



SUMMARY OF THE FOURTH SPECIAL SESSION OF THE UNCCD COMMITTEE ON SCIENCE AND TECHNOLOGY AND 3RD SCIENTIFIC CONFERENCE: 9-12 MARCH 2015

The fourth Special Session of the Committee on Science and Technology (CST S-4) of the UN Convention to Combat Desertification (UNCCD), together with the UNCCD 3rd Scientific Conference, convened from 9-12 March 2015, in Cancun, Mexico. Approximately 300 people registered for the meeting, almost half of whom were from the scientific community. In addition, government officials and representatives of civil society, intergovernmental and UN organizations also participated.

Participants at the Scientific Conference had been charged by the UNCCD Conference of the Parties (COP) with addressing “Combating desertification/land degradation and drought for poverty reduction and sustainable development: the contribution of science, technology, traditional knowledge and practices.” They considered this theme on the basis of an Impulse Report on “Climate change and desertification: Anticipating, assessing and adapting to future change in drylands,” several keynote addresses and three sessions of parallel workshops, each featuring poster presentations and discussions. The Scientific Conference was organized by the Scientific and Traditional Knowledge for Sustainable Development consortium, under the guidance of the CST Bureau and the Conference’s Scientific Advisory Committee.

In addition to the official proceedings, morning, lunchtime and evening side-events were held throughout the week, showcasing, *inter alia*, advances in tools and techniques, new initiatives and regional and thematic activities, ranging from use of newly available satellite imagery to the anticipated production of a Global Land Outlook publication to progress on the COP-mandated Scientific Knowledge Brokering Portal.

As he opened the meeting, CST Chair Uriel Safriel underscored the uniqueness of combining a scientific conference with a meeting of national policy-makers. The Scientific Conference organizers highlighted that the Conference would deploy a new format, reflecting lesson learning from the first two iterations of this novel approach to bridging science and

policy. This meeting also marked the first UNCCD meeting with active involvement by the newly-established Science-Policy Interface, which held its second meeting immediately prior to the opening of the CST S-4 on 7-8 March 2015. The CST S-4 report will be transmitted to the 12th meeting of the CST and to the COP, which convenes in Ankara, Turkey, in October 2015.

A BRIEF HISTORY OF THE UNCCD

The UNCCD is the centerpiece in the international community’s efforts to combat desertification and land degradation in the drylands. The convention was adopted on 17 June 1994, entered into force on 26 December 1996, and currently has 195 parties. The UNCCD recognizes the physical, biological and socio-economic aspects of desertification, the importance of redirecting technology transfer to be demand-driven, and the importance of involving local communities in combating desertification, land degradation and drought (DLDD). The core of the UNCCD is the development of national, sub-regional and regional action programmes by national governments, in cooperation with UN agencies, donors, local communities and non-governmental organizations.

NEGOTIATION OF THE CONVENTION: In 1992, the UN General Assembly, as requested by the UN Conference on Environment and Development, adopted resolution 47/188 calling for the establishment of an intergovernmental negotiating committee for the elaboration of a convention to combat desertification (INCD) in those countries experiencing serious

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drought and/or desertification, particularly in Africa. The INCD met five times between May 1993 and June 1994 and drafted the UNCCD and four regional implementation annexes for Africa, Asia, Latin America and the Caribbean, and the Northern Mediterranean.

COPs 1-11: The COP met annually from 1997-2001. During these meetings, delegates, *inter alia*: selected Bonn, Germany, as the location for the UNCCD's Secretariat and the International Fund for Agricultural Development (IFAD) as the organization to administer the Global Mechanism (GM), which works with countries on financing strategies for sustainable land management; approved a Memorandum of Understanding (MoU) regarding the GM; established an *ad hoc* working group to review and analyze the reports on national, sub-regional and regional action programmes; adopted a fifth regional annex for Central and Eastern Europe; established the Committee for the Review of the Implementation of the Convention (CRIC); and supported a proposal by the Global Environment Facility (GEF) to designate land degradation as another focal area for funding.

COP 6 met in 2003 in Havana, Cuba. Delegates, *inter alia*, designated the GEF as a financial mechanism of the UNCCD, decided that a comprehensive review of the Secretariat's activities would be undertaken by the UN Joint Inspection Unit (JIU), and requested the Secretariat to facilitate a costed feasibility study on all aspects of regional coordination. COP 7 took place in Nairobi, Kenya, in 2005. Delegates reviewed the implementation of the Convention and developed an MoU between the UNCCD and the GEF. An intergovernmental intersessional working group was established to review the JIU report and to develop a draft 10-year strategic plan to enhance the implementation of the Convention (the Strategy).

COP 8 convened in Madrid, Spain, in 2007 and, *inter alia*, adopted a decision on the Strategy. Delegates also requested the JIU to conduct an assessment of the GM for presentation to COP 9. Delegates did not reach agreement on the programme and budget, and an Extraordinary Session of the COP convened at UN Headquarters in New York on 26 November 2007 to conclude this item.

COP 9 convened in Buenos Aires, Argentina, in 2009. Delegates focused on a number of items called for by the Strategy and adopted 36 decisions, which addressed topics including: four-year work plans and two-year work programmes of the CRIC, CST, GM and the Secretariat; the JIU assessment of the GM; the terms of reference of the CRIC; arrangements for regional coordination mechanisms; the communication strategy; and the programme and budget.

COP 10 convened in 2011, in Changwon City, Republic of Korea. Delegates adopted 40 decisions, addressing, *inter alia*, the governance structure for the GM, by which parties agreed that the accountability and legal representation of the GM shall be transferred from IFAD to the UNCCD Secretariat.

COP 11 convened in 2013, in Windhoek, Namibia. Delegates adopted 41 decisions, *inter alia*, to: approve new housing arrangements of the GM; initiate follow-up of the outcomes of the UN Conference on Sustainable Development (Rio+20); establish a science-policy interface (SPI) to enhance the UNCCD as a global authority on desertification, land degradation and

drought (DLDD) and sustainable land management (SLM); and endorse the establishment of the Scientific Knowledge Brokering Portal to enhance knowledge management, including on traditional knowledge, best practices and success stories.

COMMITTEE ON SCIENCE AND TECHNOLOGY (CST): The CST has convened parallel meetings at each COP. At CST 1's recommendation, the COP established an *ad hoc* panel to oversee the process of surveying benchmarks and indicators, and decided that CST 2 should consider linkages between traditional and modern knowledge. CST 3 recommended that the COP appoint *ad hoc* panels on traditional knowledge and on early warning systems. CST 4 submitted proposals to improve the CST's work, and CST 5 adopted modalities to improve the efficiency and effectiveness of the CST, namely through the creation of a Group of Experts. CST 6 continued discussions on improving its efficiency and effectiveness, among other agenda items. CST 7 considered land degradation, vulnerability and rehabilitation, among other issues. And CST 8 decided to convene future sessions in a predominantly scientific and technical conference-style format, which led to the convening of the UNCCD 1st Scientific Conference at CST 9 in 2009.

The first Special Session of the CST (CST S-1) (2008) considered preparations for CST 9, elements of the Strategy related to the CST, the CST's four-year work plan and two-year costed work programme, and advice to the CRIC on measuring progress on the Strategy's Objectives.

CST 9 met concurrently with COP 9, during which the 1st Scientific Conference convened to consider the theme "Biophysical and socio-economic monitoring and assessment of desertification and land degradation, to support decision making in land and water management." CST 9 also developed decisions to review the experience of the 1st Scientific Conference and to organize a 2nd Scientific Conference on the theme "Economic assessment of desertification, SLM and resilience of arid, semi-arid and dry subhumid areas." In addition, the CST recommended two indicators—the proportion of the population in affected areas living above the poverty line and land cover status—as the minimum required subset of impact indicators for reporting by affected countries beginning in 2012.

CST S-2 (2011) considered the status of work on methodologies and baselines for the effective use of the subset of impact indicators, among other matters. CST 10 established two *ad hoc* working groups: one to continue the iterative participatory process on impact-indicator refinement and monitoring and assessment of impacts; and one to further discuss options for the provision of scientific advice to the UNCCD.

CST S-3 (9-12 April 2013, Bonn, Germany) met concurrently with the UNCCD 2nd Scientific Conference, which discussed research and best practices in the face of DLDD and proposed methodologies for evaluating the costs and benefits of SLM.

CST 11 met concurrently with COP 11 (2013) and forwarded nine decisions to the COP. In addition to recommending the establishment of the SPI and the Scientific Knowledge Brokering Portal, delegates, *inter alia*: approved the roster of independent experts; established two *ad hoc* working groups, one on the iterative participatory process on impact-indicator refinement and monitoring, and another to discuss options for

providing scientific advice to the UNCCD; and called for a multi-stakeholder partnership model for launching a fellowship programme.

