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Committee on Science and Technology**

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Interfacing science and policy, and sharing knowledge

Work programme of the Science-Policy Interface for the biennium 2020–2021

**Work programme of the Science-Policy Interface (2020–
2021)**

Note by the secretariat*

Summary

In line with its mandate, as defined in decisions 23/COP.11 and 19/COP.12, the Science-Policy Interface (SPI) provides the Committee on Science and Technology (CST) with clear and well-defined thematic guidance on scientific knowledge requirements for implementing the United Nations Convention to Combat Desertification (UNCCD). According to decision 19/COP.13, the SPI is requested to submit through the secretariat a proposal for its work programme for consideration at each regular CST session, with a focus on one or two broad, globally relevant priority topics related to desertification/land degradation and drought (DLDD).

In its meeting between 25–27 February 2019, the SPI reviewed potential topics and emerging issues to be considered for inclusion in its biennium 2020–2021 work programme based on needs identified during its work over the course of the biennium 2018–2019 and from other emerging issues identified by the secretariat and the SPI. These needs and issues were then compared to feedback obtained in a survey of Parties and UNCCD stakeholders conducted from November to December 2018 to help the Bureau of the CST identify priorities. The SPI also reviewed its current coordination activities with other international scientific panels and bodies dealing with DLDD issues. Based on the identified science-policy priorities and the review of coordination activities, the Bureau of the CST in collaboration with the SPI developed a draft work programme for the SPI for the biennium 2020–2021, as contained in this document.

The CST may wish to consider making recommendations to the Conference of the Parties (COP) with regard to the proposed SPI work programme for the next biennium 2020–2021.

* The present report was submitted after the deadline so as to include the most recent information.



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List of abbreviations

AR6	Sixth Assessment Report of the IPCC
COP	Conference of the Parties
CST	Committee on Science and Technology
DLDD	desertification/land degradation and drought
DRAMP	Drought Resilience, Adaptation and Management Policy Framework
FAO	Food and Agriculture Organization of the United Nations
GFDRR	Global Facility for Disaster Reduction and Recovery
GLII	Global Land Indicators Initiative
GLO	Global Land Outlook
GM	Global Mechanism
GWP	Global Water Partnership
IDMP	Integrated Drought Management Programme
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
ITPS	Intergovernmental Technical Panel on Soils
LDN	land degradation neutrality
SLM	sustainable land management
SRCCCL	IPCC Special Report on Climate Change and Land
UNEP-IRP	International Resources Panel of the United Nations Environment Programme
UNCCD	United Nations Convention to Combat Desertification
WIM	Warsaw International Mechanism for Loss and Damage
WMO	World Meteorological Organization

I. Background

1. In line with its mandate as defined in decisions 23/COP.11 and 19/COP.12, the Science-Policy Interface (SPI) provides the Committee on Science and Technology (CST) with clear and well-defined thematic guidance on scientific knowledge requirements (e.g. thematic assessments, scientific studies and/or user guides) for implementing the United Nations Convention to Combat Desertification (UNCCD).
2. At the ninth meeting of the SPI, which took place between 25–27 February 2019,¹ the SPI proposed and reviewed potential topics to be considered for inclusion in its biennium 2020–2021 work programme, drawn from a compilation of science-policy needs identified during the course of SPI work over the biennium 2018–2019, and drawn from other emerging issues identified by the secretariat and the SPI.
3. The SPI considered the relevance of each proposed topic with respect to the mandate of the UNCCD, current policy-making needs, and the capacity of each topic to address the critical knowledge gaps. The proposed topics were also compared to feedback obtained in a survey of Parties and UNCCD stakeholders conducted from November to December 2018² in order to help the Bureau of the CST identify priorities. A summary table of the suggested topics is contained in the annex to this document; all topics have been clustered by the UNCCD secretariat into major thematic groups to facilitate the identification of a limited number of priorities for inclusion in the draft work programme.
4. The Bureau of the CST then screened the identified priorities against the following criteria:
 - (a) Relevance and added value for the UNCCD: the topic is directly relevant to the understanding of desertification/land degradation and drought (DLDD);
 - (b) Relevance for policy-making: the topic is related to an emerging policy priority;
 - (c) Relevance to addressing knowledge gaps: the topic is related to a gap identified in the current work of the SPI and has not been dealt with in earlier SPI reports or reports prepared by other intergovernmental scientific bodies; and
 - (d) Capacity to build upon the outcomes of SPI work over the biennium 2018–2019 and leverage the assembled expertise of the SPI.
5. Also in its ninth meeting, the SPI reviewed all its current coordination activities with other international scientific panels and bodies dealing with DLDD issues in order to prioritize the focus of future collaborations and, if necessary, address any gaps identified.
6. This document presents the draft SPI work programme 2020–2021 as adopted by the CST Bureau for consideration at the fourteenth session of the CST and submission to the Conference of the Parties (COP) for adoption.

