



NDCS – A FORCE FOR NATURE?

Nature, more specifically biodiversity, is declining at an alarming rate – and climate change has become an important driver. Without addressing this rapid loss of biodiversity, the world will struggle and likely fail to live up to the Paris Agreement or to achieve the SDGs and CBD Aichi Targets. And conversely without addressing climate change, actions to tackle the loss of biodiversity are likely to fail. Hence aligning action on addressing climate change, achieving sustainable development and securing biodiversity and healthy ecosystems are interdependent challenges, and in the interest of people and planet alike.

This discussion paper adds to our understanding how climate, development and biodiversity agendas interrelate. It analyses how several Nationally Determined Contributions (NDCs) are contributing to potentially halting and reversing the loss of biodiversity and thereby also to achieving the Sustainable Development Goals (SDGs). The paper concludes with a list of recommendations on policy and implementation.

TABLE OF CONTENTS

Introduction.....	2
Key findings and key recommendations.....	3
Considerations on aligning action on climate, SDGs and biodiversity.....	6
Methodology to analyse CBD Aichi Targets reflected in NDCs.....	11
Findings from analysis of Aichi Targets in NDCs.....	12
Recommendations.....	16
Country analyses.....	18



INTRODUCTION

In recent years, several multilateral agreements on environment and development have been decided, which require mutual complementarity and seem to lend themselves to an integrated approach.

In 2020, the Convention on Biological Diversity (CBD) decided on the Strategic Plan 2011-2020, including 20 Aichi Targets, to provide a framework for conservation and sustainable use to 2020. The plan is intended to working towards the CBD's 2050 vision of a healthy planet with restored ecosystem services delivering benefits for all people.

The Paris Agreement on climate change marked the next stage of action under the UN Framework Convention on Climate Change (UNFCCC), 162 national and regional Nationally Determined Contributions (NDCs) - climate targets and actions – were submitted representing 190 countries. Some countries set goals to 2025 and others to 2030ⁱ. By 2020, parties will have an opportunity to update and upgrade the NDCs in accordance with the Agreement.

The Sustainable Development Goals (SDGs) built upon the Millennium Development Goals, creating 17 global goals and 169 targets to be achieved by 2030.

These agreements and plans of action on the three areas of climate, biodiversity and sustainable development are all complementing each other. Firstly, sustainable development will be impossible should the biodiversity and ecosystem services on which human existence relies become degraded beyond repair through climate change and/or other causes. Global warming under current emissions trajectories will mean many species may not be able to move or adaptⁱⁱ fast enough. Secondly, at the same time, biodiversity and ecosystems play an important role in addressing climate change, especially for adaptation but also for mitigation. A recent study showed that natural climate solutions – mostly based on improved ecosystems – can provide a significant amount of cost-effective CO₂ mitigation needed through 2030ⁱⁱⁱ. Further, it will likely not be possible to keep global warming to 1.5°C without addressing the loss of biodiversity, including action on forests, oceans and agriculture in addition to fossil fuel based mitigation^{iv}. And thirdly, solving the climate problem can be greatly supported by achieving sustainable development. By definition^v, sustainable development cannot cause climate change or else it would impede on the development of future generations.

This paper builds on existing studies of the synergies between the SDGs and NDCs^{vi} and of the SDGs and the Paris Agreement^{vii}, with the aim of assessing the degree of alignment and integration of the current NDCs and the Aichi Targets. It proposes ways in which synergies can be realised, at international as well as national level, through coordinated or even joint implementation supported by policy frameworks. Optimising synergies is critical to make the most of scarce resources, promote efficiencies in actions, and increase information sharing to deliver effective, integrated outcomes.



KEY FINDINGS AND KEY RECOMMENDATIONS

There is a **growing appreciation of the immense benefits of synchronizing efforts** to achieve the SDGs^{viii} and the Aichi Biodiversity Targets^{ix}, with the NDCs. An integrated approach to implementation would also have huge potential for co-benefits across climate, development and biodiversity.

Overall, our analysis of a range of NDCs shows, that some countries are doing sustainable development planning to include climate and biodiversity in an integrated manner, and have reported this in their NDC. This demonstrates that it is indeed possible to do so.

Unfortunately, the alignment of action on SDGs and Aichi Targets with action on climate change is **currently underreported in most NDCs** – with some notable exceptions. Therefore including reporting on alignment of NDCs with SDGs and Aichi Biodiversity Targets would help clarify the NDCs and potentially help to enhance them ahead of 2020. For example, the potential of nature-based contributions to mitigation has often been underestimated^x which could provide good cause to revise and enhance NDCs before 2020.

Our analysis finds that among the different types of biodiversity conservation action included in the NDCs, **forest related actions were most prevalent**. A smaller amount of actions relate to agriculture, mangroves and ecosystems more generally. This makes sense since agriculture, forestry and other land uses are responsible for roughly a quarter of global emissions^{xi}. Further NDC commitments on oceans, freshwater and indigenous knowledge also relate to the Aichi Targets. To assess how far these actions are or aren't closing the gap to the level of ambition required, all countries would need to include those actions comprehensively in their NDCs.