REPORT OF THE MEETINGS

CST S-4 OPENING PLENARY

On Monday morning, 9 March 2015, CST Chair Uriel Safriel (Israel) opened the fourth special session of the UNCCD's Committee on Science and Technology, noting that combining a scientific conference with a meeting of policy-making country representatives is unique to the UNCCD process, and expressing high expectations for the forthcoming recommendations.

Roberto Borge Angulo, Governor of the State of Quintana Roo, Mexico, welcomed participants and stressed the importance of having a platform for global experts to share their strategies, experiences and knowledge in combating climate change and land degradation, which he noted represent the greatest environmental challenges of this age. He highlighted that over five million people are affected annually by drought and food demand will increase by 60% by 2050, and emphasized related challenges, particularly when calculating the economic costs and environmental consequences of land loss.

Jorge Rescala Pérez, General Director of the National Forestry Commission, Mexico, recalled that Mexico had been the first country to ratify the Convention, and confirmed Mexico's commitment to strengthen combined efforts under all three Rio Conventions to tackle global environmental concerns.

UNCCD Executive Secretary Monique Barbut recalled the reasons for the collapse of the Mayan civilization, warning that the land degradation situation is nearing the point where previous civilizations collapsed. She called on participants to keep in mind that: 75% of poorest people live in rural areas and are fully dependent on land; 2.5 billion people live on small farms and depend entirely on agriculture for survival; and 12 million hectares of land are lost annually due to land degradation, compounded by a 2% decline in agriculture as a result of climate change. Warning of the increase in competition and conflict due to diminishing natural resources, Barbut urged participants to develop innovative and practical recommendations based on sound scientific research. Noting that land use change is responsible for 20% of global carbon emissions, she emphasized the need to develop common indicators that will measure implementation progress for all three Rio Conventions.

STATEMENTS BY REGIONAL AND INTEREST

GROUPS: Costa Rica, on behalf of the Latin American and Caribbean Group (GRULAC), highlighted the need to promote interdisciplinary studies that incorporate traditional knowledge and local realities, and the convergence between academic and popular know-how.

The European Union (EU) highlighted the efficient launch of the UNCCD Science-Policy Interface and attached high importance to its activities. He underscored that science and technology is a clear example of where synergies among the three Rio Conventions can be harnessed.

Turkey highlighted the vicious circle between desertification, land degradation, drought, poverty and lack of knowledge,

noting that one of the most effective ways to break this circle is to apply traditional knowledge. Describing several national initiatives in this regard, he said that the twelfth session of the Conference of the Parties (COP 12), which will take place in Ankara in October 2015, will be a milestone in combating desertification and will launch an "Ankara Initiative." He explained that Turkey attaches particular importance to land degradation neutrality and the connection between climate change and desertification, global factors affecting desertification, and the role of the private sector in combating desertification.

ADOPTION OF THE AGENDA AND ORGANIZATION OF WORK:

CST Chair Safriel introduced the agenda and organization of work (ICCD/CST(S-4)/1), which was adopted without amendment.

On the election of Vice-Chairs, Safriel explained that regional groups had endorsed three new members to replace those no longer able to serve. The new Vice-Chairs, Matthias Magunda (Uganda), Oleg Guchgeldiyev (Turkmenistan) and Nicole Bernex (Peru), will complete the terms of Chehat Fouad (Algeria), Allaadeen Mohamad Abdalla Al-Sharjabi (Yemen), and Sonia Gonzalez (Peru). The continuing Vice-Chair is Hamid Čustović (Bosnia and Herzegovina). The CST elected Magunda as Rapporteur.

PREPARATION OF THE UNCCD 3RD SCIENTIFIC

CONFERENCE: Victor Castillo, Coordinator, Knowledge Management, Science and Technology, UNCCD Secretariat, introduced document ICCD/CST(S-4)/2, which describes the preparatory process for the UNCCD 3rd Scientific Conference and contains the executive summary of a pre-conference report prepared under the guidance of the Scientific Advisory Committee (SAC). He said the main conclusions of the pre-conference report would be presented during the Scientific Conference for discussion, and a verbal report of these deliberations would be presented to the closing session of CST S-4 for its consideration.

The CST then suspended its meeting and the UNCCD 3rd Scientific Conference opened. The Conference was organized in a series of alternating plenary sessions and parallel workshops. Plenary keynote speakers introduced the conference themes of: diagnosis of constraints: vulnerability of agro-ecosystems and populations in affected regions; responses: land-based approaches to adaptation and knowledge transfer; and monitoring and assessment: how to evaluate the effectiveness of adaptation interventions. Following these opening presentations, participants met in parallel workshops. During each two-hour session, participants selected among five workshop options, which included presentations of approximately five to ten posters, following a call for abstracts. Each workshop was organized as follows: after introductory comments, a poster session allowed participants to discuss the research with the authors, and participants then reconvened to discuss previously compiled questions with the objective of developing recommendations for further research or action. The workshop rapporteurs reported the discussions and recommendations back to plenary sessions of the Scientific Conference. Members of the SPI and the SAC for the

Conference compiled these recommendations into a final report, which was forwarded to the closing session of the CST S-4, on Thursday afternoon, 12 March.

UNCCD 3RD SCIENTIFIC CONFERENCE

During the opening session of the UNCCD 3rd Scientific Conference, on Monday morning, 9 March, Bernard Hubert, Chair, Scientific and Traditional Knowledge for Sustainable Development (STK4SD) Consortium, said that, while holding the CST S-4 concurrently with the UNCCD Scientific Conference presents some challenges, it also offers opportunities for scientists and policy makers to work towards meeting the same targets. He outlined the format of the Scientific Conference, noting that it would focus on poster presentations and interactive discussions to enhance exchanges among scientists and other stakeholders.

William Payne, Chair, Conference SAC, observed that almost 50 years after the publication of Garrett Hardin's paper on the tragedy of the commons scientists still know very little about how drought, land degradation and desertification interact within socio-economic systems and how they might be further affected by climate change. He noted that tackling such complex interactions will primarily require human responses, rather than technical solutions.

Tarja Halonen, UNCCD Drylands Ambassador and former President of Finland, noted that more than half of the world's poor live on degraded lands and stressed that, as custodians of land, women should not be viewed as victims but can provide solutions for SLM. Recalling the collaborative spirit that led to the adoption of the Millennium Declaration, she noted that "we can repeat this in September," and called for such dialogue to involve not only politicians but ordinary citizens as well.

In a keynote address, Mark Reed, Director of the Knowledge ExCHANGE Research Centre of Excellence, Birmingham City University, UK, stressed the urgency of finding a way to tackle the combined challenges of climate change and land degradation. He highlighted how communities' vulnerability to exposure to climate change and desertification is tied to their sensitivity to and ease of adapting to these changes. On diagnosing constraints, he emphasized both positive and negative feedback loops between climate change and land degradation, noting that the positive feedbacks are more immediate. On response options, he explained the Impulse Report for the Conference, which he co-authored, identified several win-wins' as well as a smaller number of 'triple-wins' that not only address climate change and land degradation, but also biodiversity and the enhancement of ecosystem services. He cited as examples ecosystem-based adaptation and SLM.

On monitoring and assessment, Reed stressed the need to be able to monitor changes to allow effective adaptation, and to know whether adaptation measures in place are working, which requires monitoring wellbeing and livelihood as well as biological assessment. Reed concluded there is a need to mainstream participatory processes to broaden stakeholder involvement in deciding among diverse priorities for how to adapt to the twin challenges of climate change and land degradation. He pointed to recent evidence on best practices for

participation that underscores the importance of: representing the widest range of stakeholders as possible, managing power dynamics, and connecting needs and priorities with resonance to relevant stakeholders.

In the ensuing discussion, panelists responded to questions about: the role of policymakers in resolving competing land uses, whether regional workshops would overcome barriers to knowledge communication, and land degradation and desertification as complicated and constantly changing processes.

DIAGNOSIS OF CONSTRAINTS: VULNERABILITY OF AGRO-ECOSYSTEMS AND POPULATIONS IN AFFECTED REGIONS:

On Monday afternoon, CST Chair Uriel Safriel, Hebrew University of Jerusalem, Israel, delivered a keynote address, which focused on determining ways of characterizing and understanding the vulnerability and adaptive capacities of ecosystems and populations in affected regions, particularly those vulnerable to the effects of climate change. He introduced the conceptual framework of the process through which climate change affects the human population through its exacerbating effect on land degradation. He emphasized that land use is a driver of ecosystem change, which can be affected by another driver of ecosystem change—climate change. On the characteristics of these two drivers of ecosystem change, Safriel highlighted that the mutual effect and spatial cover of climate change is global, whereas that of land degradation is not as large and is reversible. He explained that ecosystem vulnerability to climate change is relatively low with high inherent adaptability, whereas an ecosystem possesses low adaptability to land degradation. Safriel emphasized that, for agricultural and rangeland ecosystems to be climate-change resilient, non-converted natural land ecosystems need to provide a sustained flow of ecosystem services that support the functioning of the agricultural ecosystems. He said this situation highlights the importance of securing the natural capital of ecosystems, since it is this natural capital that generates ecosystem services and, hence, securing ecosystem services conservation and management needs to be applied to the land and to biodiversity. He emphasized that, for land use to qualify as SLM, attention must be given to both agricultural land and the ecosystems that support the land. Safriel urged conference participants to contribute through providing data that will validate this framework and identify knowledge-based practices for attaining sustainable land use. He lamented the lack of quantifiable research that supports the claim that climate change and biodiversity loss are mutually reinforcing nested feedback loops.

