The role of nature-based solutions in addressing climate change

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What are nature-based solutions?

- **IUCN defines nature-based solutions as:** “actions to protect, sustainably manage and restore natural or modified ecosystems, that address societal challenges (e.g. climate change, food and water security or natural disasters) effectively and adaptively, simultaneously providing human well-being and biodiversity benefits”

- Formally adopted by **IUCN’s 1,300+ State and NGO Members** at the 2016 **IUCN World Conservation Congress** held in Hawaii, USA – representing the broadest agreed view of the global conservation community

*NbS are often described as ‘no-regret’ options, providing benefits to people in a range of scenarios*
Benefits of nature-based solutions from a climate perspective

- Nature-based solutions can provide over one-third of the cost-effective climate mitigation needed by 2030 to stabilize warming to below 2°C (PNAS 2017)

- Land-based carbon removal options – including forests, wetlands and soils – offer a total annual emissions reduction potential of up to 12 GtCO₂e (UNEP 2017)
World's largest tropical peatland found in Congo basin

Carbon-rich peatlands could store three years’ worth of world’s total fossil fuel emissions, say scientists

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Cuvette Centrale peatlands in the Congo Basin

Wetlands helped to avoid US$ 625 million in direct flood damages during Hurricane Sandy in 2012

More generally, coastal wetlands in the US have been estimated to provide storm protection services worth US$ 23 billion annually

Source: Costanza et al. 2008
Nature-based solutions in Nationally Determined Contributions (NDCs)

- Presents an overview of the current level of ambition for NbS within NDCs
- Based on an analysis of 10 major comparative assessments of nature’s prominence in NDCs to date
- Provides recommendations on how climate ambition within future NDCs can be raised through the more substantive inclusion of NbS
Key findings

• At least 66% of Paris Agreement signatories include NbS in one form or the other to help achieve their mitigation/adaptation goals

• But more concrete, evidence-based targets for NbS are urgently needed
  – E.g. over 70% of NDCs are estimated to contain references to efforts in the forest sector, but only 20% of these include quantifiable targets, and only 8% include targets expressed in tonnes of CO$_2$e
  – E.g. only around 17% of NDCs with current or planned actions involving NbS for adaptation (i.e. ecosystem-based adaptation) set quantifiable and robust targets

• NbS that synergise adaptation and mitigation are underused
  – E.g. only 17 countries aim to address adaptation and mitigation together
Need for more concrete targets

Figure 2. Global distribution of countries that included in their NDCs: (a) NbS in the mitigation component; (b) NbS in the adaptation component; (c) explicit mention of synergies between mitigation and adaptation actions; and (d) several quantitative adaptation targets. Figures generated using the Nature-based Solutions Policy Platform in August 2019 (www.nbspolicyplatform.org).
Major opportunity to scale up NbS in non-forest, carbon-rich, ecosystems

Non-forest ecosystems – grasslands, drylands, mangroves and peatlands, etc. – are relatively poorly represented in NDCs

E.g. only 19% of NDCs from countries with coastal ecosystems include them in their mitigation components, and only 39% in their adaptation components
‘Low income’ countries, as classified by the World Bank, currently include NbS actions more prominently in their NDCs. This could be, in part, due to the implicit rather than explicit inclusion of NbS by higher-income/developed countries in their NDCs.
All countries can strengthen their future NDCs by substantially incorporating NbS in them

1. Include NbS actions across a wide range of naturally occurring ecosystems

2. Step up NbS actions that address climate change adaptation and mitigation as well as support sustainable development and biodiversity conservation

3. Include more specific, measurable and robust NbS targets in NDCs and associated national implementation plans

4. Align NDCs with other relevant national plans and international processes

5. Mobilise greater funding for NbS to climate change
Reasons for optimism

• **Growing global awareness** of the role and importance of **nature-based solutions**
  – UN Climate Action Summit
  – NbS track co-chaired by China & New Zealand (*NbS for Climate Manifesto*)
  – UNFCCC COP25, Madrid

• **Increasing NbS investments** by countries and other social actors

• **2020 ‘super year’ for Nature** – to continue the momentum for global and national ambition and action
Thank you

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