II. Draft Science-Policy Interface work programme 2020–2021

7. The draft SPI work programme 2020–2021 consists of two parts: objectives and coordination activities. Objectives target specific assessment topics whereas coordination activities relate to cooperation with external processes and bodies. An overview of objectives and coordination activities is provided in tables 1 and 2. As defined in decision 23/COP.11, paragraph 3, and extended in decision 19/COP.12, paragraph 2, the SPI will identify the most optimal way forward (e.g. commissioning an individual or group of experts, organizing expert meetings or encouraging the organization of regional meetings by regional scientific institutions or networks) to address these knowledge requirements in coordination with the

¹ See the report of the fourth meeting of the Science-Policy Interface, 25–27 February 2019. Available at: <<https://knowledge.unccd.int/science-policy-interface/mandate-and-tor-spi>> (under “SPI meeting reports”).

² See ICCD/COP(14)/CST/3 for more information about the survey.

UNCCD secretariat. A budget proposal for the implementation of the SPI work programme 2020–2021 is contained in table 3 and in document ICCD/COP(14)/7-ICCD/CRIC(18)/2.

A. Objectives

1. Objective 1: Provision of science-based evidence of the potential contribution of integrated land use planning and integrated landscape management to positive transformative change in the context of land degradation neutrality

8. This objective would provide evidence on how the spatial mix of land uses can be optimized for the achievement of multiple environmental, social and economic benefits, and how trade-offs among competing demands for land resources can be more effectively navigated, factoring in the need for effective governance options to realise this potential.

9. The context for this assessment would include, but not be limited to, consideration of:

(a) The key messages and emerging recommendations from the SPI technical reports on “Creating an Enabling Environment for Land Degradation Neutrality (LDN) and its Potential Contribution to Enhancing Well-being, Livelihoods and the Environment” and “Realising the Carbon Benefits of Sustainable Land Management (SLM) Practices: Guidelines for Estimation of Soil Organic Carbon in the Context of LDN Planning and Monitoring”, which are included in ICCD/COP(14)/CST/2;

(b) Projections of land use change that will be required to stabilize the climate, noting that the Intergovernmental Panel on Climate Change (IPCC) suggests that large areas of afforestation/reforestation and energy crops may be needed, entailing land use change of up to 700 million hectares;

(c) The environment, food and energy trilemma and the potential for an optimal spatial mix of SLM, restoration and rehabilitation interventions to enhance human well-being, conserve biodiversity, provide food security, safeguard land tenure, address gender inequality, satisfy energy demands and contribute to climate change mitigation and adaptation;

(d) The potential contribution of integrated land use planning to drought planning and management, sand and dust storm source mitigation and the enhancement of urban and rural linkages with respect to transforming climates, landscapes and lifestyles;

(e) Mechanisms to achieve greater integration among environmental monitoring systems and land administration systems, such as through the development/application of scenario generation tools and in-situ observations which facilitate the spatial optimization of interventions and the navigation of trade-offs;

(f) Governance mechanisms that enable no-regret options and implementation strategies designed to address technical and socioeconomic challenges, and to promote opportunities; and

(g) The gender dimensions of land degradation and desertification.

