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Work programme of the Committee on Science and Technology for the next biennium

Options for improving the Committee on Science and Technology inputs to decision-making, including through synergies with other relevant scientific conferences

Assessment of the impacts of the outcomes of the UNCCD 1st and 2nd Scientific Conferences in supporting the UNCCD decision-making process

Note by the secretariat

Summary

By its decision 21/COP.11 paragraph 25, the Conference of the Parties (COP) requested its Science-Policy Interface (SPI) to make an assessment of the effectiveness of the outcomes of the UNCCD 1st, 2nd and 3rd Scientific Conferences in supporting the United Nations Convention to Combat Desertification decision-making process and to report to the COP at its thirteenth session (COP 13).

The SPI took up this task as part of its 2014–2015 work programme. This document complements document ICCD/COP(12)/CST/4 by providing: (a) information on the scientific preparations led by the institution/consortium selected by the Bureau of the CST to organize the conferences; and (b) a detailed analysis of the 11 recommendations arising from the UNCCD 1st Scientific Conference and the 26 recommendations arising from the UNCCD 2nd Scientific Conference relative to the decisions taken at COP 9, COP 10 and COP 11 and the activities that followed in the intersessional phases. Document ICCD/COP(12)/CST/4 offers concrete proposals on future institutional arrangements in response to these findings.

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Contents

	<i>Paragraphs</i>	<i>Page</i>
I. Background	1–4	3
II. Assessment of the impacts of the recommendations (outcomes) from the UNCCD 1st Scientific Conference on the UNCCD decision-making process	5–23	4
A. Impacts on UNCCD strategies for the monitoring and assessment of desertification, and areas of synergy between desertification, climate change and biodiversity	9–16	4
B. Impacts on UNCCD strategies for becoming a scientific authority on desertification and the creation of network exchange mechanisms	17–23	7
III. Assessment of the impacts of the recommendations from the UNCCD 2nd Scientific Conference on the UNCCD decision-making process	24–31	9
IV. Conclusions	32	11
Annexes		
I. Summary of the current impacts of the recommendations from the UNCCD 1st Scientific Conference		12
II. Summary of the current impacts of the recommendations from the UNCCD 2nd Scientific Conference		16

I. Background

1. At the eighth session of the Conference of the Parties (COP), Parties took steps to strengthen the scientific basis underpinning the United Nations Convention to Combat Desertification (UNCCD). Pursuant to the provisions contained in decision 13/COP.8, paragraph 1 (a), and decision 21/COP.11, paragraphs 19 and 20, the COP decided that each future intersessional session of the Committee on Science and Technology (CST) would be organized in a predominantly scientific and technical conference-style format by the Bureau of the CST in consultation with the lead institution/consortium, which is qualified in the relevant thematic topic selected by the COP. Since then, three UNCCD Scientific Conferences have been held (2009, 2013 and 2015).

2. By its decision 21/COP.11 paragraph 25, the COP requested its Science-Policy Interface (SPI) to make an assessment of the effectiveness of the outcomes of the UNCCD 1st, 2nd and 3rd Scientific Conferences in supporting the UNCCD decision-making process and to report to the COP at its thirteenth session (COP 13). The SPI took up this task as part of its 2014–2015 work programme and developed proposals for improving the efficiency of the CST. In the background of this request to the newly established SPI lies the concern of the Parties as to whether the benefits derived from these UNCCD-sponsored scientific conferences justify the resources invested.

3. To assess the impacts of the first two UNCCD Scientific Conferences, this document complements document ICCD/COP(12)/CST/4 by providing: (a) information on the scientific preparations led by the institution/consortium selected by the Bureau of the CST to organize the conferences; and (b) a detailed analysis of the 11 recommendations arising from the UNCCD 1st Scientific Conference and the 26 recommendations arising from the UNCCD 2nd Scientific Conference relative to the decisions taken at COP 9, COP 10 and COP 11 and the activities that followed in the intersessional phases. The methods applied for the assessment of the impacts of the recommendations on the UNCCD decision-making process as well as the assessment of the efficiency of the structures governing the UNCCD 1st, 2nd and 3rd Scientific Conferences are outlined in the complementing document ICCD/COP(12)/CST/4.

4. This assessment shows how recommendations emerging from the UNCCD 1st Scientific Conference and to a lesser degree those from the UNCCD 2nd Scientific Conference have impacted on decisions taken by the COP since 2009 as well as on other activities related to desertification/land degradation and drought (DLDD) in the domains of research, implementation and policy development outside the UNCCD decision-making process. Despite the clear links between numerous recommendations and decisions taken at COP 9, COP 10 and COP 11, it is important to note that the gradual adaptation of the wording of the recommendations in the decision-making process of the COP diluted the connection between a recommendation emerging from a UNCCD Scientific Conference and its subsequent impact at the decision-making level several years later. This occurred in part because policy decisions tend to be succinct summaries designed to achieve agreement amongst Parties, thereby weakening or obfuscating the intention of a scientific recommendation.

II. Assessment of the impacts of the recommendations (outcomes) from the UNCCD 1st Scientific Conference on the UNCCD decision-making process

5. By its decision 18/COP.8, the COP decided that the priority theme of the UNCCD 1st Scientific Conference would be “Bio-physical and socio-economic monitoring and assessment of desertification and land degradation, to support decision-making in land and water management”.

6. The UNCCD 1st Scientific Conference was co-organized by the scientific consortium called ‘Dryland Science for Development’ (DSD)¹ within the ninth session of the CST and held back-to-back to COP 9.

7. The DSD consortium established three working groups with members selected based on academic expertise as well as integrated and participatory research experience, including experts with extensive on-the-ground experience.² Each working group prepared a white paper on the basis of electronic communication and two physical meetings. The three emerging white papers underwent two major international revision phases prior to the UNCCD 1st Scientific Conference, based on two global online consultations which were organized by the DSD consortium. The outcomes of both online consultations were considered by the DSD consortium during the revision and finalization of the white papers. Founded on the finalized white papers and the results of the discussions at the UNCCD 1st Scientific Conference, the DSD consortium presented 11 key scientific recommendations at COP 9.