There is a clear **difference between the NDCs of developing and developed countries** – the latter mostly reported their economy-wide target and the sectors covered. Providing details on links to the SDGs and Aichi Targets, however, could not only strengthen implementation by clarifying how countries will achieve their economy wide targets, they would also provide an entry points to ensure that economy wide targets are implemented in a way that amplifies synergies agendas.



KEY RECOMMENDATIONS (PLEASE SEE CHAPTER 'RECOMMENDATIONS' FOR FURTHER DETAILS)

- **Provide guidance/recommendations on reporting** for countries on how to include in their NDCs whether and how mitigation and adaptation actions are contributing to achieving the SDGs and biodiversity targets.
- **Investigate the potential** that increased actions supporting biodiversity, species and ecosystems would have in enhancing NDCs ahead of 2020.
- **Develop appropriate common indicators** for reporting between UNFCCC, CBD and UNCCD. The Executive Secretaries of the Rio Conventions identified land use as a possible such area.
- **Leverage the power of non-state actors**, such as the Global Climate Action Agenda, and encourage them to embrace an integrated approach to climate, development and biodiversity.
- **Adopt an integrated approach** at global and domestic level (overcoming institutional and other barriers) to planning and implementation related to climate, development and nature.



SELECTED QUOTES FROM NDCS - PART 1



BRAZIL

The implementation of policies and measures to adapt to climate change contributes to building resilience of populations, ecosystems, infrastructure and production systems, by reducing vulnerability and through the provision of ecosystem services.



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

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



GUATEMALA

La ley marco de cambio climático creó, a nivel político, el consejo nacional de cambio Climático orientado a velar por la aplicación de esa ley. Adicionalmente, se han creado unidades técnicas especializadas en los Ministerios de Ambiente, Agricultura, Energía y Minas, Finanzas, Relaciones Exteriores y otras dependencias como: Consejo Nacional de Áreas Protegidas, Instituto Nacional de Bosques, Instituto de Sismología, Vulcanología, Meteorología e Hidrología.



INDIA

Environmental sustainability, which involves both intra-generational 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.



CONSIDERATIONS ON ALIGNING ACTION ON CLIMATE, SDGS AND BIODIVERSITY

CLIMATE AND SDGS

Analysis by the World Resources Institute (WRI) found a high degree of alignment between the SDG targets and the NDCs. The study^{xii} found that 154 of the 169 SDG targets were aligned with climate actions planned for the NDCs, and while from some SDG targets, a limited number of NDCs reflected an alignment, other targets showed widespread alignment. The Energy and Resources Institute (TERI) study^{xiii} of selected Asian countries assessing alignment of NDCs with the SDGs similarly found good overlaps, although the exact matches differed considerably between countries, reflecting different national circumstances and priorities.

The overlaps between the Nationally Determined Contributions (NDCs) to climate action and the SDGs strongly suggest the need for integration of implementation strategies between these agreements at the national level, being aware of the potential tradeoffs, as well as the demonstrable synergies.

BIODIVERSITY AND SDGS

In 2016, the 15th CBD Conference of Parties to the CBD (COP-15), which followed the agreement of the SDGs was alive to their potential, and decided that Parties and all relevant stakeholders should integrate and mainstream biodiversity, including the Aichi Biodiversity Targets into SDG implementation, noting the importance of biodiversity and ecosystem services for sustainable development. The CBD Secretariat prepared a technical note^{xiv} showing the synergies between the SDGs and Aichi Targets, showing that each SDG aligned with at least one of the Aichi Targets.

In 2020 a new strategic framework of the CBD following on from the Aichi Targets and covering the time span of 2021 to 2030 will be agreed. Revised or new targets will need to be incorporated into the extension of those SDG targets that expire in 2020 due to their alignment with the Aichi Targets – the SDGs run generally until 2030. The post-2020 CBD framework and subsequent frameworks are intended to build on each other to achieve the 2050 vision of the CBD.

The 2050 vision of CBD

“By 2050, biodiversity is valued, conserved, restored and widely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people”

The graphic on the next page shows the extent to which the CBD targets overlap with the SDGs^{xv} – clearly indicating that aligning their implementation could be effective as well as efficient.