10. *Rationale:* the outcomes of major global assessments completed in the past biennium suggest that land transformation resulting from land use change is having major impacts on human well-being and biodiversity.³ While past efforts to address DLDD have primarily focused on land management, the key messages of these reports suggest the need for greater emphasis on integrated land use planning and integrated landscape management so that land use decisions can more systematically ensure LDN and more effectively navigate the trade-offs among potentially competing demands for land resources. LDN provides a framework conducive to achieving these objectives.

³ These include: IPBES: Summary for policymakers of the assessment report on land degradation and restoration of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (2018). ; IPCC Special Report on the Impacts of Global Warming of 1.5 °C (2018); World Atlas of Desertification (2018); IPBES Global Assessment Report on Biodiversity and Ecosystem Services (2019); and An IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems (2019).

2. Objective 2: Provision of science-based evidence on the approaches for the assessment and monitoring of the resilience of vulnerable populations and ecosystems to drought

11. The context for this assessment would include, but not be limited to, consideration of:

(a) Strategic objective 3 of the UNCCD 2018–2030 Strategic Framework, which is to mitigate, adapt to, and manage the effects of drought in order to enhance resilience of vulnerable populations and ecosystems;⁴

(b) The key messages and emerging recommendations from the SPI technical report on “The Land-drought Nexus: Enhancing the Role of Land-Based Interventions in Drought Mitigation and Risk Management”, which are the basis for ICCD/COP(14)/CST/2, as well as contributions to the development of a monitoring framework for the strategic objective on drought (ICCD/COP(14)/CST/7 – ICCD/CRIC(18)/4);

(c) The drought resilience, adaptation and management policy framework⁵ and efforts to enable its implementation;

(d) The findings and emerging recommendations of a study on drought impact and a vulnerability assessment commissioned by the secretariat with the World Meteorological Organization (WMO) and the Food and Agriculture Organization of the United Nations;⁶

(e) Reports of the IPCC, the United Nations Framework Convention on Climate Change Warsaw International Mechanism for Loss and Damage, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and other bodies relevant to DLDD, SLM and LDN;

(f) Learning from best practice and experience in the mitigation and management of drought, including from indigenous and local knowledge;

(g) Diagnostic tools, ranging from Global Facility for Disaster Reduction and Recovery impact assessment tools to participatory diagnostic vulnerability assessment tools;

(h) Gender as a determinant of vulnerability to drought; and

(i) The need for coherence among local, national, regional and global assessments of drought.

12. *Rationale:* this objective would support Parties in their efforts to address strategic objective 3 of the UNCCD 2018–2030 Strategic Framework, particularly drought vulnerability, as identified in decision 15/COP.13, paragraph 8, on the monitoring of this strategic objective, and decision 29/COP.13, paragraphs 1(b)(ii) and 4(a)(ii), on vulnerability and impact assessments for sectors, populations and regions vulnerable to drought. This objective would help support, as proposed in ICCD/COP(14)/16, countries participating in the Drought Initiative to further enhance their capacity to assess their drought impacts and vulnerability. It would support country efforts to address the tendency to be adversely affected by drought (vulnerability to drought) and strengthen the ability of communities, ecosystems and economies to anticipate, absorb, accommodate or recover from the effects of drought quickly and efficiently by ensuring the preservation, restoration or improvement of natural capital (resilience to drought). Co-benefits of increased resilience and reduced vulnerability of ecosystems and populations should be achieved as result.

⁴ Decision 7/COP.13 and ICCD/COP(13)/21/Add.1.