8. Following the scientific conference, the recommendations were classified into three themes³ (see annex I). The assessment of their impacts on the UNCCD decision-making process detailed in the remainder of the chapter considers both this classification of the recommendations as well as their interlinkages.

A. Impacts on UNCCD strategies for the monitoring and assessment of desertification, and areas of synergy between desertification, climate change and biodiversity

9. COP 9 involved considerable discussions about monitoring and assessing the impact of efforts to implement the UNCCD. The discussions took place concurrently in both the policy arena and within the scientific community represented at the UNCCD 1st Scientific Conference. The large gap emerging between concerns raised by the scientific community and the focus of policymakers was considered by participating members of the international scientific community who were involved in the generation of the white papers for the UNCCD 1st Scientific Conference, and who further developed the initial set of

¹ DSD was a consortium of five research institutions and science networks: DesertNet International; the International Center for Agricultural Research in Dry Areas; the International Crops Research Institute for the Semi-Arid Tropics; the European Commission’s Joint Research Centre – Institute for Environment and Sustainability; and the United Nations University Institute for Water, Environment and Health.

² The primary thematic focuses of the three working groups were as follows: working group 1: Integrated methods for monitoring and assessment of desertification/land degradation processes and drivers; working group 2: Monitoring and assessment of sustainable land management; working group 3: Monitoring and assessment of desertification and land degradation: Knowledge management, institutions and economics.

³ See chapter III.A of document ICCD/CST(S-2)/2.

recommendations on the basis of the ongoing discussions at the UNCCD 1st Scientific Conference in Buenos Aires. The final wording of the recommendations emerging from the conference was therefore highly influential on both supporting policy generation and encouraging the scientific community to focus on the realities policymakers were grappling with at that time.

10. The recommendations 1, 2, 3, 4, 7, and 10 (see theme 1 in annex I)⁴ and recommendation 8 (see theme 2 in annex I) of the UNCCD 1st Scientific Conference, all of which relate to the monitoring and assessment of DLDD and sustainable land management (SLM), were acted upon by the secretariat, with the support of the scientific community, via decision 17/COP.9 which called for a participatory, formative and iterative scientific peer-review process of how the UNCCD would measure progress in achieving strategic objectives 1, 2 and 3 of The Strategy. That process ultimately involved input from 183 technical experts from around the world that was focused on the refinement of a provisional set of impact indicators and which led to a set of proposals that were considered at COP 10 (see ICCD/COP(10)/CST/2). The work of the UNCCD 1st Scientific Conference served as the starting point for this scientific review process and featured directly in what was presented at COP 10, including: (a) developing a conceptual scientific framework (recommendation 1); (b) considering an approach that was scalable and capable of capturing local, national and global priorities (recommendations 2 and 3); (c) addressing not only DLDD but also embracing the solutions offered by SLM (recommendation 4); (d) underscoring the value of promoting knowledge management (recommendation 7); (e) including local and institutional knowledge (recommendation 8); and (f) promoting open data and data harmonization efforts (recommendation 10). It is important to note that recommendation 2 emerging from the UNCCD 1st Scientific Conference also partly focused on ‘integrated assessment modelling’, which, though thoroughly discussed in the scientific conference, was not endorsed in the scientific peer review as a currently feasible policy replacement for the indicators approach for monitoring and assessment. In addition, recommendation 10 of the UNCCD 1st Scientific Conference partly focused on early warning systems for desertification, which were not discussed in the scientific review process and therefore were not operationally part of subsequent UNCCD policy decisions or action plans.

11. Recommendation 5 (see theme 3 in annex I), which focused on the inclusion of climate change and biodiversity information on DLDD/SLM monitoring and assessment through linkages to the other Rio conventions (the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change), was central to the aforementioned participatory scientific peer review process, to some of the proposals that have influenced COP decisions since COP 9, and to the SPI work programme 2014–2015.⁵

12. At COP 10, Parties adopted decision 19/COP.10 that endorsed all proposals emerging from the participatory scientific review process, with the exception of the formal science networking mechanism, which was supported by recommendation 11 (see annex I).⁶

⁴ Note that recommendation 6 of the UNCCD 1st Scientific Conference focusing on the economic, social and environmental cost of DLDD, and the benefits of SLM, which became the priority theme of the UNCCD 2nd Scientific Conference through decision 18/COP.10, was not part of the participatory scientific review described in this section. It is addressed in paragraphs 15 and 16 of this document.

⁵ See annex III of document ICCD/COP(12)/CST/6.

⁶ The scientific networking mechanism proposed was called the ‘desertification monitoring and assessment partnership’ (see ICCD/COP(10)/CST/2, paras. 43–49 and its annex II).

13. While much was accomplished between COP 9 and COP 10 on the advancement of the process on monitoring and assessment of desertification, Parties recognized the need for the further integration of science and policy with regard to the challenges associated with monitoring and assessing desertification. The Parties consequently continued the iterative and participatory scientific peer review process through the appointment of the ad hoc Advisory Group of Technical Experts on Impact Indicator Refinement (AGTE) (decision 19/COP.10). The AGTE's mandate addressed four critical challenges: (a) developing an approach to operationally delineate affected areas; (b) developing a mechanism to facilitate the integration of local and national priorities/indicator data in the global impact assessment effort; (c) further refining the set of the provisionally adopted impact indicators; and (d) developing a science-based approach for an indicator integration approach. The AGTE produced recommendations, whose origins can be traced back to recommendations 1, 2, 3, 4, 5, 7, 8 and 10 of the UNCCD 1st Scientific Conference (see annex I), which were considered at COP 11 (see ICCD/COP(11)/CST/2) and subsequently adopted by decision 22/COP.11.

14. Since that time, the SPI, established by decision 23/COP.11, took up as part of its work programme 2014–2015 matters related to monitoring and assessment. The findings are outlined for COP 12 in the documents ICCD/COP(12)/CST/3-ICCD/CRIC(14)/7 and ICCD/COP(12)/CST/INF.1.