Overlaps of CBD Aichi Targets with SDGs

		A I C H I T A R G E T S																				
		GOAL A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society				GOAL B: Reduce the direct pressures on biodiversity and promote sustainable use						GOAL C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity			GOAL D: Enhance the benefits to all from biodiversity and ES services			GOAL E: Enhance implementation through participatory planning, knowledge management and CB				
STRATEGIC GOALS		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
		Awareness of biodiversity	Biodiversity values integrated	Incentives reformed	Sustainable production and consumption	Habitat loss halved or reduced	Sustainable management of aquatic living sources	Sustainable agriculture, aquaculture and forestry	Pollution reduced	Invasive alien species prevented and controlled	Ecosystems vulnerable to climate change	Protected areas	Reducing risk of extinction	Safeguarding genetic diversity	Ecosystem services	Enhancement of carbon stocks	Access to and sharing benefits from genetic resources	Biodiversity strategies and action plans	Indigenous and local knowledge	Sharing information and knowledge	Mobilize resources from all sources	
SUSTAINABLE DEVELOPMENT GOALS	1		●				●	●							●							
	2				●		●	●						●						●		
	3								●					●	●		●					
	4	●																			●	
	5															●			●	●		
	6								●			●			●	●						
	7					●		●							●	●					●	
	8		●		●			●	●						●	●		●				
	9		●		●				●						●	●					●	
	10								●							●				●		●
	11		●		●				●			●			●	●						
	12	●			●			●	●	●											●	
	13		●			●						●			●	●			●			
	14	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	16																		●			
	17		●																●		●	●



CLIMATE AND BIODIVERSITY

This report focuses on the third side of this synergistic triangle: the alignment of climate actions with the Aichi Targets.



Ecosystems are defined by a number of climatic factors, including temperature and precipitation levels. They are therefore vulnerable to climate impacts, and these, combined with other significant threats such as habitat destruction, atmospheric pollution, habitat fragmentation, invasion of alien species and overexploitation, can place destructive stress on the ecosystem. It should also be noted that these factors are not independent variables: an ecosystem is more susceptible to alien invasion if it is inherently low in biodiversity, such as in island systems, or if it is already stressed through other threats.

Conversely, the biodiversity is important in maintaining ecosystem functions, as well as providing many essential resources and services. These include:

- Carbon sequestration and storage,
- Nutrient cycling
- Agricultural pollination
- Flood protection/ disaster risk reduction
- Cultural services
- Ecotourism
- Food\fuel
- Building materials
- Medicines

Diversity itself is a biological insurance policy and there is a substantial literature on the 'diversity-stability hypothesis' that would suggest biodiversity itself reduces risks of instability of ecosystems and biological resources on which life on earth relies.

There is already an internationally-agreed mandate for countries to integrate biodiversity considerations into all relevant national policies and plans in response to climate change^{xvi}: both the text of the UNFCCC^{xvii} and CBD^{xviii}, and this was explicitly reaffirmed in the climate-biodiversity context by the COP to the CBD in 2006^{xix}.

There is also a forum between the climate and biodiversity Convention secretariats (also with that of the UN Convention to Combat Desertification) aiming to enhance coordination and explore



opportunities for cooperation and synergistic action between the three Conventions. The Joint Liaison Group has met since 2000 and has identified land use as an area of mutual concern.

Coordinating complex issues, at both the governmental and intergovernmental levels, is not without its difficulties. The World Conservation Union identifies three general barriers to achieving synergistic cooperation:

- Technical (lack of understanding of cross-cutting issues)
- Political (lack understanding at the policy-making level, lack of communication between departments and ‘territoriality’)
- Cultural (lack of insight into working at ground level and an awareness of the territoriality of others)^{xx}

Despite these potential barriers, quite a few of the NDCs do incorporate, in more or less detail, biodiversity considerations, some explicitly linking their climate action to achievement of the Aichi Targets. A survey of the NDCs by the International Institute for Environment and Development found that 109 of the 162 NDCs submitted at the time indicated ecosystem-orientated visions for adaptation and 23 explicitly related to ecosystem based adaptation. Nine of these were from Least Developed Countries, and all except Armenia were from tropical countries^{xxi}.

Biodiversity arises in mitigation too, notably in the forest sector. A WWF survey of 75 NDCs found 20% aimed to maintain or increase their forest cover, with a third aiming to reforest or afforest^{xxii} (although information was patchy as to whether this was for ecosystem rehabilitation or commercial forestry).

This paper looks at 29 NDCs covering 56 countries to gather a wider impression of the degree of alignment between the NDCs and the achievement of the Aichi Targets.



SELECTED QUOTES FROM NDCS - PART 2



MADAGASCAR

*...the choice of the **identified adaptation sectors** (agriculture, coastal zone management, human health), **as well as ecosystem based adaptation approach** (forests, mangroves, biodiversity, water resources) **can have significant benefits on the mitigation**. In fact, these actions may contribute to the strengthening of carbon stocks.*



MARSHALL ISLANDS

*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.*



MEXICO

*In Mexico there is a **large diversity of ecosystems that provide society with a vast amount of environmental services** such as carbon sequestration, provision and maintenance of water, habitat conservation for the permanence of species, reduction of impacts caused by meteorological disasters, and the formation and maintenance of soils. These environmental services are seriously threatened by human activities and by the effects of climate change. **Ecosystem-based adaptation consists of the conservation of biodiversity and ecosystem services as part of an integral adaptation strategy to assist human communities to adapt to the adverse effects of climate change.***