The discussion on this topic continued in five workshops on Monday afternoon. The workshop rapporteurs reported on the discussions and recommendations during a Tuesday afternoon plenary session.

Workshop 1.1: Climate Change: This session was facilitated by Jose Marengo, Brazilian Centre for Natural Disaster Monitoring and Alerts. The rapporteurs were Nabil Ben Khadra, Sahara and Sahel Observatory, and Cristóbal Díaz Morejón, SAC, Cuba. Ten posters were presented covering research in Ukraine and the Balkan region, Mexico, Northeast Brazil, Argentina, Oman, United Arab Emirates, India, North Africa, and the Polar and mountain regions. Presenting the outcome of

the discussions, Ben Khatra noted that while climate variations are recognized as one of the major factors contributing to land degradation, there is insufficient understanding of the feedbacks between the two processes, which limits capacities for anticipating climate adaptation. He reported that the poster presentations offered insights for bridging this gap with regard to, *inter alia*: precipitation and temperature trends confirming climate change in different regions; tools and methods for drought frequency and intensity; projections from phases three and five of the World Climate Research Programme Coupled Model Intercomparison Project, and regional cooperation and communications relating to land degradation due to natural disasters.

On key messages, Ben Khatra highlighted two sets of recommendations. Regarding science, he highlighted the need for: integrated and multi-disciplinary studies on the links between processes of climate change and land degradation; economic studies on the benefits of land rehabilitation and return on investment; downscaling of climate change projections for impact studies on ecosystems and populations; and integration of diverse environmental and development policies at national and regional levels. On operational recommendations, he highlighted the need for: methodologies that can capture the temporal and spatial dynamics of vulnerability and adaptive capacity; complementary bundles of adaptation options to create win-wins; cultural factors that shape adaptation options and influence their uptake; and measures that can help prevent the loss of adaptive capacity.

Workshop 1.2: Environmental and Ecological Setup: This workshop was facilitated by Elena Maria Abraham, SPI and Director, Argentine Dryland Research Institute, with Miriam Diaz, SAC and Universidad Nacional Experimental Francisco de Miranda, Venezuela, acting as rapporteur. Six posters were presented. Diaz lamented the absence of any policy makers in the room, and introduced the questions that participants were to discuss in relation to their research, including on: the challenges associated with managing knowledge exchange at different organizational and spatial scales; ways in which knowledge exchange can be influenced by different institutions; opportunities in which scientists and other stakeholders can co-evaluate and jointly communicate success stories; and identifying incentives and disincentives necessary for promoting continued adoption.

The poster presenters focused on: community participatory approaches and multi-sectorial teams; and ways of filling science gaps through collaborating with social scientists, including from anthropology, economics, history and sociology. Presenters stressed the need to upscale research, and to engage in interdisciplinary “translating” through joint collaboration between communities, decision makers and scientists. They further emphasized approaching ecosystems and research of these in an integrated manner, based on holistic understanding and emulating pristine conditions. On the potential adaptation options that will create win-win solutions for climate change, biodiversity loss and DLDD, the workshop participants highlighted that: traditional and scientific knowledge should be

linked reciprocally with policy making; and bottom-up economic and financial models need to be tailor-made to local cultures and needs.

Workshop 1.3: Food Security, Agriculture and Pastoralism: This session was facilitated by Jonathan Davies, International Union for Conservation of Nature (IUCN) Global Drylands Initiative and SPI Observer. The rapporteurs were Guadalupe Durón, GEF-STAP Secretariat and Klaus Kellner, SPI and North-West University, South Africa. Eight posters were presented covering research and field-based experiences from Turkey and the Mediterranean region, Tanzania, Brazil and Argentina, as well as a global study by IUCN and the UN Environment Programme on pastoralism and the green economy containing evidence from all regions of the world.

Introducing the session, Davies highlighted some common questions addressed in the poster presentations, including how to: integrate SLM into the food security dialogue; raise awareness among land users on environmental risks due to desertification and climate change; and discern the key critical feedbacks in order to understand the drivers of productivity in agro-ecosystems. During discussions, participants highlighted the need to, *inter alia*: recognize that poor households will prioritize survival over long-term SLM; involve consumers in influencing food policies; address political and economic pressures that favor monoculture and allow land degradation by private capital; and move beyond the focus on the farm level to facilitate long-term vision building and governance capacities at the landscape level. With regard to how to communicate climate-related risks, participants emphasized the need to: make a strong business case to policy makers so they can provide incentives for SLM; encourage farmer collaboration to spread the risk; and identify local risk management strategies that are easy to apply and replicate.

Presenting key messages from the session to plenary, Kellner highlighted issues for research, including: recognizing different viewpoints regarding the value of pastoralism; marking research sites through GPS and other tools to monitor changes over time; and improving interactions with farmers and other land users to create “hybrid knowledge” and guide further development of adaptation strategies.

On policy guidance, he highlighted, *inter alia*: the need to address land tenure and other barriers to SLM; recognizing that political agendas are often different from land users’ perspectives; and analyzing “good news stories” to determine the fundamental lessons that can be promoted and scaled up.

Workshop 1.4: Socio-economics: This workshop was chaired by Mark Schauer, Economics of Land Degradation Initiative. The rapporteurs were Mélanie Requier-Desjardins, SAC Vice-Chair, International Centre for Advanced Mediterranean Agronomic Studies – Mediterranean Agronomic Institute of Montpellier, and Karma Dema Dorji, SPI and National Soil Services Centre, Bhutan. The workshop participants considered six posters representing research in four subregions.

The discussion considered issues including linkages between climate change and land, adaptive capacities, property rights structures, and decision-making and applied science. Workshop participants were informed by Ian Johnson, former Secretary

General of the Club of Rome, former World Bank Vice President for Sustainable Development, that he is coordinating the pilot of a new publication, titled “Global Land Outlook,” which is expected to be published every three to four years. He said the first chapter will focus on climate change, and that the report will seek to be a vehicle for the interface of science and policy. He emphasized the need to recognize that land is not used in a one- or two-dimensional way, and that multi-functionality will be the new name of the game. He said the establishment of a carbon price may not make a big difference on technical choices in the energy sector, but it could make a big difference for smallholders. Johnson also suggested exploring carbon-land-poverty connections, appealing beyond the boundaries of the UNCCD, and capitalizing on the fact that “land” is not ephemeral but appeals to all.

On scientific recommendations in the context of socio-economic aspects of DLDD, participants highlighted the following areas for further research: the nexus of justice, climate change and land; the relationship between economic incentives and land users, and not just land owners; meta-analyses to identify best cases and success stories based on existing research; and the impacts of climate change on land property rights.

One participant emphasized the need for applied science that is focused on the local scale and originates from the users of the science. Another suggested exploring the type of information that ministers of finance and economy need to take action and proposed developing information on the impact of exports on poverty and land rather than generating more maps. Another speaker highlighted that the financial cost of land and the economic value of land can diverge, and suggested that public policy should focus on aligning these values.

Workshop 1.5: Integrated Methodology and Policy

Making: This session was facilitated by Matthias Magunda, CST Vice-Chair and SPI, Uganda. The rapporteurs were Oleg Guchgeldiyev, CST Vice-Chair and SPI, Turkmenistan, and Mariam Akhtar-Schuster, SAC and SPI, DesertNet International. The workshop considered five posters.

Guchgeldiyev first presented an analysis on how the submitted abstracts responded to the workshop’s five guiding questions on: methodologies to capture the temporal and spatial dynamics of vulnerability and adaptive capacity, complementary bundles of adaptation options that can create win-win solutions for climate change, loss of biodiversity and DLDD, cultural and socio-economic factors that shape adaptation options and influence their uptake, useful measures to prevent the loss of adaptive capacity, and emerging issues relevant for future scientific research and the interests of policymakers.

Following the poster session, participants discussed, *inter alia*: who has the responsibility for translating findings from science to policy; experience with existing tools such as the World Overview of Conservation Approaches and Technologies (WOCAT) network and the Land Degradation Assessment in Drylands (LADA) project; the availability and cataloging of case studies; the need for awareness raising and income generating activities; the need for technologies and tools to provide

information in policy relevant formats; and the need for mapping global vulnerabilities to land degradation and climate change and downscaling of climate change scenarios.

RESPONSES: LAND-BASED APPROACHES TO ADAPTATION AND KNOWLEDGE TRANSFER: On Tuesday morning, Matthias Magunda, CST Vice-Chair and SPI, Uganda, chaired the session on responses to desertification and land degradation through land-based approaches to adaptation.