15. Recommendation 6 (see theme 1 in annex I), which relates to the monitoring and assessment of DLDD and SLM, underscored the need to collect information on the economic, social and environmental cost of DLDD, and the benefits arising from SLM. This recommendation was developed on the basis of the scientific analyses of the economic relevance of DLDD and SLM, as well as the influence which both the “Stern Review on the Economics of Climate Change” and the work on The Economics of Ecosystems and Biodiversity were having on international processes and regional, national and local policymaking. Recommendation 6 was used as a means to support the advocacy of the UNCCD Executive Secretary in 2010 to pursue the ongoing efforts to start a meta-analysis and stocking exercise on the economics of DLDD and promote the development of the global initiative for a comprehensive assessment of the socioeconomic dimensions of land degradation and the value of SLM to enable decision-makers to strengthen rural development and global food security. In December 2010, the secretariat, with the support of the German Ministry for Economic Cooperation and Development (BMZ), established a global alliance of 53 representatives from 31 different intergovernmental agencies, government ministries, donor organizations and the private sector from countries and regional groupings in Africa, Asia, Latin America and Europe. Based on the findings of this alliance, the secretariat, in collaboration with the BMZ, commissioned the International Food Policy Institute (IFPRI) and the Center for Development Research in Bonn, Germany to undertake a state-of-the-knowledge study on the Economics of Land Degradation (ELD).⁷

16. Recommendation 6 also had a direct impact on the identification of the primary theme of the UNCCD 2nd Scientific Conference that was titled “Economic assessment of desertification, SLM and resilience of arid, semi-arid and dry sub-humid areas” (decision 16/COP.9).

⁷ E. Nkonya, N. Gerber, P. Baumgartner, J. von Braun, A. De Pinto; V. Graw; E. Kato, J. Kloos, T. Walter. 2011. The Economics of Desertification, Land Degradation, and Drought. Toward an Integrated Global Assessment. IFPRI Discussion Paper 01086 (Environment Production and Technology Division, 2011).

B. Impacts on UNCCD strategies for becoming a scientific authority on desertification and the creation of network exchange mechanisms

17. Recommendations 8, 9 and 11 (see theme 2 in annex I) addressed strategies for making the UNCCD a scientific authority on desertification and the creation of network exchange mechanisms. Based on these recommendations, at its ninth session, the COP requested the Bureau of the CST to conduct an assessment on how to organize international interdisciplinary scientific advice, taking into account the need to ensure transparency and geographical balance (decision 18/COP.9). The Bureau of the CST, as part of the assessment, conducted an electronic e-survey involving Parties, the scientific community and other relevant stakeholders. The e-survey introduced four options on which respondent's opinions were sought:

- (a) Option 1: The use of existing scientific networks;
- (b) Option 2: The establishment of a new scientific network focused on specific topics;
- (c) Option 3: The use of existing intergovernmental scientific advisory mechanisms;
- (d) Option 4: The establishment of a new scientific panel on land and soil.

18. A few months before the launch of the UNCCD e-survey, scientists from the former DSD consortium conducted a similar, science-driven international e-survey on how to channel core scientific advances into the UNCCD process as a follow-up on the recommendations presented at the UNCCD 1st Scientific Conference.⁸ The results of the UNCCD e-survey were presented at CST 10 in Changwon.⁹ The results of the e-survey conducted by the members of the former DSD consortium were also presented at a side event at COP 10.¹⁰

19. Since the CST could not reach consensus on which option to recommend to the COP, decision 20/COP.10 sanctioned the establishment of an ad hoc working group. Pursuant to this decision, the Ad Hoc Working Group to Further Discuss the Options for the Provision of Scientific Advice Focusing on Desertification/Land Degradation and Drought Issues (AGSA) was established by the Bureau of the CST in July 2012. The terms of reference for the AGSA, agreed by the Bureau of the CST at its meeting on 17–18 February 2012,¹¹ required it to propose “the most suitable components that would shape an integrated scenario for providing scientific advice to UNCCD focusing on DLDD issues, taking into account the regional approach of the UNCCD”¹² and previous work undertaken by the UNCCD on this issue.

⁸ J. Oldeland, “Evaluation of the Global E-Consultations on a Panel for Land Issues (Final Report)”, Commissioned by DesertNet International and UNU-INWEH (2010). Available at: <www.desertnet-international.org/docs/Final_Report_e-forum_16Feb2011.pdf>.

⁹ ICCD/COP(10)/CST/6.

¹⁰ Side event titled “At the cutting edge: channelling core scientific advances into the UNCCD process” held at COP 10.

¹¹ Report of the meeting of the Bureau of the Committee on Science and Technology held on 17–18 February 2012. Available at <www.unccd.int/Lists/SiteDocumentLibrary/CST/BMR_17-18Feb2012.pdf>.

¹² <www.unccd.int/Lists/SiteDocumentLibrary/science/ToR_AGSA_final.pdf>.

20. The AGSA presented its findings at COP 11, and recommended a modular approach¹³ for the provision of scientific advice to the UNCCD. The modular approach consisted of:

- (a) A science-policy interface;
- (b) An independent non-governmental group of scientists;
- (c) Regional science and technology hubs.

21. Based on the AGSA's proposal, at its eleventh session, the COP decided to establish the SPI to facilitate a two-way science-policy dialogue and ensure delivery of policy-relevant information, knowledge and advice on DLDD (decision 23/COP.11). The AGSA's modular approach also underscored the need to ensure independent scientific assessments and to take into account national and subnational levels that would enable the UNCCD to address all relevant geographic levels (see recommendations 3 and 8 in annex I). Based on the other two modules recommended by AGSA (see para. 20), in the same decision the COP also encouraged the formation of an independent consortium of scientific networks on DLDD and regional science and technology platforms that can interact with the SPI for the provision of scientific advice. The COP renamed AGSA's recommendations for an independent non-governmental group of scientists and regional science and technology hubs, perhaps to better underscore that such mechanisms should (a) build on existing expertise and institutional arrangements; and (b) use more common terminology (e.g. 'platform' instead of 'hub'). However, the functions of these two bodies remained as recommended by AGSA.

