

Background Note for The First Meeting of International Experts/Advisors CCICED Nature-Based Solutions work

The 2020-2021 CCICED Work-Plan - approved in September 2020 – established a new sub-group for Nature-Based Solutions (NBS), co-chaired by the two CCICED Chief Advisors, and in close coordination with other Special Policy Studies, particularly related to climate, biodiversity, and oceans.

The first meeting of international experts and partners to scope NBS will be held in October 2020. The three objectives of the meeting are (a) to seek advice regarding the draft Terms of Reference; (b) to seek advice on the proposed scope of work; and (c) to identify recent research, projects, and policies to advance NBS work.

Three important contexts of the NBS work are (a) China's hosting of the UN CBD COP 15 Kunming meeting; (b) the central role that nature will play at the UNFCCC COP 26 meeting in Glasgow; and (c) China's September 2020 announcement to become carbon neutral on or before 2060.

A. Draft Terms of Reference

- How can NBS achieve mutual benefits in meeting the objectives of the three Rio Conventions: biodiversity, climate, and desertification;
- How can the Ecological Red Line system and the new National Park system increase carbon storage and sequestration;
- How can NBS strengthen climate resilience?
- How can carbon stored in sediment in China's ocean floor and near-shore ecosystems – mangroves, sea-grass, tidal flats, and other - be considered in the context of carbon storage and biodiversity conservation?
- How can NBS support China's recent pledge to peak greenhouse gas emissions on or before 2030, and to become carbon neutral on or before 2060?
- How can NBS support steps by the CBD and UNFCCC Conventions to advance a *Carbon-Neutral/ Nature Positive* future work in a Chinese context?

B. Proposed Scope of Work

The timing of the NBS work will be to finalize work by late January or early February 2021. A proposed focus of the report entails identifying three focused, concrete areas of research, findings, and recommendations:

- **What:**
 - Are there NBS priorities - such as afforestation, wetlands, or oceans - that should be emphasized for short and medium-term action? Are there substantive project design, policy support, and other measures required for different NBS?
 - Alternatively, should a comprehensive NBS approach entail priority action in all NBS?

- **Where:**
 - Develop a framework and criteria to identify priority NbS locations;
 - Identify 8-10 priority, large scale and, fast-start NbS;
 - Identify if NbS provides opportunities beyond domestic approaches, including for example via the green Belt and Road Initiative and green supply chains;
- **How:**
 - Examine how China’s current approaches – notably Ecological Redline, eco-compensation and national parks and protected areas, can advance NbS;
 - Identify other approaches to NbS, including relating to large-scale spatial planning, regenerative agriculture, and sustainable food systems;
 - Identify the financing tools needed to support NbS at scale; and
 - Identify steps to enhance the role of the private sector and market-based approaches.

C. Recent Work/Literature Review

The NbS report will draw on recent literature, reports, project examples, and policies to guide its analysis, and be organized to support the eventual outline of the report.

Since the 2015 Paris Climate Agreement, there has been a growing body of research from international bodies like the IPCC and IPBES, public project funding from REDD+, the GEF, GCF, and others, as well as increased private sector support. Below is a preliminary, illustrative rather than exhaustive, example of recent work. An important element of the report should include examples of successful NbS projects.

Definition: The [2016 World Conservation Congress](#) defined NbS as “actions to protect, sustainably manage and restore natural or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits.” There is [extensive literature](#) identifying the impact of climate change on species and wider ecosystems, as well as recent reports by the [IPCC](#).

What

Forests: A significant focus of NbS work involves the role of forests both as a source of GHGs when burned, as well as their role as a [carbon sink](#), as one aspect of a broader focus on the interaction between [land degradation and climate change](#).

Freshwater: The July 2020 report of the [OECD – Policy-Perspectives: Nature-Based Solutions for Adapting to Water-Related Climate Risks](#) notes that investing in NBS projects like protecting wetlands and coastal marshlands can reduce various pressures including flooding. In 2017, the [World Bank’s Implementing Nature-Based Flood Protection](#), as well as other examples of NbS in flood management in [urban regions](#).