INDONESIA

*Indonesia has taken significant steps to reduce emissions from LULUCF by instituting a **moratorium on the clearing of primary forests and by prohibiting conversion of peat lands from 2010-2016**. These on-going efforts will be strengthened through... **active participation** of the private sector, SMEs, civil society organizations, local communities and the most vulnerable groups, especially **adapt communities [customary law of the indigenous peoples of Indonesia]** and women - in both the **planning and implementation phases**.*



JORDAN

*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**.*



Using the method of text analysis, each NDC was rated for each Aichi target as strong or less strong (dark and light green, respectively) based on the level of relevant detail provided in the NDC, taking into account such factors as whether the action was already enshrined in actual 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.

As very few countries, (Colombia and Jordan are some exceptions) made explicit linkages to the Aichi Targets, the text analysis assessed alignment of the NDC with the content of the Aichi Targets, rather than exact reference of their wording.

The symbols (forest, marine, indigenous, agriculture, ecosystems, mangroves, freshwater and unspecified) indicate the context in which the NDC relates to the respective Aichi Targets.

In addition to the in-depth country analysis per Aichi Targets, we have also provided an overview analysis indicating how detailed the NDCs refer to biodiversity and ecosystems overall as well as to the SDGs, Disaster Risk Reduction and more general the terms ‘sustainable’ as well as ‘co-benefits’ and ‘synergies’.

To round up the analysis we have also provided a short summary comment for each NDC analysed.

FINDINGS FROM ANALYSIS OF AICHI TARGETS IN NDCS

From this indicative snapshot of some of the NDCs, it is clear that **a number of countries are already integrating biodiversity into climate actions in their thinking, plans and policies.**

Some of these, like Colombia and Jordan are explicit in the NDC that they are aligning their plans with their implementation of the Aichi Targets themselves. Others, like Mexico and Guatemala, have provided quite specific actions in their NDCs that demonstrate joined up planning, but have not specified whether this is directly in pursuit of achieving the Aichi Targets.

Peru gave useful detail on how it has approached the creation of its NDC, which showed clear recognition of its natural systems, their vulnerability and value. The country established three levels of dialog, at the scientific, political and multi-ministerial levels, followed by public consultation on the proposal. This created opportunities for climate specialists to have inputs from those with other specialisms, potentially including biodiversity.

While some countries, like South Africa, focus on conservation for human benefit, others, like Brazil and Uzbekistan, seem to see value in protecting ecosystems in their own right.



There were different types of biodiversity conservation actions included in the NDCs.

Most prevalent was action related to forests but not all countries mentioning forests included concrete targets. Some countries offered relevant details. Madagascar, for example, included the important-for-biodiversity detail that their reforestation would use native species. Paraguay was clear that it would use plantations to reduce pressure on native forests and Brazil also included a strong deforestation/reforestation component in their NDC. Many countries included forest conservation as part of their REDD programs but not all that mentioned forests were clearly committing to implementing REDD+ or forest action as part of their NDC.

Many countries noted their multi-stakeholder processes in developing their NDCs. Some, like Brazil, and the Philippines spoke of **indigenous peoples** in the context of respect for Human Rights, while New Zealand noted the spiritual importance of the land for the Maori people. Other countries, like Indonesia and Peru were explicit in having consulted indigenous peoples, while Guatemala noted that its national climate law included legal safeguards for the rights of indigenous peoples.

Marine and terrestrial coastal ecosystems and their biodiversity tended to be raised in the context of adaptation, with countries including the Marshall Islands, intending mangrove rehabilitation programs, and Mexico planning to conserve and recover their mangroves, as well as sea grass, coral reefs and dunes.

There is a noticeable difference in the NDCs of developed and developing countries, however.

Developed countries generally reported their economy-wide target and the sectors that would be covered in the NDC, which is somewhat a missed opportunity to share ideas and potential good practice for others to learn from. More importantly, including such detail could strengthen implementation as it sets a clear direction of travel and clarifies how countries will achieve their economy wide targets – therefore hopefully also providing entry points to ensure countries are implementing their economy wide targets in a way that amplifies synergies with other agendas.

Other Aichi target related action focused on **species and habitats**. With climate change likely to cause ecosystems to move towards climatic conditions that force species and ecosystems to move, Mexico and Madagascar’s plans to increase connectivity and create wildlife corridors suggests thinking through what conservation in a climate changing world will need. Jordan is conducting a review of its National Network of Protected Areas to both identify climate-vulnerable ecosystems, but also to design buffer zones to “[strengthen} the adaptive capacities of key ecological hotspots”.