22. Through the outreach mechanism of the modular approach mentioned above, areas of synergy are currently being identified by the SPI between land degradation/desertification and existing science-policy interfaces on climate change, biodiversity and soil.¹⁴ This process consequently also provides the means to implement recommendation 5 emerging from the UNCCD 1st Scientific Conference (see theme 3 in annex I) through concrete proposals from the SPI to the COP at its twelfth session.¹⁵

23. At its ninth session, the COP also encouraged the publication of the findings of the UNCCD 1st Scientific Conference (decision 23/COP.9). In 2010, the members of the former DSD consortium became guest editors of a special issue of the *Land Degradation and Development Journal*.¹⁶ The white papers presented at the UNCCD 1st Scientific Conference in 2009 were used to develop 13 scientific papers, which were published one and a half years after that conference after an extensive peer-review process. The quality of these white papers was so high that, according to Google Scholar, five of the journal papers

¹³ ICCD/COP(11)/CST/3.

¹⁴ See annex III of document ICCD/COP(12)/CST/6.

¹⁵ Monitor the contribution of sustainable land use and management to climate change adaptation/mitigation and to safeguarding biodiversity and ecosystems services (ICCD/COP(12)/CST/3-ICCD/CRIC(14)/7 and ICCD/COP(12)/CST/INF.1); ensure that the thematic assessment on land degradation and restoration assessment conducted by the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) is of relevance to the UNCCD (ICCD/COP(12)/CST/6 and ICCD/COP(12)/CST/INF.3); identify topics for collaboration between the SPI and the Intergovernmental Technical Panel of Soils (ITPS) (ICCD/COP(12)/CST/6 and ICCD/COP(12)/CST/INF.4); initiate and coordinate interactions between the UNCCD process and that of the Intergovernmental Panel on Climate Change (IPCC)(see draft SPI work programme 2016–2017 (ICCD/COP(12)/CST/6 and ICCD/COP(12)/CST/2)).

¹⁶ M.D. Winslow, M. Akhtar-Schuster, C. Martius, L.C. Stringer, R.J. Thomas, J.V. Vogt, guest eds., "Land Degradation & Development. Special Issue on Understanding Dryland Degradation Trends", vol. 22, No. 2 (2011).

derived from them feature in the top ten most frequently cited papers with ‘desertification’ or ‘land degradation’ in their titles that have been published since 2010.¹⁷ This indicates that scientific outcomes of the UNCCD 1st Scientific Conference have also had and are continuing to have an impact on how DLDD issues are being perceived and addressed in the international scientific community.

III. Assessment of the impacts of the recommendations from the UNCCD 2nd Scientific Conference on the UNCCD decision-making process

24. By its decision 16/COP.9, the COP decided that the priority theme of the UNCCD 2nd Scientific Conference would be “Economic assessment of desertification, sustainable land management and resilience of arid, semi-arid and dry sub-humid areas”. The UNCCD 2nd Scientific Conference was co-organized by the Global Risk Forum (GRF) Davos and was held during the third special session of the CST (CST S-3) from 9 to 12 April 2013 in Bonn, Germany.¹⁸

25. GRF Davos divided the conference theme into two subtopics: (a) economic and social impacts of DLDD; and (b) costs and benefits of policies and practices addressing DLDD. Two working groups were established. In contrast to the selection process practiced in preparation of the 1st UNCCD Scientific Conference, where scientists selected scientists and field practitioners for the three working groups (see para. 7), the members of the two working groups in preparation of the UNCCD 2nd Scientific Conference were selected by the Scientific Advisory Committee (SAC), which was established for this conference, more on the grounds of regional representation than academic criteria.

26. Each working group addressed one subtopic and prepared a white paper on the basis of electronic communication and one physical meeting. Both white papers were the source for the scientific preparation of the UNCCD 2nd Scientific Conference and were prepared to generate discussion during the conference while also providing the foundation for one of the main conference outcomes. However, during the scientific conference itself, the white papers were only presented alongside other topics and speakers at two different sessions. This was seen by scientists actively involved in preparing the white papers for the UNCCD 2nd Scientific Conference as a major drawback on the part of the conference organizers because it prevented communication of scientific knowledge to the CST and meant that most of the conference involved scientists speaking in a language that targeted the scientific audience rather than the policy community. In comparison, during the UNCCD 1st Scientific Conference, two half days were reserved for the presentations of the three white papers, which had been produced by the three working groups.

27. A preliminary conference report was prepared by GRF Davos and the SAC and published as part of the report of CST S-3 immediately after UNCCD 2nd Scientific Conference.¹⁹ However, the report on the final outcomes of the scientific conference was not published until August 2013, just four weeks before COP 11.²⁰ This report highlighted the synthetic findings of the white papers and listed the recommendations emerging from the UNCCD 2nd Scientific Conference in a long summary of the conference sessions. Furthermore, the process of formulating the recommendations was not considered ideal by

¹⁷ Search carried out by the former members of the AGSA on 30 July 2014.

¹⁸ ICCD/COP(11)/CST/INF.5.

¹⁹ See annex II to document ICCD/CST(S-3)/7.

²⁰ ICCD/COP(11)/CST/INF.3.

the SAC because the recommendations were drafted during the conference and were prepared by an external expert employed by the conference organizers; this expert did not have adequate time to consult the SAC regarding his recommendations. According to the SAC, this led to the formulation of 26 recommendations which gave a broad overview rather than a peer-reviewed output. Moreover, some of these recommendations, which were divided into four themes, were not formulated in the style of a policy recommendation, and thus risked not catching the attention of the negotiating Parties at COP 11 (see annex II).

28. The publication of the report on the recommendations from the UNCCD 2nd Scientific Conference (just a few weeks ahead of COP 11) and the writing style of several recommendations hampered the identification of key synthetic findings that could support the UNCCD decision-making process. Consequently, the responses of the COP at its eleventh session on the recommendations from the UNCCD 2nd Scientific Conference were formulated in a rather general, non-binding manner (decision 21/COP.11).