Richard Thomas, International Center for Agricultural Research in the Dry Areas (ICARDA), delivered a keynote address on ways to enhance responses through collaboration. He noted that the main objective should concentrate on reducing poverty and increasing food security through SLM practices. Thomas urged participants to adopt systems approaches that include comprehensive understanding, diagnosis and decision-making in order to transition to research-for-development communities. On the advantages of systems approaches, Thomas highlighted, *inter alia*: improved understanding of place-based social, financial, technical and environmental contexts; strengthened science-policy interfaces; and diversified opportunities for the agricultural sector to reverse lack of investment in drylands. Using examples from different agrarian systems across the world, Thomas stressed the need to consider policies and operating practices that enhance competitiveness and advance socio-economic conditions of communities where they are based, and link companies’ success with social improvement and development.

During the ensuing discussion, participants addressed: the role of governments in enabling the different research phases; the linkages between research in the farming and market systems; ways to influence government policies to improve land use management; quality training of researchers; and the lack of human resources in developing nations. Thomas noted that breakthroughs in science will not come from traditional scientists; they will come through interdisciplinary science. He said the academic community needs to take the issue of land degradation on board, and requires better rewards in the academic system to ensure such research will flourish.

On Tuesday afternoon, Session Chair Mariam Akhtar-Schuster, SAC and SPI, and Coordinator of the Advisory Board of DesertNet International, introduced keynote speaker Úrsula Oswald Spring, National Autonomous University of Mexico.

Stressing the interconnections among climate change, biodiversity loss and water stress, she presented on how indigenous and peasant societies in Latin America have combated land degradation. Noting that 2 billion people now live in drylands, and that 30% of the Earth’s land surface is affected by the degradation of fragile drylands, she outlined natural and anthropogenic causes of land degradation. She called for integrated management of land, soil, water, food, biodiversity and human settlements that uses biocultural knowledge and builds on preventive conflict resolution. She concluded by highlighting the need for Human, Gender and Environmental security, or “HUGE security” that requires a systemic approach dealing with the nexus of water, energy, biodiversity and food. In

the ensuing discussion, Oswald Spring addressed the importance of cultural contexts, managing risks in a risk society, and means of transferring traditional knowledge.

Workshops on “Responses” took place on Tuesday morning, and reported back to plenary on Tuesday afternoon.

Workshop 2.1: Crops, Livestock, Genetics and Seed

Systems: This session was facilitated by William Payne, SAC Chair and University of Nevada, US, with Chandrashekar Biradar, ICARDA, acting as rapporteur. Participants heard six poster presentations on: crop breeding under drought stress; seed production; crop diversification; rehabilitation of degraded areas through symbiotic and native species introduction; protection of rehabilitated plant communities; and tree plantations establishment on degraded lands. On the challenges associated with managing knowledge exchange at different organizational and spatial scales, the workshop highlighted that research outputs are often too site-specific and demand-driven, and lack out-scaling options. Presenters concluded that capacity development, community participation, and provenance trials can be best influenced by developmental institutions.

Workshop participants emphasized the importance of co-evaluation of research outcomes to increase adoption rates among communities through: local community engagement, sharing success stories, technical training opportunities, and combining traditional and modern knowledge. Lack of local knowledge, living conditions, language barriers, amended policies, and resource availability were identified as drivers that prevent continuation of sustainable practices and technologies. Participants stressed the need for open access, subsidies and habitat protection as incentives and disincentives that will promote continued adoption of best practices, and emphasized that an important result of integrated land management will be soil security, containing land degradation, and improving livelihoods and human well-being.

Workshop 2.2: Agro-ecosystems: This workshop was facilitated by Lindsay Stringer, University of Leeds and Impulse Report co-author, and considered seven posters that focused on agro-forestry in several regions.

Following a review of the posters, participants suggested that further research needs to include: meta-analyses that scale-up and draw together research and lessons across projects and present evidence in a way that policy makers can use; exploration of land-tenure dynamics; research on how local knowledge can be captured and upscaled; inventories of techniques and tools for land restoration; market analyses of successful techniques, practices and technologies for restoration; and assessments of the social and ecological impacts of payments-for-ecosystems services.

Participants asked how scientists and other stakeholders can co-evolve and jointly communicate success stories, and highlighted the need to engage with communications experts and expertise. One speaker said the “game has changed for scientists,” as they have to have an impact. Another speaker indicated that the discussion on this topic has moved a long way from the conversations at the UNCCD 1st Scientific Conference.

Operational recommendations from this workshop included: develop information on the *ex-ante* impact of subsidies/

incentives; improve the use of web 2.0 and “on the ground” tools; promote interactions between traditional knowledge and academic knowledge; and recognize the importance of social learning and co-production of knowledge.

Workshop 2.3: Soil and Water Issues: This session was facilitated by Martial Bernoux, SPI and Institut de Recherche pour le Développement (IRD), France. The rapporteurs were Nathalie van Haren, SPI Observer and Both ENDS, Netherlands, and Hamid Čustović, SPI and University of Sarajevo, Bosnia and Herzegovina. Introducing the eight poster presentations, Čustović noted they highlight best practice in realizing multiple benefits from sustainable land and water management from Turkey, Tunisia, Algeria, India, Mexico, Argentina, Pakistan and Ukraine, as well as modeling approaches to scale up responses at the regional level. He summarized the key questions addressed in the posters as how to: develop adaptive capacities in the short, medium and long term; recognize key contributions from traditional and local practices and scientific research; and identify replicable elements as well as obstacles to scaling up experiences from specific settings.

In their discussions, participants highlighted ways to scale up promising technologies including through: promoting “learning by doing” at the community level about multiple benefits of SLM; addressing institutional vulnerabilities and adaptive capacities at the national and sub-national level; enhancing access to knowledge resources and finance for those directly affected by land degradation; and changing the “rules of the game” to encourage more responsive science and policy approaches.

Presenting the main outcomes of the session, Van Haren noted that while many good technical solutions exist, they should be assessed within their specific socio-economic and political contexts. Among issues from a science-policy perspective, she highlighted the need for: reinforcing multidisciplinary scientific approaches; translating scientific results for different audiences and stakeholders; promoting landscape approaches; and enhancing synergies among the Rio Conventions. Among possible issues for consideration at UNCCD COP 12, Van Haren highlighted a number of sub-themes linked to the broad question of how to foster an enabling environment to scale up promising responses, namely: identifying incentives and disincentives for upscaling such responses; communicating solutions to non-scientific stakeholders; exploring policy mechanisms to compare and assess different responses; and developing indicators for validating and monitoring the implementation of responses.

Workshop 2.4: Knowledge and Knowledge Transfer: This session was facilitated by Úrsula Oswald Spring, National Autonomous University of Mexico. The rapporteurs were Bernard Hubert, Chair of the STK4SD Consortium, and Patrice Burger, Centre d’Actions et de Réalisations Internationales. The workshop considered ten posters.

Hubert first presented an overview of the submitted abstracts, noting that several related to scientific knowledge, others addressed traditional knowledge, and still others discussed sustainable land management practices. He then introduced the workshop’s guiding questions on: the nature of knowledge transfer; those concerned by knowledge transfer outcomes,

whether among the scientific community, policymakers or local stakeholders; the possibility for 'crossed' learning; and prospects for upscaling.

Following the poster session, participants discussed, *inter alia*: the advantage of thinking in terms of knowledge exchange; the success of peer-to-peer knowledge exchange and the need for translators to facilitate exchange across constituencies; the potential of information and communications technologies, including applications presented in posters that might facilitate scaling up and down of knowledge; the role of extension services; the ways in which traditional and practical knowledge is changing as it is transferred across generations; the role of multidisciplinary research efforts; and the need to critically evaluate and locally analyze knowledge.

Workshop 2.5: Desertification, Land Degradation and Restoration: This workshop was facilitated by Joris de Vente, SPI and Spanish National Research Council, and with German Kust, SPI and Moscow State University, Russian Federation, and Nicole Bernex, SPI and Pontifical Catholic University of Peru, acting as rapporteurs. Workshop participants heard 12 poster presentations.

During the discussions on integrated land management, participants stressed it is a systemic approach and a process that requires integration of the biophysical, socio-cultural and political systems, as well as open dialogue between different types of knowledge in order to build socio-environmental resilience. They further stressed maintaining a continued focus on monitoring and evaluation. The workshop participants provided operational recommendations based on their experiences, including: elaboration of strategies to apply knowledge; increasing awareness among land users and policy makers; building capacity; agreeing on an international framework to incentivize SLM; enhancing the use of modern communication tools for knowledge exchanges; and reducing the time between scientific knowledge generation and application by policy makers and society. As key messages, participants highlighted the need to develop inter- and transdisciplinary research, build on multi-disciplinary objectives, integrate scientific research in stakeholder processes, further develop knowledge about site specific land capacities, and develop tools to upscale local sustainable land management models and individual experiences.