Biodiversity-related adaptation actions, such as mangrove restoration and planting, featured in quite a few of the developing countries’ NDCs, and some, including Nepal, explicitly planned to take an ecosystem-based adaptation approach. None of the Annex I countries included in this analysis included adaptation elements in their NDCs, although Australia noted it was preparing a national



adaptation strategy and New Zealand and Norway referred readers to their respective 6th National Communications.

As can be seen in the analysis, countries included – apart from climate action related to forest, mangroves and ecosystems more general – also action on marine environments, agriculture and freshwater as well as references to the values of indigenous and traditional knowledge.

Overall, some countries are doing sustainable development planning to include climate and biodiversity in an integrated manner, and have reported this in their NDC. This demonstrates that it is indeed possible to do so. Some gaps are almost inevitably because of the NDCs' place as contributions as part of the climate negotiations, where some countries may have not seen the value in including the biodiversity-relevant parts of their planning. This does not however mean that it might not be happening domestically. **It is also possible that some countries are yet to integrate their plans and may be missing opportunities for achieving these essential co-benefits.**



SELECTED QUOTES FROM NDCS - PART 3



NEPAL

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

Our planted forests have enabled the phase out of timber from our natural, indigenous forests, protecting these original forests and providing a sustainable supply of timber and wood products for both export and domestic use.



PERU

Peru has 84 out of the 117 life zones of the world...even in the most moderate climate change scenario, the potential growth of the country will be adversely affected since many activities of high economic potential depend on eco-systemic resources that this diversity provides (such as the hydropower, agriculture, livestock and tourism sectors).



PHILIPPINES

The Philippines is endowed with diverse ecosystems, 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.



UGANDA

Ugandan communities, private sector and NGOs can also contribute significantly to these climate change-related activities, for instance through public-private partnerships and payment for ecosystem services schemes.



RECOMMENDATIONS

The integrated thinking and plans of some countries in their NDCs demonstrate what is possible and provides examples for current best practice that could inform the recommendations to other countries. However, there might be many more good examples for integrated planning that just aren't reported in the NDCs. Sharing this information could be of benefit for other countries' NDC planning.

This creates a **strong argument for countries to clarify their NDCs** by reporting in greater detail what development and biodiversity actions and policies will be integrated in the NDCs. After all, Article 17.1 of the CBD requires “[facilitating] the exchange of information” and the UNFCCC Article 7.1b requires [facilitating] the exchange of information on measures adopted by Parties to address climate change and its effects”. Bringing these elements together would create information more valuable than the sums of its parts.

From the numerous studies indicating that countries are not yet on target to achieve the goals of limiting warming to well below 2°C or 1.5°C as required by the Paris Agreement, the **NDCs also need to be enhanced**. Various options for this enhancement are already being discussed^{xxiv}. The Facilitative Dialogue in 2018 will provide three opportunities in this context: firstly, to take stock of the progress and revisit shortfalls. Secondly, to explore opportunities for climate action that also advance biodiversity and development objectives. And thirdly, to collectively resolve closing the gap in the form of more ambitious NDCs by 2020.

On the one hand, it will most likely be unavoidable for countries to integrate climate and biodiversity action, for example on deforestation, ocean acidification, land use and agriculture, if they want to limit global warming to 1.5°C. This enhancement is, on the other hand, in itself essential to achieve the Aichi Targets, and to avoid the worst predictions surrounding the 6th global mass extinction in the Earth's history.

Policy at international level

- COP decisions by Parties to the UNFCCC and CBD and other relevant processes that **reporting of integrated actions** should be an element in respective reporting, to incentivize integrated thinking and planning on climate and biodiversity, eg the **NDC should be required to include noting whether and how mitigation and adaptation actions are contributing towards achieving the SDGs, CBD and UNCCD goals**.
- Development of **common indicators for reporting** between the Conventions, as appropriate. The fourteenth meeting of the Executive Secretaries of the Rio Conventions, 24 August 2016, identified land use as a possible such area.



- The UNFCCC requiring **reporting on the role of nature in adaptation planning** in each country's NDC would help demonstrate integrated thinking, including measurable targets, and also to share knowledge and ideas.
- **Joint technical papers** by the UNFCCC and CBD Secretariats to **define areas and practices where co-benefits can be realized** and what factors could maximize benefits.
- Create **platforms for identifying and sharing best practice**, including formal and informal events at CBD and UNFCCC negotiation sessions.
- **Create political and economic incentives for the restoration of ecosystems with native species**, since it will contribute to both the UNFCCC and CBD targets.
- When allocating Means of Implementation, take into account that acting holistically on biodiversity, development and climate will help ensure that **(often limited) resources are used more efficiently and effectively**.

Policy at national level

- National governments should **recognise the synergies between mitigation and adaptation actions, and sustainable development and biodiversity conservation**, with a view to developing integrated plans of action.
- **A national high-level panel/commission/cabinet should be established**, ideally led by the head of state and include all relevant ministers, to create integrated plans, realize potential co-benefits, and reach agreement on tradeoffs where they occur. Intersectoral planning groups including scientists, NGO experts and officials should also contribute to the process, and there should be a period of open public consultation when draft plans have been made.
- **Invest in capacity-building** at the national, sub-national and local levels, and to take into account local and indigenous knowledge, as part of that knowledge sharing dialog.