Wetlands: A large number of studies have examined the value of wetlands, their contribution to [addressing climate change](#), as well as their role in mitigating some [extreme flooding events](#).

Oceans: Since the IPCC identified the [important role oceans can play in NbS](#), more recent analysis such as the work via the [High-Level Panel for a Sustainable Ocean Economy](#) has identified the likely effects of climate change on oceans health, as well as opportunities to build greater resilience in the blue economy.

Peatlands are among the planet's most protected and restored ecosystems, and have [multiple NbS benefits](#), as well as contributing to [flood controls and freshwater storage](#). Scotland announced funding for peatland restoration as part of its NDC Paris commitments.

Bamboo: Similarly, research suggests [maintaining and planting bamboo forests](#) can have multiple benefits in addition to its climate sequestration potential.

Why

Climate Mitigation/Sequestration: There are a growing research project and policy focus on the contribution of NbS to climate sequestration. Examples include the [general contribution of NbS to climate action](#), as well as more specific topics like their role in [advancing](#) the Paris Climate Agreement Nationally Determined Contributions.

Climate Adaptation: The [2019 report of the Global Commission on Adaptation](#) emphasizes the contribution of NbS to climate adaptation. Examples at the project level include [green infrastructure in cities](#), and at the wider [freshwater basin level](#).

Ecosystem Restoration: According to [FAO 2019](#), land restoration associated with NbS - including restoration of degraded croplands - could be an effective economic and ecological means to reduce greenhouse gas emissions.

Sustainable Development Goals: Given the potential multiple benefits of NbS that include ecosystem protection, climate adaptation, climate sequestration, as well as local livelihoods, some analysis has attempted to [capture multiple effects within an SDG framework](#).

How

Global Standards: To support comparable NbS design and performance indicators, in 2020 IUCN released the [Global Standard for NbS](#).

Economic Valuation: Economists note that ecosystems should be valued and managed as an asset: the [April 2020 Dasgupta Report](#) of the U.K. argues that the loss of biodiversity is an asset management problem; others have made [similar recommendations](#).

Landscape Planning, Protected Areas: Experts have identified and examined the role of [China's Ecological Redline](#) to protect biodiversity domestically and at the international level, and the opportunity to [link biodiversity and climate change strategies](#).

Financing: [The Forest Carbon Forestry Facility](#) is a leading international example of the project, policy, and program financing for REDD+ to reduce GHGs associated with

deforestation. In September 2020, the Paulson Centre, together with The Nature Conservancy and Cornell University, released the [Financing Nature Report](#). There are examples of [online courses and training](#) related to micro-financing of NbS projects. In mid-2020, the Global Environmental Facility announced a new initiative with UNIDO and other to use modeling and data to [strengthen the business case for NbS](#).

Private Sector: The [2019 Report of The Nature Conservancy](#) provide examples of how companies are implementing NBS, as well as different roadmaps, timelines, and implementation strategies as well as internal management steps and checklists. A [WBCSD July 2020 Nature Positive Recovery Report](#) of the Nature4Climate initiative identifies the role of NbS in national economic recovery plans, and suggests support to three principles: do not harm, properly value nature, and recognize the full economic value of NbS. Other examples include the [UN Global Compact](#); the Consumer Goods Forum Forest Positive Coalition of Action and actions by individual companies like [Walmart](#), [Nestle](#), and others. In September 2020, [McKinsey](#) released a report to support the quantification of ecosystem services.

Where

NbS Atlases: WBCSD supports an [online NbS Atlas](#) intended to provide country-level data regarding forestry, improved peat-lands restoration, rice cultivation, avoided grasslands degradation, and other data fields. Other examples of atlases and updated maps include the [U.S. Army Corp of Engineers Engineering with Nature Atlas Volume 2](#), [maps of peatlands, forests](#) (as well as changes to forest cover), [wetlands](#), and other important ecosystems. These tools can be useful in providing an initial assessment of NbS.

While these examples of large-scale maps and atlases are useful at a general level, [more detailed maps at scale](#) are needed to support projects. Moreover, mapping some ecosystems like peatlands are [more complex than forests](#).