⁵ ICCD/COP(13)/19 and <https://www.unccd.int/sites/default/files/relevant-links/2018-08/DRAMP_Policy_Framework.pdf>.

⁶ <<https://www.unccd.int/issues/land-and-drought>>.

Table 1

Objectives and deliverables of the Science-Policy Interface work programme 2020–2021

<i>Objective</i>	<i>Deliverable</i>
1. Provision of science-based evidence on the potential contribution of integrated land use planning and integrated landscape management to positive transformative change, in the context of land degradation neutrality (LDN)	<p>A technical report providing science-based evidence of how, in the context of working to achieve or exceed LDN, integrated land use planning and integrated landscape management can contribute to positive transformative change, including examples of cases where these approaches have been applied.</p> <p>A demonstration, resulting from an open call, of how LDN can be incorporated into existing open source land use planning and trade-off analysis tools.</p> <p>Provision of scientific assistance to the Global Mechanism to support decisions on the technical feasibility of LDN transformative initiatives.</p>
2. Provision of science-based evidence on the approaches for the assessment and monitoring of the resilience of vulnerable populations and ecosystems to drought	A technical report, based on a review of existing synthesis reports and the primary literature, which would provide science-based guidance on approaches for the assessment and monitoring of the resilience of vulnerable populations and ecosystems to drought.

B. Coordination activities

13. During the biennium 2020–2021, the SPI will also undertake the following coordination activities:

1. **Coordination Activity 1: Contribute to the work of the Intergovernmental Science–Policy Platform on Biodiversity and Ecosystems Services rolling work programme up to 2030 in accordance with the procedures established by Intergovernmental Science–Policy Platform on Biodiversity and Ecosystems Services and the Memorandum of Cooperation between the secretariats of the Intergovernmental Science–Policy Platform on Biodiversity and Ecosystems Services and the UNCCD**

14. In decision 19/COP.13, the COP requested the SPI, in close collaboration with the secretariat, to continue to contribute to and cooperate with Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). A Memorandum of Cooperation between the secretariats of IPBES and the UNCCD was signed in January 2019. The rolling work programme of the IPBES up to 2030⁷ includes two topics relevant to the UNCCD. The SPI 2018–2019 work programme undertook activities to support the IPBES Thematic Assessment on Land Degradation and Restoration and the IPBES Global Assessment of Biodiversity and Ecosystem Services (ICCD/COP(14)/CST/4).

⁷ IPBES/7/L.5.

2. Coordination Activity 2: Cooperate with the Intergovernmental Panel on Climate Change within the framework of its agenda, particularly regarding its Special Report on Climate Change and Land and its Sixth Assessment Report (AR6)

15. *Rationale:* In decision 19/COP.13, the COP requested the SPI, in close collaboration with the secretariat, to continue to contribute to and cooperate with the IPCC. The SPI 2018–2019 work programme undertook scientific peer review activities to support the IPCC’s Special Report on Climate Change and Land (SRCCL) and AR6 (ICCD/COP(14)/CST/4). These two reports have key messages relevant to the UNCCD, which will be analyzed by the SPI as part of the 2020–2021 work programme.

3. Coordination Activity 3: Follow up on current cooperation, and explore future means and topics for cooperation with the Intergovernmental Technical Panel on Soils

16. *Rationale:* In decision 19/COP.13, the COP requested the SPI, in close collaboration with the secretariat, to continue to contribute to and cooperate with the Intergovernmental Technical Panel on Soils (ITPS). Under the SPI 2018–2019 work programme, activities were undertaken to further strengthen cooperation with the ITPS (ICCD/COP(14)/CST/4). Cooperation during the next biennium will continue on topics to be jointly agreed by the SPI and the ITPS, including follow-up activities emerging from the conclusions of the Global Symposium on Soil Organic Carbon (2017) and the Global Symposium on Soil Erosion (2019), and potential participation in future symposiums relevant to the UNCCD, such as the Global Symposium on Soil Biodiversity (2020) and Global Symposium on Soil Pollution (2021).