During a closing discussion on responses, one participant called for clarity on the types of legal frameworks that can support SLM. Others highlighted the need to: involve young people in developing solutions; systematically assess ongoing efforts to conserve land and soils; and recognize the international market for land as a new driver for land degradation. Lamenting the low number of presentations at the Conference, one speaker proposed exploring virtual participation at the next Scientific Conference.

Participants from Brazil and the Sahel and Sahara Observatory drew attention to national and regional reports produced as part of the preparatory process for the UNCCD 3rd Scientific Conference and called for exploring ways to incorporate their recommendations within the UNCCD process.

MONITORING AND ASSESSMENT: HOW TO EVALUATE THE EFFECTIVENESS OF ADAPTATION INTERVENTIONS: The discussion on this topic was chaired by Tao Wang, SAC and SPI, and Chinese Academy of Sciences. In her keynote address on Wednesday, Elena Maria Abraham, SPI and Director, Argentine Dryland Research Institute, noted the objective is to assess the adaptive capacities and resilience of affected ecosystems. Stressing that no single tool, indicator or analytical model can reliably measure the complexity of links between climate change and land degradation, she noted the importance of integrating outcome-oriented with context-oriented methodologies through knowledge "co-production" processes, in order to achieve the necessary links among global, regional, national and local scales. Among examples of such integrated approaches, Abraham highlighted the Global Assessment of Human-induced Soil Degradation, the World Overview of Conservation Approaches and Technologies (WOCAT), the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) assessment on land degradation, and the World Atlas on Desertification. Noting that such studies require bringing together science and policy communities, she underscored the need for expert facilitation and knowledge translation at national and lower levels to address barriers such as the specialized nature of scientific outputs, limited input from the social sciences, and cost, language and connectivity barriers.

Responding to issues raised by participants, Abraham noted that integrated approaches feed into the spirit of realizing synergies among the Rio Conventions. She observed that cost is not always a barrier, noting that syntheses of local available data offer a cost-effective alternative to benchmarking and have the added benefit of encouraging local participation and validation of indicators.

On Wednesday afternoon, CST Chair Safriel introduced a special session on the potential synergies among the three Rio Conventions. Graham von Maltitz, SAC and Council for Scientific and Industrial Research, South Africa, provided, via Skype, a keynote overview of the progress on the proposed land degradation and restoration assessment undertaken by IPBES. He stressed the importance of having strong scientific bases that underpin political decision-making bodies, and highlighted some advantages of IPBES, including allowing different types of knowledge and not being fixated on peer review. Von Maltitz said IPBES emphasizes four pillars: research, observation, using assessment from all possible platforms and bodies, and jointly informing the policies of the three Conventions. He noted IPBES has initiated a thematic assessment of land degradation and restoration, which had a first scoping meeting in September 2014, with IPBES accepting a preliminary scoping report in January 2015. He said the assessment will be an interdisciplinary work, mostly based on available data, with a greater emphasis on anthropological and participatory approaches. Von Maltitz invited participants to engage with their governments and organizations to be nominated, by 30 March 2015, as an author or editor for the assessment. He noted the assessment will be undertaken over the next two years, and should be published in early 2017.

In his keynote speech, Tomasz Chruszczow, Chair of the UNFCCC's Subsidiary Body for Scientific and Technological Advice (SBSTA), provided an overview of the institutions and functions of the UNFCCC. He identified knowledge as a promising area for synergies, calling for translating scientific deliberations into an accessible and understandable single message. He stressed the importance of environmental integrity and addressing the environment in a holistic way. He also underscored that if the goal is to build a new low-emission development paradigm, then the entire UN family should be involved in building a framework that would help meet this goal. His presentation was followed by several questions and comments, including on the example set by synergies among the chemicals and wastes conventions, the need for synergies among the objectives of the Rio Conventions, and the role of youth in convention proceedings. In his responses, Chruszczow highlighted, *inter alia*: adaptation as a rich area for synergies; the promise of SLM as a key political message across the Rio Conventions; and the potential for NGOs to pressure other ministries in their countries to support their environment ministries in domestic and international policy-setting.

Graciela Metternicht, SPI and University of New South Wales, Australia, presented a keynote address on "land-based practices: a synergistic approach to the Rio Conventions." She noted that despite clear feedback loops among drivers and processes of land degradation, biodiversity loss and climate change, as well as thematic and operational overlaps across the three Rio Conventions, there has been little coordination of implementation. She highlighted a number of governance, practice and research "imperatives" for improved synergies, including the potential to achieve land degradation neutrality through meeting the Aichi Biodiversity Targets, and enhancing the livelihoods of smallholder farmers through adaptation programmes.

Metternicht noted that the main trigger for pursuing synergies so far has been the need to reduce the reporting burden at the national level, as implementation synergies are more difficult to achieve. She said a possible entry point could be undertaking inter-disciplinary, step-wise approaches to classify affected areas, based on geo-spatial tools and techniques, enabling application of response measures across the "land degradation continuum." Among her recommendations, she highlighted the need for foresight studies based on internationally agreed goals; "connecting the dots" by assessing how land-based practices contribute to addressing the goals of the three conventions; undertaking timely and policy-relevant research on interactions between land degradation and climate change; completing work on the framework for land-based adaptation reporting indicators; and capitalizing on existing channels of collaboration among the conventions, such as their respective science-policy bodies.

Responding to a suggestion that perhaps the time has come for a new integrated convention, Metternicht recalled that the three conventions were endorsed at the national level and highlighted the role of civil society in driving a more integrated approach.

Five workshops discussed aspects of the monitoring and assessment theme on Wednesday morning, and the rapporteurs

presented summaries of the recommendations to a Wednesday afternoon plenary session.

Workshop 3.1: Indicators: Jeff Herrick, US Department of Agriculture, facilitated this workshop, and Alan Grainger, SPI and University of Leeds, UK, served as rapporteur. The group reviewed posters in a facilitated process, and then discussed new monitoring and assessment tools and mechanisms, as well as new directions for monitoring and assessment work with indicators. Among the poster presentations, several focused on estimating risk, and modeling risk and land cover change to estimate risk and several focused on measuring particular variables, such as vulnerability and resilience. One poster sought to measure adaptation, and several monitored performance.

The group discussed the need to devise indicators within integrating frameworks in order to develop useful indicator systems. In this regard, they noted the importance of moving from lists of indicators to more coherent sets of indicators, and suggested that good frameworks distinguish status indicators from driving indicators. A speaker noted that monitoring driving indicators can help with efforts to model trends in status indicators.

Workshop participants highlighted two new policy-relevant tools. One uses satellite data validated by ground data and includes participatory, crowd-sourced data to show, over large areas, whether agriculture is resilient to climate change. Another involves applying a common indicator framework to assess resilience across the Rio Conventions. Some participants suggested that each convention should adopt an integrated approach to monitoring that is not biased towards individual ecosystem services in ways that could undermine multi-functional sustainable land management. Discussions also highlighted a role for encouraging the use of mobile phones to engage citizens in participatory environmental monitoring.

Workshop 3.2: Remote-Sensing and Mapping: This session was facilitated by Stefan Sommer, Joint Research Center, European Commission. The rapporteurs were Richard Escadafal, Vice-Chair of the STK4SD Consortium, Comité scientifique français de la désertification, France, and Tao Wang, SAC and SPI, Chinese Academy of Sciences. The workshop considered 15 posters.

Escadafal first presented an overview of the submitted abstracts, noting they mainly covered three areas: using satellite imagery and other geographic information to assess the land degradation level at a given time; using satellite imagery to detect change; and methodological developments. He introduced the operational questions for the sessions, calling attention to examining how to use modeling and mapping approaches at local, regional, and global scales to prioritize spatial areas for in-depth monitoring and assessment.

Following the poster session, participants discussed, *inter alia*: the need to tie prioritization of tools to prioritized objectives; identifying suitable indicators for land degradation; the need for a standardized or harmonized methodology and data interoperability; access to tools and data; and the importance of also collecting data on the ground and field validation, including

a case from Niger where herders were given smartphones with GPS to upload information on vulnerability factors in their grazing range.

Reporting to plenary on research questions arising from the group discussion, Escadafal noted, *inter alia*, selecting appropriate approaches to process the new types of data now available and evaluating available monitoring methods to propose a selection of validated ones.

Workshop 3.3: Drought, Water, Hydrology: This workshop was facilitated by José Camacho, World Meteorological Organization. Rajendra Pandey, SPI, India, and Abdelghani Chehbouni, IRD, served as rapporteurs. The workshop considered the following questions: how to assess effectiveness of drought monitoring and mitigation for sustainable water and land management; what is the minimum assessment requirement for decision makers to make improved decisions on what are the variables to monitor interactions and feedbacks between climate change and DLDD; and how to evaluate sustainable practices and technologies and recommend/decide for greater consideration and applications.

The workshop suggested that drought severity and impacts need to be studied using a multidisciplinary approach and ground observation system for evaluation and feedback. They noted that water and land management are an integral part of the drought monitoring system, and the impacts of drought on land degradation and desertification need to be studied.

