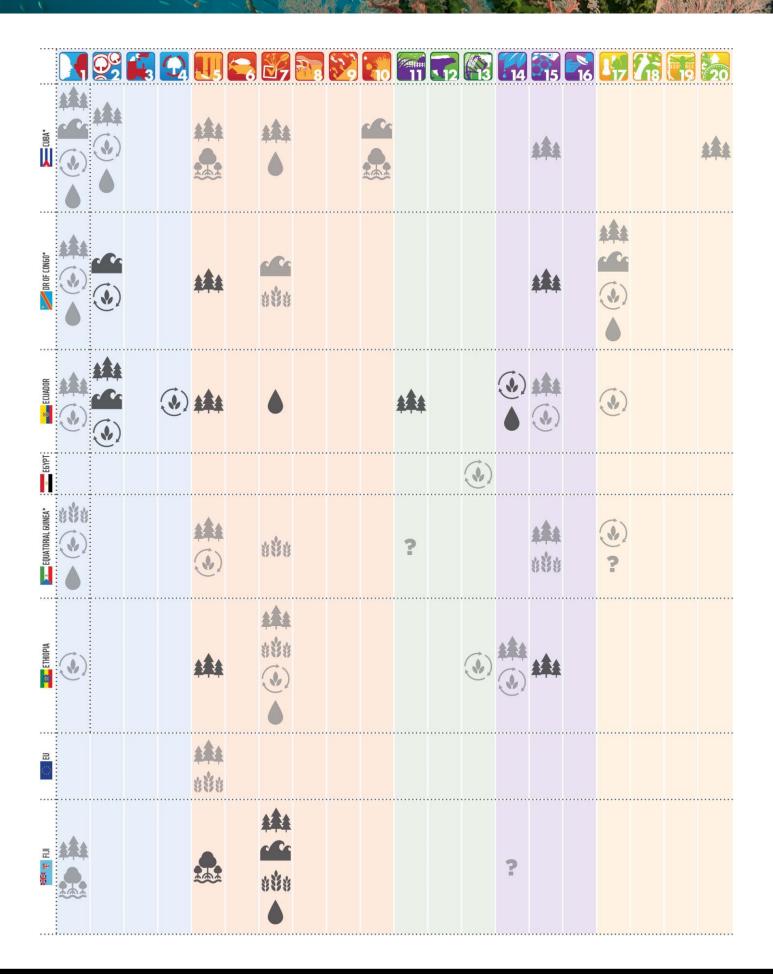
ZIMBABWE

Zimbabwe seeks to contribute to an ambitious goal of limiting temperature rise to below 1.50C. The global climate target is to prevent dangerous anthropogenic interference with the climate system so as to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.