Implementation and Planning

- **Leverage the power of non-state actors**, for example the Global Climate Action Agenda, and encourage them to embrace integrated action on climate, development and nature.
- **Incorporate in all planning processes the understanding** that addressing biodiversity loss is an important element to staying well below 2°C and essential for 1.5°C and that – in turn – **mitigating climate change will help the natural systems, on which we rely**, for adaptation and climate resilience (among other things).
- Consider future climate conditions in ecosystem management and demarcation of protected areas: **species will need to be able to move** in response to changing climatic conditions.
- Restore ecosystems with native species, in a diversity appropriate to the locality: **biodiversity helps to provide stability for the ecosystem against changing conditions**.



COUNTRY ANALYSIS - AICHI TARGETS

KEY TO ICONS								
	FORESTS	OCEANS	INDIGENOUS	AGRICULTURE	ECOSYSTEM	MANGROVES	WATER	UNSPECIFIED
	● DARK GREY ICON: MORE DETAILS PROVIDED				● LIGHT GREY ICON: FEWER DETAILS PROVIDED			

A I C H I T A R G E T S

STRATEGIC GOALS	GOAL A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society				GOAL B: Reduce the direct pressures on biodiversity and promote sustainable use						GOAL C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity			GOAL D: Enhance the benefits to all from biodiversity and ES services			GOAL E: Enhance implementation through participatory planning, knowledge management and CB			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Awareness of biodiversity	Biodiversity values integrated	Incentives reformed	Sustainable production and consumption	Habitat loss halved or reduced	Sustainable management of aquatic living sources	Sustainable agriculture, aquaculture and forestry	Pollution reduced	Invasive alien species prevented and controlled	Ecosystems vulnerable to climate change	Protected areas	Reducing risk of extinction	Safeguarding genetic diversity	Ecosystem services	Enhancement of carbon stocks	Access to and sharing benefits from genetic resources	Biodiversity strategies and action plans	Indigenous and local knowledge	Sharing information and knowledge	Mobilize resources from all sources
 ARGENTINA						 														
 AUSTRALIA																				
 BRAZIL																	 			
 CHINA					 	 							 							
 COLOMBIA	 	 			 	 							 							



STRATEGIC GOALS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Awareness of biodiversity																					
Biodiversity values integrated																					
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Ecosystem services																					
Enhancement of carbon stocks																					
Access to and sharing benefits from genetic resources																					
Biodiversity strategies and action plans																					
Indigenous and local knowledge																					
Sharing information and knowledge																					
Mobilize resources from all sources																					

EU

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INDIA

INDONESIA



STRATEGIC GOALS	JAPAN	JORDAN	KENYA	SOUTH KOREA	MADAGASCAR
1 Awareness of biodiversity					
2 Biodiversity values integrated					
3 Incentives reformed					
4 Sustainable production and consumption					
5 Habitat loss halved or reduced					
6 Sustainable management of aquatic living sources					
7 Sustainable agriculture, aquaculture and forestry					
8 Pollution reduced					
9 Invasive alien species prevented and controlled					
10 Ecosystems vulnerable to climate change					
11 Protected areas					
12 Reducing risk of extinction					
13 Safeguarding genetic diversity					
14 Ecosystem services					
15 Enhancement of carbon stocks					
16 Access to and sharing benefits from genetic resources					
17 Biodiversity strategies and action plans					
18 Indigenous and local knowledge					
19 Sharing information and knowledge					
20 Mobilize resources from all sources					



STRATEGIC GOALS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Awareness of biodiversity																				
Biodiversity values integrated																				
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Sustainable management of aquatic living sources																				
Sustainable agriculture, aquaculture and forestry																				
Pollution reduced																				
Invasive alien species prevented and controlled																				
Ecosystems vulnerable to climate change																				
Protected areas																				
Reducing risk of extinction																				
Safeguarding genetic diversity																				
Ecosystem services																				
Enhancement of carbon stocks																				
Access to and sharing benefits from genetic resources																				
Biodiversity strategies and action plans																				
Indigenous and local knowledge																				
Sharing information and knowledge																				
Mobilize resources from all sources																				

PERU

PARAGUAY*

NORWAY

NEW ZEALAND

NEPAL

MEXICO

MARSHALL ISLANDS



STRATEGIC GOALS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Awareness of biodiversity																				
PHILIPPINES																				
SOUTH AFRICA																				
SWITZERLAND																				
TURKEY																				
UGANDA																				
US																				
UZBEKISTAN																				