4. Coordination Activity 4: Cooperate with the International Resources Panel of the United Nations Environment Programme, in accordance with the procedures established by International Resources Panel of the United Nations Environment Programme and within the framework of its 2018–2021 work programme

17. *Rationale:* In decision 19/COP.13, the COP requested the SPI, in close collaboration with the secretariat, to continue to contribute to and cooperate with the International Resources Panel of the United Nations Environment Programme (UNEP-IRP). Under the SPI 2018–2019 work programme, activities were undertaken to further strengthen cooperation with the UNEP-IRP, including a contribution to and scientific peer review of the IRP think piece, Land Restoration for Achieving the Sustainable Development Goals (ICCD/COP(14)/CST/4). Cooperation during the next biennium will continue on topics to be jointly agreed by the SPI and UNEP-IRP with respect to its 2018–2021 work programme.

5. Coordination Activity 5: Cooperate with the Global Land Indicators Initiative of UN-Habitat to ensure harmonization of land indicators developed by the Global Land Indicators Initiative to measure tenure security globally and at country level and land indicators used for measuring progress towards land degradation neutrality

18. *Rationale:* The Global Land Indicators Initiative (GLII) was set up to develop a set of core land indicators to measure tenure security globally and at country level. The SPI cooperated with the GLII to ensure the harmonization of land indicators developed by the GLII and LDN indicators (ICCD/COP(14)/CST/4). The SPI will continue cooperation to ensure harmonization of land indicators developed by the GLII, and land indicators used for measuring progress towards LDN.

6. Coordination Activity 6: Cooperate with the Integrated Drought Management Programme, a joint initiative of the World Meteorological Organization and the Global Water Partnership, on scientific issues related to drought

19. *Rationale:* The Integrated Drought Management Programme (IDMP) works to support stakeholders at all levels by providing policy and management guidance and by sharing scientific information, knowledge and best practices for integrated drought management, with the aim of achieving a coherent global framework for drought management, prediction and monitoring by networking new and existing programmes and activities worldwide. The SPI will ensure the coherence and relevance of SPI work on

drought, particularly towards the IDMP’s second pillar of drought management, which is vulnerability and impact assessment.

7. Coordination Activity 7: Contribute to the development of a second edition of the Global Land Outlook (GLO) and other UNCCD science-based communications, as appropriate

20. *Rationale:* The GLO is a flagship publication of the UNCCD on the status of land and its use. The SPI 2016–2017 work programme included contributions to GLO 1 (ICCD/COP(13)/CST/5) while the SPI 2018–2019 work programme included the participation of SPI members in the steering committee (ICCD/COP(14)/CST/4). Such technical and scientific support is to continue for the preparation of the GLO 2.

**Table 2
Coordination activities of the Science-Policy Interface work programme 2020–2021**

<i>Activity</i>	<i>Sub-activities</i>
1. Contribute to the work of the Intergovernmental Science–Policy Platform on Biodiversity and Ecosystems Services (IPBES) rolling work programme up to 2030 in accordance with the procedures established by IPBES and the Memorandum of Cooperation between the secretariats of the IPBES and the United Nations Convention to Combat Desertification (UNCCD).	<p>The SPI will follow up on two of the prioritized topics of the IPBES rolling work programme up to 2030:</p> <p>(a) Understanding the importance of biodiversity in achieving the 2030 Agenda for Sustainable Development; and</p> <p>(b) Understanding the underlying causes of biodiversity loss and determinants of transformative change and options for achieving the 2050 Vision for Biodiversity, contributing scientific review and analysis of key messages if these reports become available in time for the Science-Policy Interface (SPI) to complete the review.</p>
2. Cooperate with the Intergovernmental Panel on Climate Change (IPCC) within the framework of its agenda, particularly regarding its Special Report on Climate Change and Land (SRCCL) and its Sixth Assessment Report (AR6).	The SPI will analyse the key messages of the SRCCL and AR6 relevant for the UNCCD for presentation at the fifteenth session of the Committee on Science and Technology (CST 15).
3. Follow up on current cooperation and explore future means and topics for cooperation with the Intergovernmental Technical Panel on Soils (ITPS).	<p>The SPI will cooperate with the ITPS on topics to be jointly agreed by the SPI and the ITPS, bearing in mind the importance of soil organic carbon to land degradation neutrality (LDN).</p> <p>The SPI should be involved in any follow-up activities emerging from the conclusions of the Global Symposium on Soil Organic Carbon (2017) and the Global Symposium on Soil Erosion (2019).</p> <p>The SPI should explore with the ITPS potential participation in future symposiums relevant to the UNCCD, including the Global Symposium on Soil Biodiversity (2020) and Global Symposium on Soil Pollution (2021).</p>