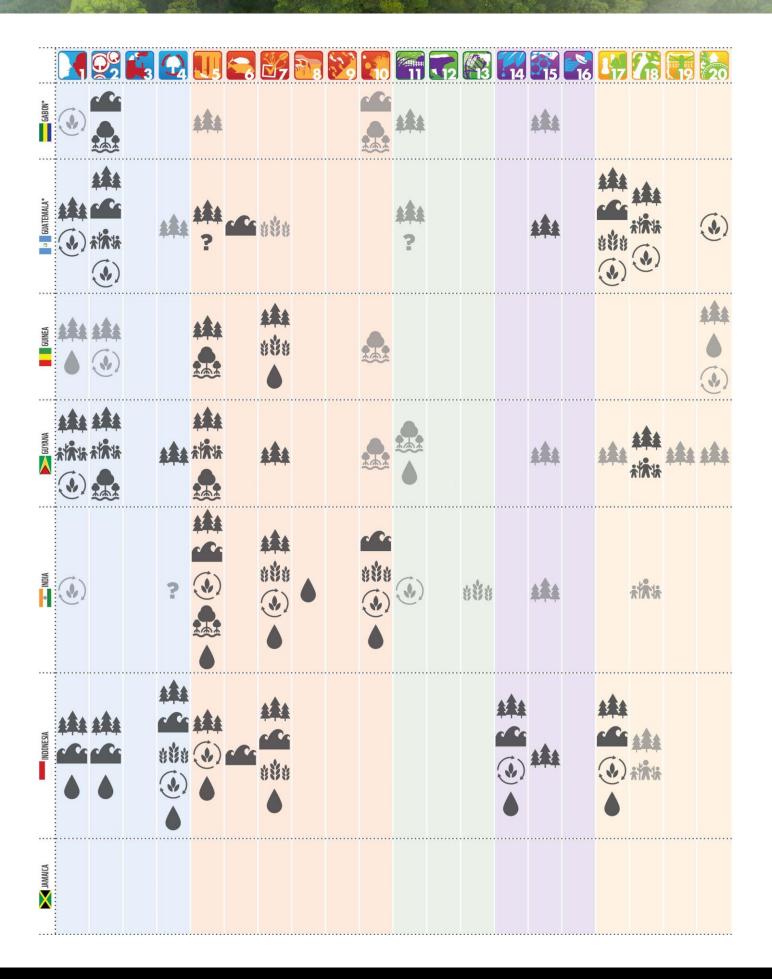


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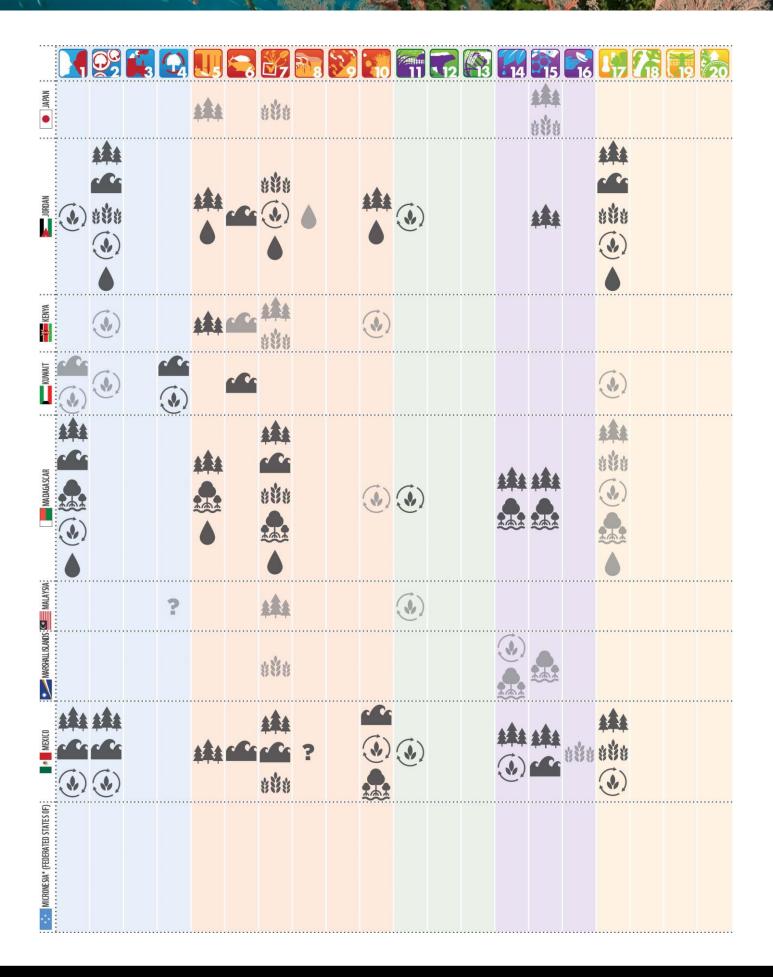