29. Despite these limitations, the analyses of the current impact of the 26 recommendations from the UNCCD 2nd Scientific Conference on supporting the UNCCD decision-making process indicates that some of the recommendations (see annex II) have had some (initial) impacts on, for example:

- (a) Existing initiatives working on the economics of DLDD, for example the ELD Initiative and the Global Environment Facility (GEF) (recommendations 1, 7, 19 and 21);
- (b) The sustainable development goals, land degradation neutrality/zero net land degradation initiatives under the UNCCD (recommendations 5, 6 and 16);
- (c) Awareness-raising on DLDD (through the GEF and SPI) (recommendations 8 and 26);
- (d) Systems for making data available (recommendation 18);
- (e) The assessment of sustainable agriculture production systems (through the SPI and the Scientific and Technical Advisory Panel of the GEF) (recommendation 23);
- (f) Strengthening the evidence base of UNCCD policy deliberations (through the SPI) (recommendation 24).

30. At national level, there also seems to be a high degree of resonance for the economic valuation of DLDD, such as the work being carried out by the ELD Initiative. This has led to an attentive and proactive attitude among some governments,²¹ and could gradually lead to a stronger impact from the recommendations emerging from the UNCCD 2nd Scientific Conference (see annex II).

31. Peer-reviewed papers are currently being developed by former members of the SAC from the UNCCD 2nd Scientific Conference, in liaison with other scientists and the UNCCD secretariat. Thus, the impact of the conference outcomes on the wider scientific community have the potential to expand as occurred with the peer-reviewed publications following the UNCCD 1st Scientific Conference.

²¹ ELD activities carried out by the International Union for Conservation of Nature in Jordan in 2014, the Economic Commission for Latin America and the Caribbean and numerous universities in Latin America have achieved significant results in relation to the cost of inaction and the economics of desertification/land degradation in recent years.

IV. Conclusions

32. The detailed assessment of the impacts of the recommendations emerging from the UNCCD 1st and 2nd Scientific Conferences shows that they have had direct and indirect influences on UNCCD policymaking. Despite the mismatches in the perception of what a UNCCD scientific conference is intended to achieve and the critical organizational constraints governing the previous conferences outlined in ICCD/COP(12)/CST/4, the impacts of the recommendations detailed in this document suggest that the concept of using a conference approach to bridge the science-policy gap has value and provides an entry point for capturing the wider trends in the field of DLDD. This positive trend has the potential to be enhanced and sets the basis for the development of a model by the SPI that would decouple future expert meetings from official sessions of the CST to enhance the quality and timely provision of scientific advice and advice on emerging DLDD policy issues to the UNCCD decision-making process. However, the ultimate test of any scientific information interfaced successfully with policymaking is the subsequent implementation of evidence-based policy on the ground and the monitoring of its effects by the bodies of the UNCCD.

Annex I

Summary of the current impacts of the recommendations from the UNCCD 1st Scientific Conference¹

Recommendation from the UNCCD 1st Scientific Conference

Impact on decision-making

Theme 1: Strategies for monitoring and assessment of desertification/land degradation and drought (DLDD) and sustainable land management (SLM)

Recommendation 1: DLDD as defined by the United Nations Convention to Combat Desertification (UNCCD) results from dynamic, interconnected, human-environment interactions in land systems, where land includes water, soil, vegetation and humans – requiring a rigorous scientific framework for monitoring and assessment, which has heretofore been lacking.

This recommendation was initially addressed by the first 2 of the 11 core principles endorsed in decision 19/COP.10 (drawn from paragraph 52 of document ICCD/COP(10)/CST/2). These core principles were foundational to the results of an extensive, participatory peer-review process initiated by decision 17/COP.9 that included work responding directly to this recommendation. That peer-review process established an initial scientific conceptual framework for monitoring and assessment of the impacts of the Convention and ensured that this framework and the impact indicators selected with respect to it would evolve with changing scientific knowledge and decision-making needs. Both the scientific framework and the indicator set were further refined by the ad hoc Advisory Group of Technical Experts on Impact Indicator Refinement (AGTE) through their fifth recommendation (document ICCD/COP(11)/CST/2), which was then supported by decision 22/COP.11 paragraph 10. Thus, the current scientific framework endorsed by the Conference of the Parties (COP) is the DPSheIR (Driving Force – Pressure – State – human and environmental Impact – Response) framework.

Recommendation 2: To be sufficiently realistic and insightful in light of this complexity, monitoring and assessment must make use of a wide range of analytical methodologies, and distil their lessons into forms useful for decision makers through integrated assessment modelling.

Integrated assessment modelling has not been directly adopted in a COP decision. Due to differing needs and capacities at the country Party level, indicator-based approaches remain the preferred tool of communicating monitoring and assessment information to policymakers. However, the AGTE encouraged that the scientific framework be supported by a system dynamics-based understanding of DLDD processes (ICCD/COP(11)/CST/2) with an emphasis on the integrative capacity of the framework through the assessment of the interactions among indicators.

¹ ICCD/COP(9)/CST/INF.3. The 11 recommendations from the UNCCD 1st Scientific Conference have been grouped in accordance with document ICCD/CST(S-2)/2.

*Recommendation from the
UNCCD 1st Scientific Conference*

Impact on decision-making

Recommendation 3: Public land-use and land-management decisions are mainly taken at national and subnational levels, and so a UNCCD global monitoring and assessment strategy should be designed to be compatible and synergistic with these levels.

