UNITED NATIONS

BES

IPBES/3/7

Distr.: General
23 October 2014

Original: English

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

Plenary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
Third session
Bonn, Germany, 12–17 January 2015
Item 5 (c) of the provisional agenda*

Initial work programme of the Platform: scoping documents for regional assessments, land degradation and restoration and the conceptualization of values

Scoping for a thematic assessment of land degradation and restoration (deliverable 3 (b) (i))

Note by the secretariat

I. Introduction

1. At the second session of the Plenary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, held in Antalya, Turkey, from 9 to 14 December 2013, member States approved the initiation of scoping for a thematic assessment of land degradation and restoration. Accordingly, a scoping document was developed by an expert group in accordance with the procedures for the preparation of the Platform's deliverables (IPBES-2/3, annex). The expert group met in Beijing from 9 to 11 September 2014, thanks to generous in-kind support received from China. The present note constitutes the scoping document developed by the expert group. Additional information on the work of the expert group is available in document IPBES/3/INF/18.

II. Scope, rationale, utility and assumptions

A. Scope

2. For the purposes of this thematic assessment, "degraded land" is defined as the state of land which results from the persistent decline or loss in biodiversity and ecosystem functions and services that cannot fully recover unaided within decadal time scales. "Land degradation", in turn, refers to the many processes that drive the decline or loss in biodiversity, ecosystem functions or services, and includes the degradation of freshwater and coastal ecosystems that are closely interconnected with terrestrial ecosystems. "Restoration" is defined as any intentional activity that initiates or accelerates the recovery of an ecosystem from a degraded state. The term "rehabilitation" is used to refer to restoration activities that may fall short of fully restoring the biotic community to its pre-degradation state. This assessment will include seven chapters, the first four of which will report on: concepts and perceptions of land degradation and restoration, according to different worldviews, including those of indigenous and local people (chapter 1); indirect and direct drivers of degradation processes (chapter 2); the nature and extent of land degradation processes and the resultant loss or decline in biodiversity and ecosystem structure and functioning (chapter 3); and the loss or decline in nature's benefits to people and the impact of such changes on quality of life (chapter 4). The following two chapters will

* IPBES/3/1.

explore the wide range of responses to land degradation by: (a) developing and applying a broad framework to assess the effectiveness of interventions intended to prevent, halt, reduce and mitigate processes of land degradation and to rehabilitate or restore degraded land (chapter 5) and (b) providing decision support and policy relevant guidance to decision makers at all levels who are responsible for addressing land degradation problems (chapter 6). The assessment will conclude with a final chapter (chapter 7) exploring a range of development scenarios, including the consideration of different response options and their implications for land degradation regionally and globally. The assessment will seek to involve all relevant stakeholders from its inception. The structure of the assessment is based on the conceptual framework adopted by the Plenary of the Platform in its decision IPBES-2/4 (IPBES/2/17).

B. Geographic coverage of the assessment

3. The assessment will encompass all the terrestrial regions and biomes of the world, recognizing that land degradation drivers and processes can vary in severity within regions and countries as much as between them. Attention will also be given to the impacts of land degradation on freshwater, floodplain, wetland and coastal systems as they relate to the delivery of water-related benefits to people, including reduced food and water security and increased exposure to flood risk.

C. Rationale

4. Land degradation, which is primarily a direct or indirect result of human activities, is a major problem on every continent except Antarctica. The total human cost of land degradation is not known, but the Food and Agriculture Organization of the United Nations (FAO) estimates the economic impact at more than $40 billion annually. Building on the work of the Rio conventions (the United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, the United Nations Framework Convention on Climate Change, the Convention on Biological Diversity), and the United Nations Conference on Sustainable Development (Rio+20), the goals of halting and reversing land degradation and decoupling economic growth from environmental degradation have been proposed as part of the sustainable development goals. In 2011, in recognition of the benefits to people of restoring degraded land, world leaders endorsed the “Bonn Challenge”, a global effort to restore 150 million hectares of deforested and degraded land by 2020. As a first step towards meeting that goal, there is a clear need to assess the extent, causes and processes of land degradation and the consequences for biodiversity and people, as well as evaluating responses to the restoration and rehabilitation of degraded land and the avoidance of future degradation.