*NDC translated using Googletranslate



COUNTRY ANALYSIS – OVERALL

KEY TO COLOURS		● DARK GREY CIRCLE: MORE DETAILS PROVIDED		● LIGHT GREY CIRCLE: FEWER DETAILS PROVIDED		
	Mentions biodiversity, ecosystems or similar	Mentions disaster risk reduction	Mentions the SDGs	Mentions the world sustainable/sustainably	Mentions cobenefits/synergies	Overall comment
 ARGENTINA	●	●		●	●	Argentina is admirably explicit about the importance of integrating biodiversity into climate planning, both for adaptation (including ecosystem-based adaptation) and mitigation, noting that 21% of the country's emissions are from land use, with a further 28% from agriculture.
 AUSTRALIA						Australia's NDC is brief and focused on its economy-wide target, rather than detail of planned implementation, although it states plans to develop a National Climate Resilience and Adaptation Strategy during 2015 which may better reflect an integration of biodiversity considerations into climate policy.
 BRAZIL	●			●		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.
 CHINA	●	●		●		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.
 COLOMBIA	●	●	●	●	●	Colombia has made the exemplary decision to seek potential co-benefits between adaptation and mitigation, as well as expressly aiming to integrate its adaptation action with implementation of targets from the Convention on Biological Diversity (including the Aichi goals), the SDGs, those of the UN Convention to Combat Desertification and the Sendai Framework on Disaster Risk Reduction, as well as having a National Strategy for Emissions from Deforestation and Forest Degradation, which will help to conserve forest biodiversity.
 EU						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	●	●				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.
 GUATEMALA	●	●	●	●	●	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.
 INDIA	●	●	●	●		India's NDC itself is a succinct statement of its 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."



	Mentions biodiversity, ecosystems or similar	Mentions disaster risk reduction	Mentions the SDGs	Mentions the word sustainable/ sustainably	Mentions cobenefits/ synergies	Overall comment
 INDONESIA	●	●	●	●		Indonesia's NDC shows integrated thinking, stating that the NDC took into account the SDGs and the need for sustainable management of its natural resources and sustainable consumption and production, including from natural ecosystems, as well as reversing land degradation and biodiversity 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.
 JAPAN						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	●		●	●	●	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.
 KENYA	●					Kenya's NDC is short and to the point. There are clear areas where ecosystems are considered, but these are not greatly elaborated on.
 SOUTH KOREA	●	●				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.
 MADAGASCAR	●	●		●		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
 MARSHALL ISLANDS		●		●	●	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.
 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.
 NEPAL	●	●	●	●	●	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.
 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.



	Mentions biodiversity, ecosystems or similar	Mentions disaster risk reduction	Mentions the SDGs	Mentions the word sustainable/ sustainably	Mentions cobenefits/ synergies	Overall comment
 NORWAY						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.
 PARAGUAY				●		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.
 PERU	●	●		●	●	In its NDC, Peru has considered the diversity of its ecosystems and seeks to draw synergies between mitigation and adaptation 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.
 PHILIPPINES	●	●		●	●	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.
 SOUTH AFRICA	●	●		●		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.
 SWITZERLAND						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.
 TURKEY				●		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.
 UGANDA		●	●	●	●	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.
 US						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	●		●	●	●	Uzbekistan clearly recognizes the foundational role 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.



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 habitats.



ANNEXE: OVERLAPS BETWEEN SDGS, CBD AICHI TARGETS AND PARIS AGREEMENT

SDG	Relevant Aichi Biodiversity target ^{xxv}	Relevant Paris Agreement provision
1. End poverty in all its forms everywhere	2, 6, 7, 14	Preamble, Articles 2.1, 4, 6.8,
2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture	4, 6, 7, 13, 18	Preamble, Article 2.1b
3. Ensure healthy lives and promote well-being for all at all ages	8, 13, 14, 16, 18	Preamble
4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	1, 19	Preamble, Articles 11.1, 12; 1/CP.21 para 82
5. Achieve gender equality and empower all women and girls	14, 17, 18	Preamble Article 7.5, 11.2 1/CP.21 preamble 1/CP.21 para 102
6. Ensure availability and sustainable management of water and sanitation for all	8, 11, 14, 15	
7. Ensure access to affordable, reliable, sustainable and modern energy for all	5, 7, 14, 15, 19	1/CP.21 preamble
8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	2, 4, 6, 7, 14, 16	Article 4.7, 7.5, 7.9e, 10.5 1/CP.21 para 108, 109d, 127b
9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	2, 4, 8, 14, 15, 19	Article 10.5
10. Reduce inequality within and among countries	8, 15, 18, 20	
11. Make cities and human settlements inclusive, safe, resilient and sustainable	2, 4, 8, 11, 14, 15	1/CP.21 preamble 1/CP.21 para 133
12. Ensure sustainable consumption and production patterns	1, 4, 6, 7, 8, 19	Preamble
13. Take urgent action to combat climate change and its impacts	2, 5, 10, 14, 15, 17	1.CP.21 and the Paris Agreement
14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development	1-20	Preamble
15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	1-20	Preamble Article 5.1, 5.2, 7.2, 7.5, 7.9c, 8.4h 1.CP.21 para 54
16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	17	Preamble Article 6.8c, 7.7b, 9.9, 11.5, 19.1, 19.2 1.CP.21 para 42a, 43, 45, 64, 73a, 81, 84, 85a, 130, 133,
17. Strengthen the means of implementation and revitalize the global partnership for sustainable development	2, 17, 19, 20	Article 9 (finance) Article 10 (technology) Article 11 (capacity building) Article 12 (training and education)