The effort to distil lessons drawn from monitoring and assessment in a way that is compatible with the different realities of the global versus national versus subnational levels was endorsed in decision 22/COP.11. The path to this began with the tenth of the eleven core principles endorsed by decision 19/COP.10 (drawn from paragraph 52 of ICCD/COP(10)/CST/2) calling for a mechanism for national relevance, which was later developed by the AGTE, to bridge local, national and global scales through the tracking of ‘storylines’, the documented history of successes and failures experienced at a particular site threatened by desertification and related processes. These storylines were the basis for what the AGTE called ‘narrative indicators’ (ICCD/COP(11)/CST/2). Decision 22/COP.11, paragraph 9, encourages affected country Parties to complement the set of common progress indicators with formal and narrative indicators at national/local scale based on existent data collection systems and databases and from local storylines. The AGTE also recommended engaging local stakeholders in the national action programme (NAP) alignment process, which was then included in decision 22/COP 11, paragraph 11.

Delineating ‘affected areas’ poses a major challenge to the development of a monitoring and assessment strategy that is compatible among country Parties and also responsive to and synergistic among different levels of reporting. The fifth of the eleven core principles endorsed in decision 19/COP.10 emphasized the operational use of the term ‘affected areas’ and separated their delineation from defining, measuring and monitoring impact indicators. This made it possible for the AGTE to propose operational guidelines for the delineation process (recommendation 1 in ICCD/COP(11)/CST/2). However, decision 22/COP.11 limited this to highlighting the text of the Convention concerning the definition of affected areas without commenting on operational approaches to the delineation of affected areas.

Recommendation 4: SLM is imperative to address the UNCCD core mission to combat desertification; therefore SLM monitoring and assessment should be fully integrated into DLDD monitoring and assessment.

The AGTE (ICCD/COP(11)/CST/2, paragraph 34) directly recommended the monitoring and evaluation of SLM in parallel with DLDD, with the view that SLM is the primary tool being employed for global benefits. The COP addressed this in part via decision 22/COP.11, paragraph 14, which encouraged the sharing of best methodologies for monitoring and evaluation across scales of SLM practices.

The supporting text for recommendation 4 from the UNCCD 1st Scientific Conference places particular attention on the constraint of low soil carbon content in drylands. Soil organic carbon stock is one of the metrics adopted in decision 22/COP.11.

Recommendation 6: To aid decision makers in setting priorities, monitoring and assessment should collect information on the economic, social and environmental cost of DLDD, and the benefits of SLM. The potential role of economic modelling should be explored to develop policy mechanisms that can facilitate SLM decisions.

This recommendation supported the promotion of the Economics of Land Degradation (ELD) initiative and had a direct impact on the primary thematic focus of the UNCCD 2nd Scientific Conference that was titled “Economic assessment of desertification, sustainable land management and resilience of arid, semi-arid and dry sub-humid areas” (decision 16/COP.9), and thus relates to its recommendations (see annex II).

Recommendation 7: Monitoring and assessment should capitalize on knowledge management to stimulate valuable synergies between different sources of expertise across different spatial and temporal scales and levels, social settings, institutions, scientific disciplines and development sectors.

The influence of recommendations 7 and 8 from the UNCCD 1st Scientific Conference have been directly reflected in COP decisions beginning with decision 21/COP.10, further supported by AGTE recommendation 8 (ICCD/COP(11)/CST/2), and later moved into a pilot testing phase via decision 22/COP.11 and decision 24/COP.11. These decisions culminated in the development and pilot testing of the Scientific Knowledge Brokering Portal (SKBP) in 2014 (see ICCD/COP(12)/CST/7-ICCD/CRIC(14)/6).

Recommendation 10: In order to propel principles into action, regular global DLDD/SLM monitoring and assessment and early warning mechanisms should be organized and implemented based on agreed standard protocols and open data access policies, to harmonize with other efforts worldwide and to minimize duplication of effort.

The part of this recommendation which has been incorporated into policy is the call for open data access policies and efforts to promote data harmonization (see the sixth of the 11 core principles endorsed in decision 19/COP.10).

Desertification early warning systems (EWS) have not been directly addressed in UNCCD policy. It still needs to be analysed as to whether EWS have already been addressed in any global or national strategies, plans and/or programmes to combat desertification. Knowledge gaps and pending questions must be addressed to translate broadly accepted principles on EWS into action-oriented modalities (e.g. NAPs and regional action programmes (RAPs)).

Theme 2: The UNCCD as a scientific authority on desertification and the creation of network exchange mechanisms

Recommendation 8: Sharing of local and scientific knowledge, tools and methods will enhance monitoring and assessment and strengthen human and institutional capacities.

Recommendations 7 and 8 of the UNCCD 1st Scientific Conference led to the development of an approach and technical mechanisms for sharing local and scientific knowledge, as described in recommendation 7 above. Recommendation 8 also led to considerable discussion in the scientific and policy arenas about the capacity challenges associated with monitoring and assessment, as reflected in the core principles (such as the data harmonization principle), and concerns about the need to strengthen human and institutional capacities endorsed in decision 19/COP.10 (drawn from paragraphs 29–33 and 52 of ICCD/COP(10)/CST/2).

The supporting text behind recommendation 8 emphasized the value of local knowledge and the need to scale that knowledge up, as noted in recommendation 3 above. Decision 23/COP.11 also encouraged the formation of regional science and technology platforms that can interact with the Science-Policy Interface (SPI) for the provision of scientific advice.

Recommendation 9: Coordination and dissemination of new knowledge and methodologies for integrated approaches to DLDD/SLM require the establishment of an independent, international, interdisciplinary scientific advisory mechanism which would include (but not be limited to) monitoring and assessment, with clear channels for consideration of its advice in Convention decision-making.

Recommendation 9 of the UNCCD 1st Scientific Conference led to decision 20/COP.10, which recommended the formation of the Ad Hoc Working Group to Further Discuss the Options for the Provision of Scientific Advice Focusing on Desertification/Land Degradation and Drought Issues (AGSA). Based on the AGSA's proposals, the COP decided to establish the SPI to facilitate a two-way science-policy dialogue and ensure delivery of policy-relevant information, knowledge and advice on DLDD (decision 23/COP.11). The same decision also encouraged the formation of (a) an independent consortium of scientific networks on DLDD; and (b) regional science and technology platforms that can interact with the SPI for the provision of scientific advice.