Workshop participants recommended: encouraging integrated and multidisciplinary studies on linkages between the processes of sustainable land and water management to combat desertification and poverty; integrating local and indigenous knowledge on drought monitoring, impact assessments and responses to deal with mitigation/coping mechanisms; and evaluating methods and techniques for “Integrated Assessment of Vulnerability to Drought” using multiple factors (physical, meteorological, hydrological, and socio-economic, including coping ability).

Workshop 3.4: Sustainable Land Management/Land Degradation Neutrality: This workshop was facilitated by Graciela Metternicht, SPI and University of New South Wales, Australia, with Wafa Essahli, DesertNet International, and Sahibzada Irfanullah Khan, SAC, Pakistan, acting as rapporteurs. Participants attended nine poster presentations from 13 countries, clustered around the themes of land degradation neutrality, indicators, capacity building of local communities, land recovery projects, assessment of global public goods, and land use options, including on productivity and agro-forestry. As scientific recommendations to the Conference, participants proposed: including socio-economic and cultural contexts when conducting monitoring and assessment of SLM responses to DLDD; considering the political environment when disseminating monitoring and evaluation findings of adaptation strategies; developing evaluation strategies at the ecosystem level and addressing broad temporal and spatial variations using GIS and remote sensing technologies; and including traditional knowledge in all phases of DLDD responses, thus creating an enabling environment across all institutions and spatial boundaries; and prioritizing spatial areas for in-depth monitoring.

Participants further proposed operational recommendations, including: linking SLM to land degradation neutrality (LDN) and using it as indicator to assess SLM; assessing economic viability of SLM practices and their effect on livelihoods in order to attract private and public sector investors; focusing strategies on short-, medium- and long-term capacity-building measures and developing monitoring indicators for SLM and LDN at the ecosystem level in order to assess adaptation options for climate change and land degradation more effectively.

Workshop 3.5: Processes of Degradation: This session was facilitated by Pier Paolo Roggero, DesertNet International. The rapporteurs were Richard Thomas, ICARDA, and Gordana Grujic, SAC, Serbia. Opening the session, Roggero noted that while 15 abstracts were received covering processes of soil erosion, salinization, vegetable pattern dynamics, and soil pollution and remediation, only two posters, from the US (discussing a time series of above-ground Net Primary Production data) and Turkey (on erosion control measures in the Coruh Basin) were presented for discussion. Participants opted to focus on two broad questions: how to monitor and assess the effectiveness of SLM and criteria for determining the success of practices and technologies; and the minimum assessment requirements for decision makers to make improved decisions.

Presenting the outcomes and recommendations, Thomas said the discussions highlighted a number of issues, including the need for: a thorough understanding of “the context, the demand and who asks,” in order to arrive at a minimum set of assessment criteria and benchmarks; and a long-term time perspective derived from combining technical measurements such as remote sensing with histories by local people. Concluding that “one man’s degradation is another’s improvement,” he noted the need to develop robust multi-stakeholder learning spaces and alliances, and a social process to contribute to a shared understanding of problems and solutions.

COMBATING DESERTIFICATION, LAND DEGRADATION AND DROUGHT IN MEXICO: On Thursday morning, session Chair Matthias Magunda invited three speakers to present on the current status of Mexico’s natural environment. Norma Salomé Munguía Aldaraca, Director General, Primary Sector and Renewable Natural Resources, Secretaría de Medio Ambiente y Recursos Naturales, highlighted drivers responsible for land degradation in Mexico, including: social drivers through the country’s demographic dynamics; economic drivers through widespread poverty and market access; and biophysical drivers through drought and hurricane recurrences. She stressed the need to update current legal regulations and programmes, and urged greater involvement of the state-level and local-level governments. As main challenges in managing and restoring degraded areas, she highlighted, *inter alia*: improved understanding of the subject and issues; overcoming fragmentation; developing land-management models based on socio-cultural, ecological and land use conditions; and combining efforts to manage the land sustainably through finding the synergies among the three Rio Conventions.

Jorge Rescala Perez, Director General of the National Forestry Commission (CONAFOR) and UNCCD Focal Point, noted that most degraded areas in Mexico are human-induced, and

said desertification usually starts with land-clearing practices and resultant loss of forest cover, mostly of temperate forests. He highlighted that forests are home to 11 million people from mostly indigenous communities that are often marginalized in decision-making processes. Commenting on the National Forestry Programme (PRONAFOR 2014-2018), Perez identified as national objectives: improved forest production and productivity; ecosystem conservation and restoration; combating and control of forest pests, diseases and fires; promoting forest governance and participation of forest owners; and enabling SLM institutions in order to facilitate appropriate programmes. He outlined specific goals towards achieving these objectives, including to: increase timber production to 11 million cubic meters per annum; ensure that, by 2018, 3.1 million hectares will be transformed into conservation areas through payment for ecosystem services schemes; and restore and reforest one million hectares by 2018. He reminded delegates that the Convention on Biological Diversity's COP 13 will convene in Mexico in 2016.

Jesús David Gómez Días, Chapingo Autonomous University, Mexico, and UNCCD Science and Technology Correspondent, highlighted national programmes to monitor trends in DLDD as well as restoration efforts in Mexico. He noted that experience from long-standing surveys of drought, water and other climate variables, such as the Inventory of Land Uses and Vegetation and Programa de Medidas de Prevención y Mitigación contra la Sequía, has enabled the development of new integrated tools and indicators to assess changes in bio-productive systems. He concluded by calling for policy bodies to incorporate such insights in measures to address DLDD and proposed the creation of a regional scientific committee to guide such linkages.

CLOSING SESSION: Bernard Hubert, Chair, STK4SD Consortium, announced that the final session of the Scientific Conference would consider the main conclusions from discussions over the three days. He invited William Payne, SAC Chair, and Mariam Akhtar-Schuster, SAC and SPI, to present the final outcome of the UNCCD 3rd Scientific Conference (ICCD/CST(S-4)/L.3)

Payne noted the UNCCD 3rd Scientific Conference aimed to produce sound scientific outputs that could inform policy formulation and dialogue at the COP. He said the Conference used a "novel, participatory approach" to explore links between biophysical and social systems, with an emphasis on vulnerability. Referring to the overall conclusions, he noted that the report recognizes that while "the very best modern science and technology" will be needed to succeed, reversing the stresses associated with the processes of DLDD and climate change ultimately requires a change in human behavior and attitudes regarding the use of land and other natural resources.

Akhtar-Schuster then highlighted policy recommendations from the Conference. Concluding that "doing nothing is not an option," she said that to give affected communities "a fighting chance" all stakeholders must continue efforts to scale up land-based adaptation efforts through effective multi-stakeholder partnerships and collaboration. She informed participants that the outcomes will be transmitted to the twelfth session of the CST and will be further synthesized by the SPI in a policy brief that

will be finalized in time for UNCCD COP 12 in October 2015, in Ankara, Turkey.

Responding to the presentations, one participant thanked the organizers for the "excellent summary" on cross-cutting issues and remarked that while "politics" would make it difficult to reshape these synergies towards a single convention that addresses ecosystems as a whole, this outcome might help to re-align the objectives of the three Rio Conventions so that they "speak with one voice." Another speaker noted he had expected greater focus on the costs and benefits of making the right decisions.

Hubert then invited organizers of two preparatory conferences to present their findings. Aldrin Martin Perez-Marin, Researcher, Research Coordination, National Institute of Semi-Arid Areas, Brazil, on behalf of a group of scientific correspondents and academics from Brazil, presented the joint findings of a series of workshops and seminars held in his country on the theme of desertification and land degradation. He outlined the recommendations, including: improved education and awareness raising about the impacts and causes of land degradation; re-activation of rural extension services based on the various local conditions; and strengthening academic knowledge through participatory research, and including indigenous knowledge at all levels.

Kherraz Khatim, Executive Secretary, Sahara and Sahel Observatory, reported on the results of a questionnaire and workshop that sought to reveal the perspective of the Sahel and Middle Eastern and North African (MENA) areas on desertification. He noted that participants from the MENA region highlighted demographic growth as the top threat, while participants from the Sahel emphasized land degradation as the top threat. For the diagnosis of degradation, the MENA region highlighted the need to bolster observatory networks, and the Sahel region emphasized the need to maintain and develop observation tools. On knowledge management, both highlighted the role of platforms for the exchange of knowledge and experience.

Hubert noted that the report presented by Payne and Akhtar-Schuster would be forwarded to CST S-4, for its consideration during its closing session. He thanked the Mexican Government for hosting the Conference, and thanked the participants, Secretariat and Consortium. CST Vice-Chair Matthias Magunda thanked the participants in the UNCCD 3rd Scientific Conference and closed the Conference at 12:48 pm.