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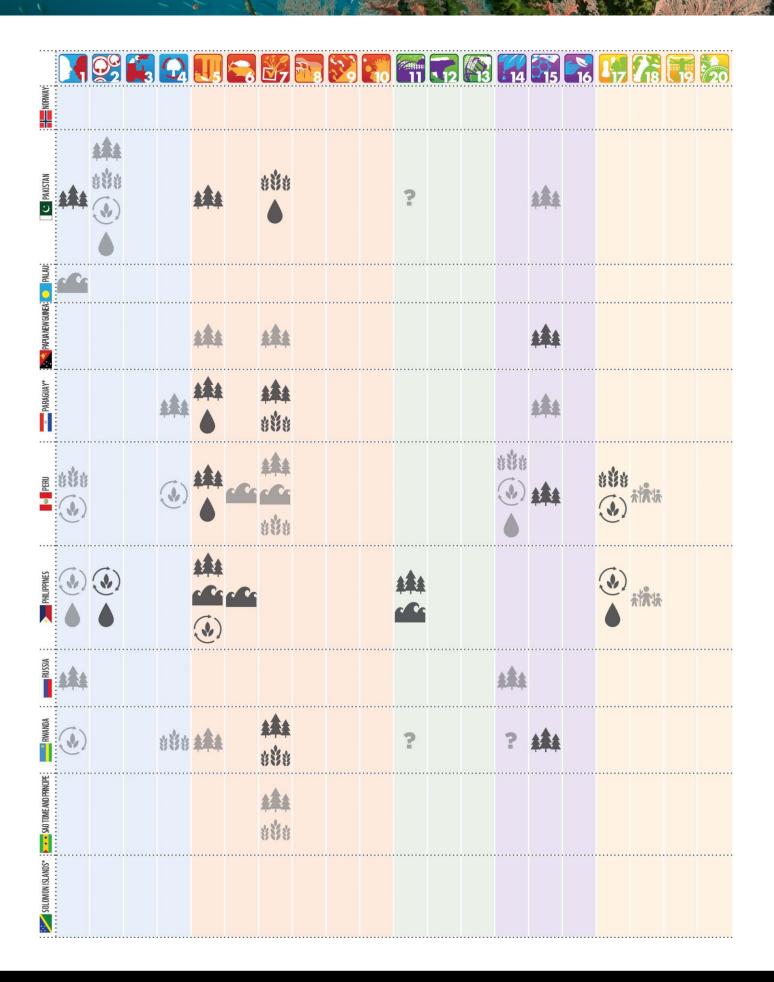


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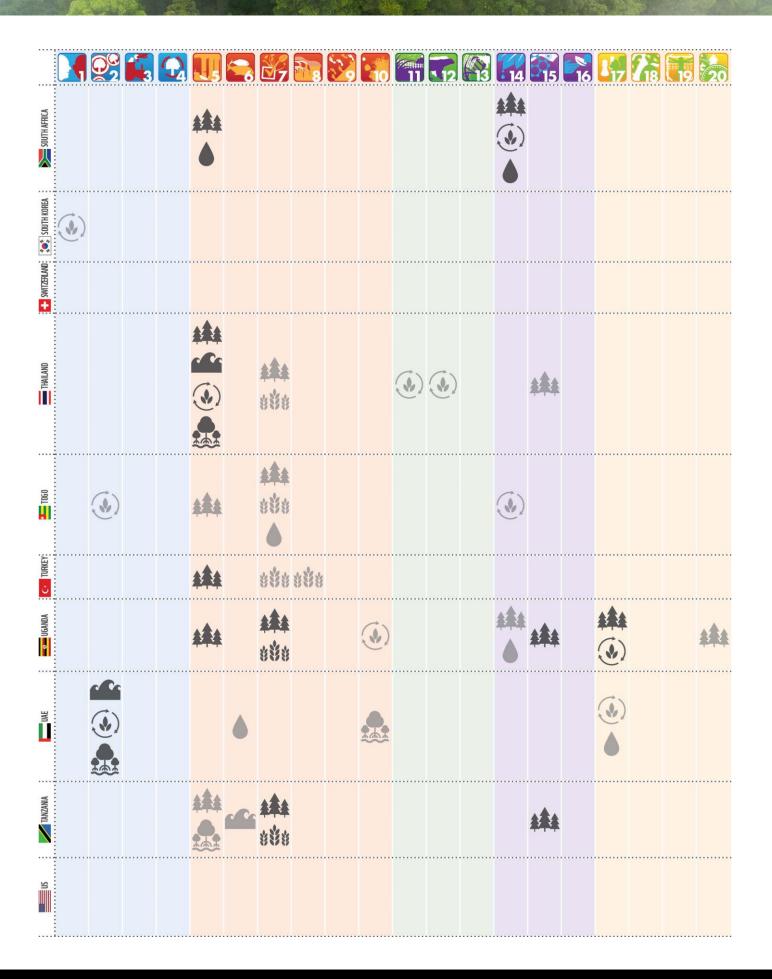