*Recommendation from the
UNCCD 1st Scientific Conference*

Impact on decision-making

Recommendation 11: The UNCCD community would benefit from a science networking mechanism so that the large yet dispersed body of DLDD/SLM knowledge and expertise worldwide could be more effectively accessed, used and shared.

Recommendation 11 of the UNCCD 1st Scientific Conference culminated in the text considered by the COP at its tenth session through document ICCD/COP(10)/CST/2 (paragraphs 43–49 and annex II), which introduced the concept of a desertification monitoring and assessment partnership (DMAP), documenting the role of the establishment of an appropriate institutional partners task force could play in mobilizing/networking the larger scientific community and associated interested institutions. While decision 19/COP.10 did call for a strengthened collaboration between international and regional organizations involved in desertification monitoring in view of better supporting affected country Parties for reporting on indicators for DLDD within the framework of the UNCCD, it did not adopt the DMAP proposal.

Decision 23/COP.11 also encouraged the formation of an independent consortium of scientific networks on DLDD based on the recommendations made by AGSA.

Theme 3: Areas of synergy between desertification, climate change and biodiversity

Recommendation 5: DLDD/SLM monitoring and assessment should include the collection of information relating it to climate change and biodiversity, and to other land-related issues that are the focus of multilateral environmental agreements.

The iterative, participatory peer-review process on impact indicators that followed the UNCCD 1st Scientific Conference (summarized in document ICCD/COP(10)/CST/2) ultimately involved 183 scientific and technical experts, many of whom brought direct experience from their work with the climate change and biodiversity conventions. All indicators of the Convention on Biological Diversity (CBD) and essential climate variables of the United Nations Framework Convention on Climate Change (UNFCCC) were reviewed for synergies with the needs of the UNCCD in DLDD/SLM monitoring and assessment. Those indicators with common features were included in the refinements of the indicator set under consideration by the COP (ICCD/COP(10)/CST/2, table at pages 13 and 14). These synergies were further explored by the AGTE (ICCD/COP(11)/CST/2), which reduced the provisional set to six progress indicators, one shared by UNFCCC (“Trends in carbon stocks above and below ground” and one by CBD (“Trends in abundance and distribution of selected species”). These are detailed on ICCD/COP(11)/CST/2, recommendation 3, and referred to in the annex to decision 22/COP.11.

The interconnections between DLDD and climate change and the role of SLM in addressing negative impacts was core to the theme of the UNCCD 3rd Scientific Conference.

Annex II

Summary of the current impacts of the recommendations from the UNCCD 2nd Scientific Conference²

Recommendation from the UNCCD 2nd Scientific Conference

Impact on decision-making

Theme 1: Background and rationale for enhanced science-policy-practice interaction regarding the economics of desertification/land degradation and drought (DLDD)

Recommendation 1: The economics of DLDD should be used for awareness-raising and effective policymaking.

This recommendation is very aspirational. Possibly progress has been made here, mainly through pre-existing initiatives like the Economics of Land Degradation (ELD) Initiative.

Economic valuation is a key emerging policy issue discussed at the UNCCD 3rd Scientific Conference for future United Nations Convention to Combat Desertification (UNCCD) science-based activities (ICCD/COP(12)/CST/2).

Recommendation 2: To use the total economic value of terrestrial ecosystems as a tool to promote sustainable land management (SLM), the evidence base for the economics of DLDD needs to be expanded further in a systematic way.

This is not a recommendation. It needs to be assessed as to whether any new investments on the economics of DLDD have been initialized beyond the ongoing studies.

Recommendation 3: To use the direct economic costs of DLDD as a tool to promote SLM, the evidence base for direct economic costs of DLDD needs to be expanded further in a systematic way

As above.

Recommendation 4: To use the indirect economic costs of DLDD as a tool to promote SLM, the evidence base for indirect economic costs of DLDD needs to be expanded further in a systematic way.

As above.

Recommendation 5: If policies for addressing desertification are to be effective, economic impacts and social impacts of DLDD need to be tackled in an integrated manner. An inter-disciplinary scientific platform dealing with DLDD is one possible solution to facilitate inter-disciplinary collaboration.

The Science-Policy Interface (SPI) is currently responding to this recommendation to some extent and will propose ways to improve the efficiency of the Committee on Science and Technology (CST) through new future institutional arrangements (ICCD/COP(12)/CST/4).

Theme 2: Action and implementation related requirements to guide science-policy efforts

Recommendation 6: Science needs to be involved in the implementation process of the Rio+20 goals.

The proposed SPI work programme 2016–2017 includes an objective to provide guidance to operationalize the land degradation neutrality (LDN) target (ICCD/COP(12)/CST/6).

² ICCD/COP(11)/CST/INF.3.

*Recommendation from the
UNCCD 2nd Scientific Conference*

Impact on decision-making

Recommendation 7: Stakeholders should use available tools to measure the cost of DLDD and share experience in a systematic way.

Possibly progress has been made here, mainly through pre-existing initiatives like ELD.

Recommendation 8: Promote education on causes of and measures against DLDD.

This is systematically addressed through the Global Environment Facility (GEF), which is quite responsive to recommendations like this. Therefore, this recommendation has been responded to, for example through projects related to the Great Green Wall of the Sahara and the Sahel Initiative.³

Recommendation 9: Payment for ecosystem services schemes are a fruitful approach for cost-effective and equitable SLM practices. Improvement in access to insurance and loan programmes for the poor can help to avoid the “poverty-environment trap”.

This is not a recommendation. Improved action towards achieving this goal remains to be analysed.

Recommendation 10: Deliberate efforts to invest in empowering local institutions and government effectiveness should be paired with efforts to achieve the goals of zero net land degradation and improved economic incentives.

Though the direct influence of this recommendation has not been documented, there is evidence of improvement in some regions (e.g. policies in Central Asia with respect to pasture user groups or in Africa regarding local governance arrangements).

Recommendation 11: Combine long term rehabilitation plans with short-term benefits to land users and/or adequate compensation if protection of natural resources has an opportunity cost.