REPORT OF THE UNCCD 3RD SCIENTIFIC CONFERENCE: The final outcome document (ICCD/CST(S-4)/L.2) highlights, in an introductory section, the impact on the vulnerability of ecosystems and human populations of, and interlinkages among, stresses associated with demographic pressure, land management practices that are inconsistent with traditional practices, and climate change. The report then presents some conclusions and recommendations from the Conference organized along its three themes.

With regard to diagnosis of constraints relating to the feedback and feedforward links between land degradation and climate change, the report highlights the need for, *inter alia*:

- qualitative indices for services that cannot be easily monetized, such as cultural and spiritual indices;
- operational indicators that integrate scientific and local knowledge, and allow better understanding of adaptive capacities; and
- greater compatibility among methods that will diagnose constraints to enhance knowledge sharing and response, and facilitate downscaling of climate change scenarios to local contexts, as well as scaling from local to wider contexts.

To ensure scaling up of responses to vulnerability the report notes the need to, *inter alia*:

- involve farmers and other stakeholders in identification of research problems and solutions, including best practices;
- develop better research and communication methodologies that integrate social, economic and biophysical information, including indigenous knowledge and farmers' experiences;
- foster an environment of co-learning in research that places value on "hybrid knowledge";
- undertake additional research to assess social, economic and environmental impacts of payments for ecosystem and environmental services as a response to land degradation;
- pay greater attention to institutional aspects of such payments, such as transaction costs and power relations, to assess their effectiveness in reducing vulnerability;
- apply systems analysis tools, including value-chain and market analyses, to identify incentives and barriers to sustainable responses, including lack of traditional and local knowledge, poor access to capital or technology, language barriers, gender inequities, property right structures, and policy environment;
- develop regional cooperation and communication to address several catastrophic aspects of land degradation, such as those associated with natural disasters; and
- undertake more research on the role of knowledge systems, whether based on traditional knowledge, modern science, or both, in land management and rural development.

Among specific recommendations for monitoring and assessment, the report calls for:

- moving from relatively narrow research indicators, such as vegetation indices and population dynamics, to a more coherent integrated framework that uses indicators to characterize vulnerability;
- distinguishing indicators of status of land degradation and climate change from indicators of drivers;
- consolidating the latest developments in the field of remote sensing to enable monitoring and evaluation at different scales and by different stakeholders;
- undertaking continued review, testing and assessment of methodologies to best use these new types of data; and
- developing new and innovative approaches to managing and combining large sets of heterogeneous data such that they are meaningful not only to scientists but to engaged communities working to achieve land degradation neutrality.

In an introductory section on policy-oriented implications, the report refers to the Impulse Report's conclusion that climate change exposes land mismanagement more quickly worldwide, and limits populations' abilities to generate a livelihood,

particularly in the drylands. It notes that in the context of globalized markets, impacts of land degradation and climate change on drylands have wider impacts across other climatic and ecological systems through migration, markets, insecurity and conflict, which necessitates policy-relevant data on such indirect drivers of desertification. The report then highlights the main policy recommendations according to the three themes of the conference.

With regard to improving the diagnosis of constraints the report calls for, *inter alia*:

- models, participatory tools and scenarios that differentiate between direct and indirect climate change and human drivers to enable evidence-based decision making on land-based adaptation options;
- appropriate governance structures, institutions and processes to enable effective use of this knowledge; and
- addressing property rights for small-scale land users who are already under acute pressure from food-price volatility and climate variability.

Among responses, the report calls for:

- involving stakeholders in the joint identification of area-specific land-based adaptations and in the co-production of knowledge with scientists;
- exploring how land-based adaptation can help harness greater financial support and advance towards the Sustainable Development Goals (SDGs), and clarifying how funding can be allocated among multi-stakeholder activities
- developing effective governance and institutions to enhance coordination of diverse stakeholder actions on the ground; and
- addressing the social costs arising from the impacts of system transformations, especially in light of increased speculation on land and large-scale land acquisitions.

On monitoring and assessment, the report calls for:

- integrating and validating satellite data with ground observations, using technologies such as mobile phones to engage citizens, including women and youth, in participatory monitoring;
- facilitating multi-stakeholder engagement in monitoring SLM through capacity building targeting the short, medium and long term; and
- developing a common framework assessment across the three Rio Conventions to facilitate more balanced monitoring of multiple ecosystem services and provide insight into the multiple benefits from SLM.

CST S-4 CLOSING PLENARY

On Thursday afternoon, the UNCCD Secretariat introduced the initial report of the Scientific Conference in English, and CST Chair Uriel Safriel invited delegates to consider ICCD/CST(S-4)/L.3. He noted the initial report will serve as the basis of a more extensive report containing the relevant policy options to be reviewed prior to the meeting of the CST at COP 12. Argentina, Brazil, Eritrea and others objected that the document was only available in English. Argentina, Brazil, Philippines, Pakistan, Peru and others stated that not all issues are covered adequately in the initial report, including land degradation neutrality, degradation in areas other than drylands, water, and

financial resources. South Africa and the US reminded delegates that this is a summary of the Scientific Conference and part of a wider process of regional consultations prior to COP 12. Switzerland voiced concern that too much emphasis had been placed on climate change as a cause of degradation, to the detriment of socio-economic development factors. CST Chair Safriel responded that it was introduced as a direct driver of land degradation and has not previously received much emphasis. Delegates adopted the report and approved its inclusion in the meeting report of CST S-4.

Argentina, for GRULAC, emphasized the importance of integrating local communities living in affected areas, and the need for contextualized education and communication to build capacity and harness potential of local knowledge. She called for improvements to the preparatory process for future scientific conferences to allow for knowledge sharing at national and regional levels in order to improve the final outcome. She welcomed the role played by the SAC at this Conference, noting it had enabled an interface between the different sessions and the research and policy communities.

Victor Castillo, UNCCD Secretariat, presented progress towards mainstreaming the concept of LDN in the context of the SDGs (ICCD/CST(S-4)/2 and Corr.1). He highlighted work undertaken by the UNCCD's Intergovernmental Working Group on land degradation neutrality (IWG), established at COP 11, to develop a science-based definition and response options that parties might consider should they strive to achieve LDN. He said the IWG's proposal for a tiered framework based on indicators already adopted by the UNCCD COP will be forwarded to the UN Statistical Commission (UNSC), which is expected to finalize work on the indicator framework for monitoring SDG implementation at its 47th session in February 2016. Castillo further reported that the ongoing LDN project, with support from the Republic of Korea, aims to provide technical assistance to a voluntary group of countries with diverse socio-ecological conditions to facilitate mainstreaming LDN in the implementation of their national action programmes. Noting that COP 12 will take place after the UN Summit to adopt the post-2015 development agenda, including the SDGs, he suggested that the CST S-4 might want to develop guidance for the Secretariat on how to proceed on the concept of LDN.

Responding to the presentation, Japan agreed that while LDN is a timely topic, it is important to avoid duplication of work of the Open Working Group on SDGs and the UNSC.

Brazil, also speaking for Spanish-speaking Latin American and Caribbean countries at the meeting, called for the CST to take note of the proposal pending further studies by the scientific community. He expressed reservations about the current formulation of LDN, noting the definition does not take into account social and economic dimensions, as well as the need to strengthen resilience, and noting it has not been subjected to scientific review. Responding to the proposed national LDN pilots, he remarked that the large-scale application of a concept not yet adopted by parties "increases confusion."

Morocco called for COP 12 to reconsider the definition of desertification under the Convention to include all areas affected by DLDD, not just drylands. On LDN, he supported calls for including more elements, including the notion of "balanced" production and resilience of ecosystems.

Mauritania reiterated the global principle of solidarity and accountability with regard to climate change and the need to support the poorest countries to implement responses to DLDD.

CST Chair Safriel then invited delegates to adopt the CST decision on this item (ICCD/CSD(S-4)/L.2), "Provision of scientific advice on the topic: Explore the options to achieve land degradation neutrality in the context of sustainable development." Argentina said she could agree with the decision, which indicates that the CST was informed about progress made on this topic and that it will be considered further at the twelfth session of the CST, but said the reference to a CST exchange of views on "how to bring forward the provision of scientific advice on this issue" should be deleted, because such an exchange did not occur. Brazil supported Argentina, and the decision was adopted as orally amended.

The CST then decided to take note of ICCD/CST(S-4)/2.

CST Rapporteur Matthias Magunda presented the report of the meeting (ICCD/CST(S-4)/L.1), which he noted includes an account of the opening of the session and organization of the session as well as a summary of discussions, including the deliberations of the UNCCD 3rd Scientific Conference. Delegates agreed that the report will be completed by the Rapporteur with the assistance of the Secretariat.

In his closing remarks, CST Chair Safriel noted that the meeting had represented an experiment for a scientific conference, with a high ratio of time for discussion compared to presentations and lectures. He said the format made the conference evolve into a "social process." He highlighted that the term "poverty" featured prominently during the meeting, and that participants noted that the Convention's remedy for restoring land would be powerless in the face of climate change. He said the CST Bureau and SPI will try to be innovative in making the outcome beneficial for the UNCCD, and noted that outcomes would include the compilation of reports from the meeting, including a report with the main findings and a policy-oriented outcomes document. He said the SPI will compile the policy options document, which will be presented by the CST for consideration by the COP.