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ⁱ http://unfccc.int/focus/indc_portal/items/8766.php The difference in the number of submitted INDCs to date and the number of Parties represented is because the EU has submitted a Union-wide INDC to cover its 28 member states

ⁱⁱ Noah S Diffenbaugh, Christopher Field et al, 2013, *Changes in Ecologically Critical Terrestrial Climate Conditions*, *Science*, 341, pp486-492

ⁱⁱⁱ Griscom et al; *Natural Climate Solutions*, *PNAS Early Edition*, www.pnas.org/cgi/doi/10.1073/pnas.1710465114

^{iv} IPCC, *Fifth Assessment Report, Working Group 3 Chapter 11*, 2015, states: "The AFOLU sector is responsible for just under a quarter (~10–12 GtCO₂eq/yr) of anthropogenic GHG emissions mainly from deforestation and agricultural emissions from livestock, soil and nutrient management. (robust evidence; high agreement)."

Rogelj et al, 2015, "Energy system transformation for limiting end-of-century warming to below 1.5°", *Nature Climate Change*, 5, 519-527. found that deeper emission cuts are required from all sectors for 1.5°C compared to 2°C and that negative emissions would be needed, including such as from afforestation.

^v Brundtland et al, 1987, "Report of the World Commission on Environment and Development: Our Common Future." It defines sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

^{vi} Including World Resources Institute's "Examining the Alignment between the NDCs and SDGs" (Northrup, Biru, Lima, Bouye and Song, 2016) and The Energy and Resources Institute's "SDG Footprint of Asian NDCs: exploring synergies between domestic policies and international goals" (Pahuja and Raj, 2017)

^{vii} Eg WWF and Care's "Twin Tracks: developing sustainably and equitably in a carbon-constrained world" (Fischler, Harmeling and Watts, 2015)

^{viii} WWF 2015 "NDC Analysis: an overview of the forest sector" (Petersen and Braña Varela)

^{ix} Griscom et al; *Natural Climate Solutions*, *PNAS Early Edition*, www.pnas.org/cgi/doi/10.1073/pnas.1710465114

^x Griscom et al; *Natural Climate Solutions*, *PNAS Early Edition*, www.pnas.org/cgi/doi/10.1073/pnas.1710465114

^{xi} IPCC (2014) *Climate Change 2014: Mitigation of Climate Change*, IPCC AR5 Working Group III

^{xii} World Resources Institute, 2016 "Examining the Alignment between the NDCs and SDGs" (Northrup, Biru, Lima, Bouye and Song)

^{xiii} The Energy and Resources Institute (TERI) 2017, "SDG Footprint of Asian NDCs: exploring synergies between domestic policies and international goals" (Pahuja and Raj)

^{xiv} UNEP/CBD/COP/13/10/Add.1

^{xv} Analysis from UNEP/CBD/COP/13/10/Add.1

^{xvi} <https://www.cbd.int/climate/background.shtml>

^{xvii} UNFCCC - Preamble, Articles 3.5, 4.1c, 4.1d, 4.1e, 4.1g, 4.1h, 4.1i, 6b 7.2l and 9.2d

^{xviii} CBD - Preamble, Articles 5, 12c, 13b, 14.1e, 18, 23.4 h, 25.2d,

^{xix} UNEP/CBD/COP/8/L.3

^{xx} Pisupati, B, *Synergies Between Conventions: An Assessment*. 2002, IUCN Regional Biodiversity Programme Asia: Colombo. p. 13.

^{xxi} IIED "Ecosystem -based adaptation: a win-win for formula for sustainability in a warming world?"

^{xxii} WWF 2015 "NDC Analysis: an overview of the forest sector" (Petersen and Braña Varela)

^{xxiii} Conservation International, 1988, based on high levels of endemism. The countries are: Australia, Brazil, China, Colombia, Democratic Republic of Congo, Ecuador, India, Indonesia, Madagascar, Malaysia, Mexico, Papua New Guinea, Peru, Philippines, South Africa, USA, Venezuela

^{xxiv} Fransen, T., Northrop, E., Mogelgaard, K., Levin, K. *Enhancing NDCs by 2020: Achieving the Goals of the Paris Agreement*. WRI Working Paper. 2017

^{xxv} Analysis from UNEP/CBD/COP/13/10/Add.1