The impact of this recommendation still needs to be analysed. This recommendation targets good practice and underscores the need for more focus on long-term sustainability in addition to short-term benefits.

The proposed SPI work programme 2016–2017 addresses under its objective 3 the need to develop guidelines for classifying different degrees of degradation for appropriate measures for enhancing the productivity of lands. (ICCD/COP(12)/CST/6).

Recommendation Theme 3: Findings and recommendations for enhanced strategy and policy development

Recommendation 12: For the better development and formulation of effective policies, greater investment in mutual inter- and transdisciplinary research on DLDD is essential.

Progress on the impact of this recommendation still needs to be analysed.

In a policy-oriented proposal emerging from an assessment of the outcomes of the UNCCD 3rd Scientific Conference, the SPI reiterated the need for transdisciplinary and translational science for making a difference for people on the ground (ICCD/COP(12)/CST/2).

Recommendation 13: Governments and the international scientific and technical bodies of the Rio conventions should benefit from joining efforts in knowledge management.

There are indications that this recommendation is having impact, though how and how much needs to be analysed. One example is the GEF-funded Great Green Wall of the Sahara and the Sahel Initiative.

The SPI work programme 2014–2015 addresses the issue of making recommendations for the most useful indicators found to be used by each Rio convention for joint reporting on land issues (ICCD/COP(12)/CST/3-ICCD/CRIC(14)/7 and ICCD/COP(12)/CST/INF.1).

³ <www.thegef.org/gef/great-green-wall>.

Recommendation 14: The UNCCD national action programme (NAP) process should help affected Parties to present their strategies for DLDD prevention and mitigation and outline future action.

Progress on the impact of this recommendation still needs to be analysed as many countries Parties are still in the midst of the revision process of their NAPs.

It would also need to be monitored as to whether the Great Green Wall of the Sahara and the Sahel Initiative with its own national action plans (aligned with UNCCD NAPs), could provide a catalyst here.

Recommendation 15: Rural development should not only increase resilience in economic risk but should also reduce social and environmental risks. Developmental and environmental policies need to minimize risks, reduce exposure to hazards and reduce vulnerability by improving coping and adaptive capacities, building resilience and fostering growth.

The proposed SPI work programme 2016–2017 includes an objective highlighting the science-based synergistic potential of SLM practices to address land degradation as well as climate change adaptation and mitigation (ICCD/COP(12)/CST/6).

Recommendation 16: Further scientific investigation into the feasibility and the potential of the zero net land degradation approach is recommended.

This is ongoing and has been picked up in the UNCCD process in its efforts on LDN target-setting.

The proposed SPI work programme 2016–2017 includes an objective to provide guidance to operationalize the LDN target (ICCD/COP(12)/CST/6).

Theme 4: Findings and recommendations relating to scientific tools and methodologies as well as to communication and outreach

Recommendation 17: Use the white papers and the background document as a basis for further research.

It is still too early to know if new research has been inspired by the content of the white papers and background document. Further monitoring is necessary.

Recommendation 18: A better system for making data available, both between scientists and economists and between them and policymakers, is needed.

A United Nations Environment Programme (UNEP) initiative, UNEPLive,⁴ is attempting to address this.

Recommendation 19: Economic analysis should be used for a better balanced negotiating power between stakeholder groups.

The impact of this recommendation still needs to be analysed. Currently, not much seems to have been done here, although initiatives of the International Union for Conservation of Nature (IUCN) (e.g. on the economics of land degradation) tried to include an element of public dialogue and capacity-building in this field. However, a much greater response is needed.

Recommendation 20: Make use of the new World Atlas of Desertification for economic valuation.

The impact of this recommendation still needs to be analysed.

⁴ <http://uneplive.unep.org/Home/aboutus#.VPIEfcn0_rI>.

*Recommendation from the
UNCCD 2nd Scientific Conference*

Impact on decision-making

Recommendation 21: Make use of the ELD Initiative to assess the benefits of action versus inaction in SLM.

Some studies have been doing on this, for example on the economics of land degradation by IUCN. Also a brochure entitled “Reaping the Rewards: Financing Land Degradation Neutrality” has been issued by the secretariat. It contains figures and data on the cost and benefits of implementing SLM based on case studies.

Recommendation 22: Acquisitions of large-scale foreign private sector investments in the drylands must be ecologically and socially just and sound.

Global advocacy has been quite strong on this issue. Based on the outcomes and policy-oriented recommendations from the UNCCD 3rd Scientific Conference, the SPI identified land speculation as an emerging policy issue relevant for future UNCCD science-based activities (ICCD/COP(12)/CST/2).

Recommendation 23: Sustainable agriculture production systems including the various approaches of ecological and climate resilient agriculture are important contributions for transformative land regeneration.

This is not a recommendation.

The SPI work programme 2014–2015 assessed the outcomes of the workshop on agroecosystem resilience organized by the Scientific and Technical Advisory Panel of the GEF (ICCD/COP(12)/CST/3-ICCD/CRIC(14)/7 and ICCD/COP(12)/CST/INF.1).

Recommendation 24: UNCCD should further use scientific conferences to strengthen the evidence base of UNCCD policy deliberations.

The UNCCD 3rd Scientific Conference was organized in Cancun in March 2015. The SPI was requested by the COP at its eleventh session to assess the impacts of the outcomes of all three UNCCD Scientific Conferences in supporting the UNCCD decision-making process (decision 21/COP.11). Based on the results of these assessments, the SPI made proposals on the possible future governing structures to support the UNCCD in becoming a scientific authority on DLDD (ICCD/COP(12)/CST/4).

Recommendation 25: Researchers, their networks and professional communities and organizations, as well as the relevant public authorities in charge of research, are to be called upon to promote the inclusion of the Conference theme in appropriate funding instruments for research and decision support.

Impact cannot be assessed currently.

Recommendation 26: There is a need for greater awareness of DLDD. A stronger case for global action towards LDN needs to be made.

The SPI work programme 2014–2015 has started targeting this issue and proposes to address LDN in its work programme 2016–2017 (ICCD/COP(12)/CST/6).