D. Utility

5. This expert-led assessment will provide the information and guidance necessary to support stakeholders working at all levels to reduce the negative environmental, social and economic consequences of land degradation, and rehabilitate and restore degraded land to aid the recovery of nature’s benefits to people. It will draw on information from scientific, indigenous and local knowledge systems to increase awareness and identify areas of concern. It will help to identify potential solutions to the challenges posed by land degradation, informing decision makers in public, private and civil society sectors. It will provide a framework for understanding, monitoring and taking action to halt and reverse land degradation in order to support decision-making at all levels and it will identify critical knowledge gaps and priority areas for new research and investment in order to enhance capacity in the sustainable management of land and biodiversity and their benefits to people.

E. Assumptions

6. The assessment will be based on both western science and indigenous and local knowledge systems. Land degradation is recognized as predominantly anthropogenically driven and as such is ultimately a consequence of the activities of institutions, governance and other indirect drivers (sociopolitical, economic, technological and cultural factors). The restoration of degraded land and associated freshwater and coastal ecosystems will be evaluated in its broadest sense, from partial rehabilitation to full restoration of the system to its pre-degradation state. Addressing direct and indirect drivers of degradation, promoting restoration and designing and implementing sustainable land management systems require a participatory process involving the co-production of knowledge with relevant and diverse stakeholders.

III. Chapter outline

7. The assessment will be presented in a summary for policymakers and a seven-chapter report, as set out below. An introduction will briefly review the rationale, utility and assumptions of the assessment, as well as the approach adopted and the rationale for the chapter sequence. An executive summary will present key findings and policy-relevant conclusions.

8. Chapter 1 will focus on assessing and comparing differing concepts and perceptions of land degradation and restoration, stemming from both western science and indigenous and local knowledge. The chapter will also review concepts and approaches used to assess the diversity of land degradation processes, the status of ecosystems and impacts thereon, as well as concepts and approaches used to describe different responses, including rehabilitation and restoration.

9. Chapter 2 will assess how land degradation is the result of multiple drivers, involving both direct anthropogenic and natural factors and interactions between them, as well as underlying indirect drivers. Direct drivers (e.g., unsustainable levels of biomass extraction) can result directly in degraded land or in processes such as soil erosion due to unsustainable land management techniques that result in land degradation. Indirect drivers are related to institutions and governance systems, as well as social, cultural, technological and economic factors that underpin direct drivers, at the local to global levels. The chapter will assess the extent and severity of different drivers and how they vary within and between different biomes, regions and land-use systems around the world. The assessment of direct drivers will include anthropogenic drivers at global, national, regional and local scales, including human-driven climate change, as well as natural drivers, such as floods, wind and droughts, and interactions between anthropogenic and natural drivers. Particular attention will be paid to climate change and its interaction with other anthropogenic drivers of land degradation.

10. Chapter 3 will focus on the status and trends of land degradation in terms of the loss or decline in biodiversity and ecosystem functioning, as well as the degradation processes that result in these changes. Degradation processes include soil erosion, sedimentation, salinization, degradation of freshwater systems, invasion of alien species, changes in natural fire regimes and pollution. Degradation can also include landscape-scale processes such as changes in ecological connectivity following deforestation. The chapter will assess levels of land degradation with regard to the type, extent and severity of changes in both biodiversity and ecosystem structure and functioning in different biomes and under different land-use and management systems. Changes in biodiversity include changes to both wild biodiversity and agrobiodiversity. Changes in ecosystem structure and functioning include aspects such as primary productivity, nutrient cycling and the provision of habitat for species. Particular attention will be given to understanding system resilience (capacity to recover a systems structure and functions following a perturbation), including the potential for thresholds and sudden changes in key attributes of biodiversity and critical ecosystem functions.