<i>Activity</i>	<i>Sub-activities</i>
4. Cooperate with the International Resources Panel of the United Nations Environment Programme (UNEP-IRP), in accordance with the procedures established by UNEP-IRP and within the framework of its 2018–2021 work programme.	The SPI will follow up on three of the prioritized topics of the UNEP-IRP 2018–2021 work programme, particularly two thematic assessments: Resource Implications of Environmental Conflict and Migration, and Leveraging Resources for Low-Carbon, Climate-Resilient Development, and the think piece, Resource Governance in Light of Fundamental Transitions in Systems of Production and Consumption, contributing scientific review and analysis of key messages if these reports become available in time for the Science-Policy Interface (SPI) to complete the review. Furthermore, the SPI will contribute in a review capacity to work on mineral resource governance following the approval of the United Nations Environment Assembly resolution 4/L23 on the topic, which calls for further consultation on governance structures around resource extraction.
5. Cooperate with the Global Land Indicators Initiative (GLII) of UN-Habitat to ensure harmonization of land indicators developed by the GLII to measure tenure security globally and at country level, and land indicators used for measuring progress towards LDN.	The SPI will provide inputs to the GLII to ensure harmonization of land indicators developed by the GLII and land indicators used by the UNCCD on the basis of existing data sources and standards that are globally collectible and comparable.
6. Cooperate with the Integrated Drought Management Programme (IDMP), a joint initiative of the World Meteorological Organization (WMO) and the Global Water Partnership (GWP), on scientific issues related to drought.	The SPI will ensure the coherence and relevance of SPI work on drought, particularly towards the IDMP's second pillar of drought management, which focuses on vulnerability and impact assessment, and collaborate on two planned publications: a framework document on integrated drought management and a brochure on drought and water scarcity.
7. Contribute to the development of a second edition of the Global Land Outlook (GLO 2) and other UNCCD science-based communications, as appropriate.	The SPI will participate in the steering committee and the development and review process for GLO 2 and will be invited to contribute to the review and, as appropriate, to the development of other UNCCD science-based communications.

C. Budget

21. The total budget needed for the implementation of the SPI work programme in the biennium 2020–2021 is EUR 516,725. Information on the estimated cost of the work of the SPI is contained in Table 3 and in document ICCD/COP(14)/7-ICCD/CRIC(18)/2. Parties may note that the proposed core budget for the SPI and the available extra-budgetary resources cover just EUR 216,725 of the total estimated budget of EUR 516,725 needed for the full implementation of the work programme. Parties may therefore decide to either make additional resources available or to prioritize the proposed objectives and activities based on available resources.

