Experiences, tools and methodologies relating to the assessment of the environmental, social and economic co-benefits of climate change policies and actions

Response by UNEP-WCMC to the Call for Inputs by the Katowice Committee of Experts on the Impacts of the Implementation of Response Measures

This submission is made to support activities under Workplan Activity 11 of the Katowice Committee. In line with UNEP-WCMC's experience and expertise, it focusses specifically on climate change policies and actions that draw on biodiversity and ecosystem services to achieve their goals (i.e. nature-based solutions / ecosystem-based approaches).

1) Assessments conducted on the environmental, social and economic co-benefits of climate change policies and actions

UNEP-WCMC's work includes both global and country or location-specific assessments of the co-benefits that can be obtained through climate change policies and actions, mainly in the area of REDD+ and Ecosystem-based Adaptation (EbA). This work is carried out in collaboration with a range of partners, including under the UN-REDD Programme.

The main approaches used are spatial analysis, literature review and stakeholder consultation. A key method applied in spatial analysis is to identify overlap between areas that could be, or are intended to be, intervention sites for climate change actions (e.g. enhancing carbon stocks and/or increasing resilience through agroforestry, conservation of natural forest, ecosystem restoration) and areas where such actions have a high potential to generate environmental, social or socio-economic co-benefits (e.g. biodiversity conservation, provision of non-timber forest products, erosion control, recreation). A summary of key points to be considered in spatial analysis to inform REDD+ decision-making is provided in the infographic on page 4 of the UN-REDD Info Brief: Land-use planning and integrated approaches to reducing emissions from deforestation and forest degradation.

Examples of published outcomes based on spatial analysis include:

Spatial analysis: a tool for integrated land use planning for REDD+ : this document discusses the use of spatial planning approaches to inform the development of REDD+ strategies and action plans. It is based on a review of published REDD+ strategy and planning documents and includes case studies of work supported by the UN-REDD Programme in Costa Rica, Nigeria and Viet Nam.

A number of country-specific reports produced by the UN-REDD Programme and accessible under https://www.unredd.net/announcements-and-news/2328-multiple-benefits-country-activity-updates.html.

We have also looked into the opportunities that an ecosystem accounting approach offers with regard to comparing options for climate change policies and actions taking into account their full range of (co-)benefits. Ecosystem accounting provides a framework for quantifying the extent and condition of ecosystems and the services they provide and associating these services with beneficiaries. It can thus help to address some of the challenges related to assessing the co-benefits of climate change policies and actions. Some of the findings from this work are reflected in the report Smart, Sustainable and Resilient cities: the Power of Nature-based Solutions – Annex III:

[Accounting for Nature in Urban Planning - How Ecosystem Accounts can help scale up Nature-based Solutions for Smart, Sustainable and Resilient Cities](#).

Results from literature reviews assessing co-benefits from climate change policies and actions are presented in the report [The Role of the Natural Environment in Adaptation – Background Paper for the Global Commission on Adaptation](#), which in addition to overview information includes an Annex with 25 referenced case studies. An example of a literature-based assessment of options to respond to climate change in the context of a green recovery at a national level is available in Chapter 5 "Investing in Nature-based Solutions and Supporting Agriculture and Rural Affairs" of the Cambridge Zero Policy Forum report [A Blueprint for a Green Future – Report on a green recovery from Covid-19](#).

2) Co-benefits identified

The co-benefits of nature-based climate change mitigation and adaptation actions are highly context-specific and it would be impossible to list all co-benefits identified across the different assessments referred to above. To provide a general overview, the co-benefits found can be grouped into a number of categories:

- Economic benefits (e.g. job creation as a result of implementing the measures or of increased opportunities for tourism or resource use; increased land productivity and availability of natural resources)
- Biodiversity conservation
- Quality of the environment / human health (e.g. improved quality of air, water and soils, improved physical and mental health of local populations, reduced risk of disease emergence)
- Cultural values (e.g. creating or maintaining a sense of place, opportunities to practice traditional livelihoods, spiritual and aesthetic values).

Note that many of these benefits are interlinked (e.g. improvements in human health leading to reduced public expense and increased economic productivity) and that many nature-based interventions can simultaneously contribute to climate change mitigation and adaptation.

For case studies of the co-benefits expected from or achieved through specific interventions, the Committee may also wish to consider available reports submitted by REDD+ countries to the Forest Carbon Partnership Facility and the Green Climate Fund, which include information on non-carbon benefits (see e.g. Annex 3 of the FCPF's Emission Reductions Monitoring Report template, information submitted by countries applying for the non-carbon benefits supplement on results-based payments under the GCF).

3) Actions taken based on the co-benefits assessment, including specific measures to maximize the co-benefits

The UN-REDD Info Brief "Land-use planning and integrated approaches to reducing emissions from deforestation and forest degradation" (linked above) discusses the use of spatial analyses that compare potential benefits of different land use options to inform integrated land use planning in a REDD+ context. Examples of where such analyses have been linked to climate change policy documents are included in the boxed text on page 7.

Examples of cases where spatial planning results have informed REDD+ strategies and action plans are also included in the publication "Spatial analysis: a tool for integrated land use planning for REDD+" linked above.

More detailed case studies are included in the [Storymap on Planning for REDD+ benefits beyond carbon](#).

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