11. Chapter 4 will focus on the loss or impairment of nature's benefits to people, and the resultant impacts on quality of life. The chapter will assess land degradation associated with the loss of benefits to people including provisioning services, such as food production, quality and quantity of water resources, and availability of raw materials, as well as regulating, cultural services, and other aspects of nature that different people consider valuable. The chapter will analyse changes in benefits to people in terms of the relative contribution of biodiversity and ecosystem structure and functioning, and that of anthropogenic assets (e.g., technologies, knowledge) applied by people in the co-production of the benefits. Impacts on the diverse dimensions of a good quality of life will include impacts on health, income-generating opportunities, meaningful livelihoods, the equitable distribution of natural resources, and rights and values considered important in different cultures. The chapter will consider the diverse costs of land degradation for people, including the overall economic and non-economic costs, encompassing those that are associated with the area of degraded land itself, as well as costs borne by people in other areas who are affected by the degraded site. The chapter will consider the type, extent and severity of these changes in different social-ecological systems and under different land cover and land management systems, including their implications for social and ecological stability and resilience, and cultural integrity.

12. Chapter 5 will develop a framework to assess the effectiveness of existing interventions to prevent, halt, reduce and mitigate the processes of land degradation and to rehabilitate and restore degraded land through the recovery of biodiversity, ecosystem structure and functioning and their benefits to people. The chapter will assess how past and current responses to degradation problems vary according to context, including the type and severity of land degradation and the underlying direct and indirect drivers, as well as the consequences of land degradation for nature's benefits to people and quality of life. The chapter will analyse the effectiveness of addressing the indirect causes of land degradation (institutions, governance systems and other indirect drivers), as compared to

efforts to address direct drivers or anthropogenic assets (better techniques, access to training). The chapter will assess the relative success or failure, as well as the potential risks, of different institutional, governance and management response options against a range of social, cultural, economic, technological and political criteria. It will explore how responses to prevent land degradation from occurring compare with efforts to deal with its effects. The chapter will also assess different institutional, policy and governance responses based on the type of instrument used, including participatory, regulatory and economic instruments, as well as support given to research and technology development, institutional reform and capacity-building.

13. Chapter 6 will consolidate and rationalize information necessary to support evidence-based decision-making and institution-building for policy makers and practitioners responsible for selecting and implementing strategies to address land degradation problems. The chapter will assess actions necessary to develop core institutional competencies in the detection and analysis of land degradation problems, and the design, implementation, management and monitoring of response strategies, including data, methods, decision support tools and stakeholder engagement. The chapter will place land degradation problems and potential solutions in the wider policy, socioeconomic and environmental context, paying special attention to institutions, governance and other indirect drivers which are the root causes of degradation. It will consider interactions between land degradation and other major policy areas such as farming and food, flood risk and water resource management, climate change adaptation and mitigation, invasive species and disease management, bio-cultural diversity conservation, public health and rural, urban and industrial development.

14. Chapter 7 will explore the implications of a range of plausible development scenarios, including the adoption of different response options, and their implications for land degradation globally, including impacts on human well-being and the potential for successfully restoring degraded lands and associated freshwater and coastal systems. Scenarios will be developed using information derived from the assessment and work from across the Platform, motivated by a systematic review of other scenario exercises of this type, including the Platform's ongoing methodological assessment of scenario analysis and modelling of biodiversity and ecosystem services, to be released at the end of 2015. The chapter will reveal the variation in plausible land degradation futures that depend on choices (with associated social and economic implications) made at the national, regional and international scales to address indirect and direct drivers, and introduce new mechanisms to avoid land degradation, mitigate its impacts, and rehabilitate and restore degraded sites.

IV. Key information to be assessed

15. The information to be assessed will be drawn from relevant articles, books, national and international assessments, reports by Governments, United Nations bodies and national and international non-governmental organizations, and indigenous and local knowledge in accordance with the recommendations of the task force on indigenous and local knowledge[1] and including knowledge that is not available in written form.

V. Operational structure

16. The operational structure will consist of a technical support unit (comprising one full-time equivalent Professional staff member). Two co-chairs, 80 authors and 16 review editors will be selected by the Multidisciplinary Expert Panel, in accordance with the procedures for the preparation of the Platform's deliverables.

17. The head of the technical support unit, the two co-chairs, one representative of the Panel and one representative of the Bureau will hold a management meeting as a first step towards operationalizing this assessment.

VI. Strategic partnership and initiatives

18. The land degradation assessment will identify as possible partners organizations which can: contribute their data and knowledge; provide in-kind support; act as clients and users of the assessment; and provide assistance at various stages, including by helping to review the assessment. The partnerships entered into will mostly be informal, but a limited number of strategic partnerships may be established. Collaboration will be developed, in particular with the United Nations Convention to Combat Desertification as a key user of the assessment on land degradation.