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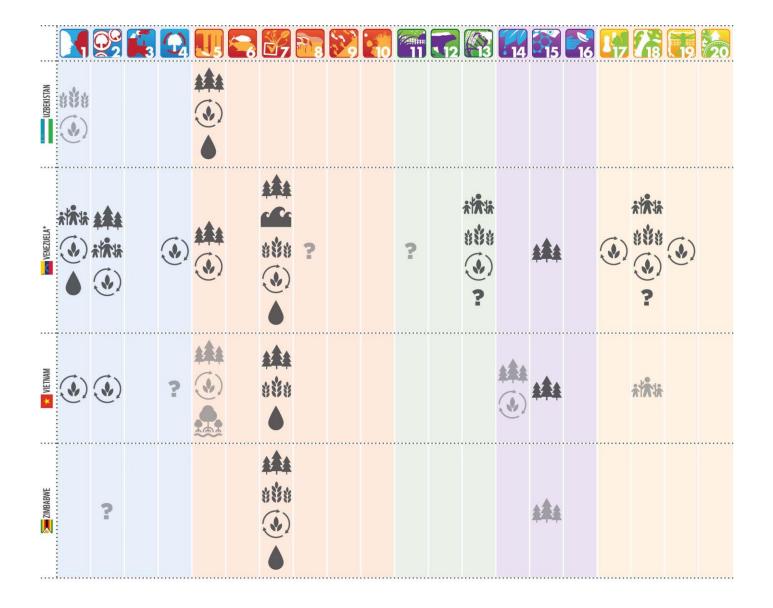
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# **CASE STUDY: BHUTAN FOR LIFE**

WWF seeks to practice what it preaches. We have recently been granted funding from the Green Climate Fund for the 'Bhutan for Life' project, which will secure 51% of Bhutan's territory as protected areas, helping to conserve its biodiversity in the face of climate change, and which will help it achieve its NDC goal of becoming carbon neutral. This project will contribute towards Bhutan's constitutional goal of maintaining 60% of its lands as forested.

Although Bhutan's protected areas are relatively intact, they face increased pressure from economic development in surrounding areas, illegal resource extraction and natural disasters. Climate change is also a threat, and is projected to cause more extreme and variable weather, leading to forest fire, floods and landslides. Accelerated glacier melting is also an increasing reality.

The project aims to address the government's main constraints of capacity and funding through the creation of a sinking fund that will provide one-time, 14-year bridge financing to better manage Bhutan's protected areas, while the country develops its own sustainable financing streams.

This national-level project will address forestry and land use mitigation, adaptation in communities and ecosystems, continued provision of ecosystem services and sustainable management of the protected areas.

Bhutan for Life will map the connectivity of terrestrial and aquatic ecosystems and assess the rate of habitat change through fragmentation and degradation. This mapping, with other studies, will be the basis for designating high biodiversity habitats, degraded lands and climate refugia (habitats likely to persist despite climate impacts) and identify where biological corridors need to be maintained or established in the face of shifting habitats.

The project uses the stability and increase of populations of large carnivores – snow leopards and tigers – as indicators of conservation success. As well as being important conservation species in their own right, their substantial habitat requirements act as an umbrella to protect the needs of other species.

The Bhutan for Life project therefore helps to protect ecosystem services for the people of Bhutan, while helping to achieve greater climate resilience, carbon neutrality and the conservation of species and habitat.

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### This discussion paper was prepared by WWF-UK / Our Planet team

**Authors**: Katherine Watts (first edition), Nina Gabrych (second edition), Vanessa Morales (second edition)

With contributions from: Peggy Bevan WWF-UK, Bernadette Fischler WWF-UK, Jaco du Toit WWF-UK, Guenter Mitlacher WWF-DE, Stephen Cornelius WWF-UK, Fernanda Viana de Carvalho WWF CEP, Ruth Fuller WWF-UK, Mark Lutes WWF-CEP, Sandeep Chamling Rai WWF-CEP, Karen Peterson WWF-US, Vanessa Morales WWF-CEP and Manuel Pulgar-Vidal, WWF-CEP, Andrew Wu WRI, Cynthia Menendez WWF Mexico, Fernanda Viana CEP Policy, Gareth Redmond WWF-UK, Mariela Canepa WWF Peru, Monica Richter WWF Australia, Elmar Groose WWF Switzerland, T.S. Panwar WWF India and Prabhat Upadhyaya WWF South Africa.

### Graphic design: Deniz Tekkul

**Contact:** Bernadette Fischler, Head of Advocacy – Our Planet / 2020 Project, WWF-UK bfischler@wwf.org.uk

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