Table 3
Budget of the Science-Policy Interface work programme 2020–2021

<i>Objective/Activity</i>	<i>Source of funds</i>	<i>Cost (euros)</i>
Objectives and coordination activities	Extra-budgetary	400 000
Annual meetings of the Science-Policy Interface	Core budget	116 725
Total		516 725
Less: proposed core budget		116 725
Less: available extra-budgetary resources		100 000
Budget gap		300 000

III. Recommendations

22. The CST may wish to recommend that the COP:

- (a) Adopt the SPI work programme for the biennium 2020–2021; and
- (b) Request the Executive Secretary to:
 - (i) Present a synthesis report, including policy-oriented recommendations by the SPI, on objective 1 included in its work programme 2020–2021 at the fifteenth session of the CST (CST 15);
 - (ii) Present a synthesis report, including policy-oriented recommendations, on objective 2 included in its work programme 2020–2021 at (CST 15); and
 - (iii) Present a synthesis report, including policy-oriented recommendations, resulting from the coordination activities conducted by the SPI during the biennium 2020–2021 to the CST 15.

Annex

Summary of topics proposed for inclusion in the Science-Policy Interface work programme 2020–2021

In its meeting between 25–27 February 2019, the Science-Policy Interface (SPI) reviewed potential topics to be considered for inclusion in its biennium 2020–2021 work programme drawn from a compilation of science-policy needs identified during the course of SPI work over the biennium 2018–2019 and a set of emerging issues identified by the secretariat and the SPI. All topics have been clustered into major thematic groups to facilitate the identification of a limited number of priorities for inclusion in the draft work programme.

(a) Refined methodological guidance for implementing Land Degradation Neutrality (LDN) targets:

- (i) Integrated land use planning and integrated landscape management to achieve positive transformative change, in the context of LDN;
- (ii) Methodologies, models and tools to support land use decision-making towards achieving or exceeding LDN while navigating environmental, social and economic trade-offs;
- (iii) Methodologies for LDN monitoring, reporting and verification (e.g. local and global scale indicators and standardized methods of LDN assessment);
- (iv) Methodologies for LDN assessments in support of integrated land use planning (land degradation status, land potential; resilience, socioeconomic conditions, gender dimensions);
- (v) Sustainable value chains within the context of LDN and the pursuit of multiple benefits;
- (vi) Assessment of the role of connectivity in ensuring integrity and resilience in socioecological systems in the context of LDN integrated land use planning;
- (vii) Provision of scientific evidence on the environment, food and energy trilemma and the potential for managing trade-offs in the context of LDN;
- (viii) Provision of scientific evidence on urban and rural linkages including approaches to make these relationships more symbiotic in the context of LDN; and
- (ix) Further guidance on the definition and implementation of LDN transformative projects (scaling up and scaling out what works);

(b) Provision of scientific evidence of the pivotal role of soil carbon for the achievement of multiple benefits in the context of LDN:

- (i) Assessment of the interlinkages between soil carbon, soil biodiversity and global efforts to conserve biodiversity; and
- (ii) Assessment of the role of inorganic carbon in the achievement of multiple environmental benefits;

(c) Refined methodological guidance for achieving strategic objective 3 of the UNCCD 2018–2030 Strategic Framework, which is to mitigate, adapt to, and manage the effects of drought in order to enhance resilience of vulnerable populations and ecosystems:

- (i) Approaches for the assessment and monitoring of the resilience of vulnerable populations and ecosystems to drought;
- (ii) Methodologies for the integration of drought planning and land use planning and management in the context of LDN; and
- (iii) Methodologies for assessing the capacity of sustainable land management (SLM) practices to confer resilience to drought;

(d) Methodologies for the assessment of the sources of sand and dust storms, the integration of source mitigation into LDN target setting and land use planning, and the identification of land-based interventions to address this hazard;

(e) The provision of scientific evidence on the correlation between illness and land degradation;

(f) Methodologies for the identification of restoration and rehabilitation opportunities at landscape level;

(g) A compilation of the direct and indirect drivers of land degradation in support of more current categorization in the UNCCD reporting process; and

(h) An assessment of the relationship between global consumption and production flows and land use change and land degradation (e.g. telecoupling).