[1] Established by the Plenary by decision IPBES-2/5.

VII. Process and timetable

19. The proposed process and timetable for preparing the assessment report, including actions, milestones and institutional arrangements, is set out below:

Time frame		*Actions and institutional arrangements*
2015	First quarter	The Plenary, at its third session, reviews and approves the detailed scoping report prepared by the expert group scoping the assessment and requests the Panel and the Bureau, within an agreed cost envelope, to establish the process to undertake the assessment
		The Chair, through the secretariat, requests nominations from Governments and other stakeholders for experts to prepare the assessment report
	Second quarter	The Panel selects the assessment co-chairs, coordinating lead authors, lead authors and review editors, using the approved selection criteria set out in decision IPBES-2/3 (IPBES/2/17, annex)
	Third/fourth quarters	The assessment co-chairs, coordinating lead authors and lead authors prepare a first draft of the report. A first author meeting is held
2016	First quarter	The first draft of the report is reviewed by experts
	First/second quarters	The assessment co-chairs, coordinating lead authors and lead authors prepare the second draft of the report and a first draft of the summary for policymakers under the guidance of the review editors and the Panel (3 months). A second author meeting is held without the participation of the lead authors
	Second/third quarters	The second draft of the report and the first draft of the summary for policymakers are reviewed by experts, Governments and other stakeholders
	Third quarter	The assessment co-chairs, coordinating lead authors and lead authors prepare the final draft of the report and the final draft of the summary for policymakers under the guidance of the review editors and the Panel. A third author meeting is held
	Fourth quarter	The summary for policymakers is translated into the six official languages of the United Nations
	Fourth quarter	The final draft of the report and the final draft of the summary for policymakers are sent to Governments and other stakeholders for final review. Written comments from Governments on the draft summary for policymakers are strongly encouraged. Such comments should be submitted to the secretariat one week prior to the fifth session of the Plenary
2017	First quarter	The Plenary is invited to review and accept the report and to review and approve the summary for policymakers at its fifth session

VIII. Cost estimate

20. The table below shows the estimated cost of conducting and preparing the assessment report:

Year	*Cost item*	*Assumptions*	*Estimated costs (United States dollars)*
2015	Meeting of co-chairs and secretariat/Technical Support Unit	Meeting costs (1/2 week, 5 participants, in Bonn)	0
		Travel and DSA (3 x $3,750)	11 250
	First author meeting (80 participants: co-chairs, coordinating lead authors and lead authors, plus Panel/Bureau members and 1 technical support staff member)	Meeting costs (1 week, 85 participants) (25 per cent in kind)	15 000
		Travel and DSA (64 x $3,750)	240 000
	Technical support	1 full-time equivalent professional position (50 per cent in kind)	75 000
2016	Second author meeting (40 participants: co-chairs, coordinating lead authors and review editors, plus Panel/Bureau members and 1 technical support staff member)	Meeting costs (1 week, 40 participants) (25 per cent in kind)	11 250
		Travel and DSA (30 x $3,750)	112 500
	Third author meeting (80 participants: co-chairs, coordinating lead authors and lead authors, plus 16 review editors, plus Panel/Bureau members and 1 technical support staff member)	Meeting costs (1 week, 101 participants) (25 per cent in kind)	18 750
		Travel and DSA (75 x $3,750)	281 250
	Technical support	1 full-time equivalent professional position (50 per cent in kind)	75 000
	Participation by the two co-chairs and two coordinating lead authors in the Plenary	Travel and DSA (3 x $3,750)	11 250
2017	Dissemination and outreach	Translation of summary for policymakers into the six official languages of the United Nations, publication and outreach	117 000
Total			**1 092 000**

IX. Communication and outreach

21. The assessment report and its summary for policymakers will be published and the summary for policymakers will be made available in the six official languages of the United Nations. The report and the summary will be made available on the Platform's website (www.ipbes.net). Dissemination will target all Platform stakeholders and will be adapted to the specific needs of different users.

X. Capacity-building

22. Capacity-building activities will be organized in accordance with the implementation plan of the task force on capacity-building, in such areas as implementation of the fellowship programme.