Victor Castillo, UNCCD Secretariat, on behalf of Executive Secretary Monique Barbut, thanked the Mexican Government for hosting the meeting, and the donors who supported developing country participation. He said the innovative forum had enabled exchanges among participants, and the outcome highlights the link between desertification and climate change, and recognizes the potential of SLM and synergies.

Jesús Carrasco Gómez, CONAFOR, on behalf of the Ministry of Environment and Natural Resources and CONAFOR, thanked participants for their dynamic participation in the conference, and noted that the scientific policies discussed in Cancun will help COP 12 in Ankara, Turkey.

The EU said close cooperation of all the Rio Conventions and their scientific bodies is needed, and this meeting has made clear contributions. He said he expected the new SPI will ensure that the Scientific Conference's conclusions are incorporated into the COP discussions and will ensure that policy decisions are guided by strong scientific evidence. He also stressed the importance of cooperation between the LDN working group and the CRIC.

Benin, on behalf of African countries at the Conference, noted a number of concerns with the meeting, including the low participation and poor financing of African researchers. To remedy these shortcomings, he called for the creation of a multi-disciplinary platform on DLDD.

Turkey thanked the Mexican Government for hosting the meeting and invited all delegates to Ankara, Turkey, for COP 12.

Speaking on behalf of civil society organizations, Nathalie van Haren, SPI Observer and Both ENDS, welcomed the exchange of views on indicators and multidisciplinary research in enabling the upscaling of SLM. Posing the question, "What will happen with the outcomes?" she underscored the need for enhancing common understanding of the problem and solutions, building solidarity with land users, and enhancing collaboration between scientists and civil society organizations. She concluded with the call to "understand, respect and work together."

CST Chair Safriel declared CST S-4 closed at 5:11 pm.

A BRIEF ANALYSIS OF THE MEETINGS

In the two decades since the UN Convention to Combat Desertification was negotiated, the UNCCD has proven itself to be a "learning convention"—with parties exhibiting willingness to take stock and adjust structures and institutions over the years. The Scientific Conference concept perhaps best exemplifies this reflexivity, and as participants gathered for its third iteration, they were asked to engage with a new format and approach.

This analysis focuses on the challenge posed by the enduring puzzle of bridging science and policy in this context and examines how the continued learning within the UNCCD had an impact on: the format of the third Scientific Conference, the role of the newly-established Science-Policy Interface (SPI) institution, and the substantive connections with climate change and synergies with the UNFCCC.

THE ENDURING CHALLENGE OF TRANSLATING KNOWLEDGE INTO POLICY

Parties to the UNCCD have turned to science for guidance on how to set priorities and most efficiently and effectively address the challenge of land degradation and achieve SLM. Yet over the years concerns have been raised that the necessary knowledge is perhaps not being produced, or not being conveyed in a format that can successfully feed into the policy process.

In particular, the open membership plenary format of the CST, established in the Convention text itself, has been questioned as lacking flexibility and not drawing sufficient expertise from the scientific community. It is in response to this deficit that parties agreed to convene a Scientific Conference during CST 9, held along with COP 9 in Buenos Aires in 2009.

Since this first iteration, parties, and the scientific and civil society stakeholders that are being targeted to contribute, have experimented with a variety of formats to best help bring science into the policy realm. One of the challenges of this learning process, however, is that there are widely diverging views on how best to bridge the science-policy divide.

Indeed, at the workshops held during the third Scientific Conference in Cancun, some participants put the blame on scientists who are not producing the results policymakers need to make sound and informed decisions. Conversely, others placed the responsibility on the shoulders of policymakers, and a slow political process that is always "two steps behind" the science and the scientists. Still others called attention to the need for both scientists and policymakers to connect to those on the ground who are facing the direct consequences of land degradation, and whose participation and buy-in is essential for SLM. This raised questions not only of how, but especially of who should undertake the task of translating knowledge—be it scientific, practical, traditional or local—into a form that is usable and relevant for those setting policies that can combat DLDD.

WORKSHOP EXPERIMENTS

As was underscored in both the opening and closing of the Scientific Conference, the format was an experiment building upon the first two conferences. Further, as CST Chair Uriel Safriel underscored in his opening address, the Scientific Conference format itself is unique among multilateral environmental agreements (MEAs) in combining a scientific conference with a meeting of policymakers.

At the Scientific Conference, the CST continued its approach of coordinating the planning of each conference with a consortium of research organizations. At the 1st Conference in 2009, the organizing consortium had commissioned teams of scientists to prepare a series of white papers that were presented in plenary keynotes. At the 2nd Scientific Conference in 2013, abstracts were solicited and papers were presented in multiple parallel sessions. In both of these cases, some participants noted that the emphasis was on listening to presentations and bemoaned the lack of time both for productive discussion on the science presented, and for generating useful and targeted policy recommendations. Many had also voiced a need for deeper and more meaningful exchanges among participating scientists but also between scientists and policymakers.

Building on these experiences, the members of the organizing Scientific and Traditional Knowledge for Sustainable Development (STK4SD) consortium and the Scientific Advisory Committee (SAC) for the conference opted for a structure and schedule that prioritized discussions. The SAC commissioned an Impulse Report on climate change and desertification that served as the basis for several keynote speeches and then divided the Conference into three sessions on: diagnosis of constraints, responses, and monitoring and assessments. Under each of these themes, abstracts were solicited for posters to be presented in more targeted two-hour parallel workshops.

As participants reflected on these workshops, several noted that this format was a step in the right direction and exemplified lessons learned from the previous two conferences. Some noted that this format allowed a better balance between the presentation of work from the field and the opportunity for more in-depth discussion. Nevertheless, there was a great deal of variation in how the workshops were conducted, which, according to some participants, made it more difficult for this process to yield policy-relevant recommendations.

Repeated mention was also made of the fact that several of those who had had abstracts accepted for presentation had been unable to make the trip for logistical and financial reasons. Those who had more experience with traditional scientific conferences also regretted the short time-window and tight spaces in which posters were available for perusal that prevented in-depth exchanges with poster authors. The workshop discussions following the poster sessions also made clear the appetite for more detailed and specific discussions. However, there were concerns that these dialogues would have been enhanced by greater geographic representation, as well as by enhanced participation by social scientists and local and traditional knowledge holders.

WORKING AT THE INTERFACE

In the end, this complex structure relied extensively on the preparatory and synthesizing work of each workshop's facilitator and rapporteurs, most of whom were drawn from the STK4SD Consortium, the SAC and the SPI, a 20-member committee established by COP 11 that had held its second meeting in the two days preceding CST S-4. The SPI is another example of UNCCD parties' willingness to engage in reflexive learning and craft an innovative structure to tackle the enduring puzzle of how best to facilitate evidence-informed policy making in MEAs. In Cancun, the SPI had two key roles. First, its members, who include CST Chair Uriel Safriel, were responsible for presenting many of the keynotes and facilitating or reporting on several workshops. Second, the daily schedule pointed to the SPI convening in the morning and evening throughout the meeting, highlighting that they were also focused on mining the conference for policy-relevant insights. Indeed, one immediate deliverable that the SPI has set itself, as reported by Mariam Akhtar-Schuster during the closing plenary, is repackaging the outputs of this Conference into a policy brief to facilitate follow up at COP 12.

Among its work programme, the SPI has been tasked with the assessment of the two first scientific conferences in supporting UNCCD decision-making, and this will be an eagerly awaited report to COP 12. Indeed, the SPI was established amidst dissatisfaction with the provision of science advice in the UNCCD process (although this is not a concern unique to the UNCCD and one that is raised in several other MEAs). Yet some participants noted that the SPI itself is evidence of the success of the Scientific Conferences, underscoring their creation can be traced back to the recommendations stemming from the 1st Scientific Conference in Buenos Aires in 2009.

As one experienced UNCCD delegate explained, the SPI is unique because its members were not selected to engage in science, nor to guide policy, but to fulfill a narrow, yet essential role: that of engaging in the translation or other mediating work that would connect these two realms. Yet, working at this interface is itself an emerging field of study, and there are no clear rules or accepted best practices on how to do this. Indeed, one participant underscored that the members of the SPI, while credentialed in matters of science and/or policy, are in fact autodidacts when it comes to this interfacing task. Thus, great attention will be paid to whether SPI can meet these high expectations when parties receive the result of their first work programme at COP 12.

SYNERGIES AND CONNECTIONS

In addition to experimenting with a new format for facilitating science-policy exchanges, CST S-4 and the 3rd Scientific Conference also stood out for the emphasis on synergies with the Rio Conventions and the SDGs. In addition to being integrally woven into the agenda of the meeting, the prominence of synergies, in particular with the UNFCCC, was also championed by UNCCD Executive Secretary Monique Barbut, for whom this marked the first UNCCD subsidiary body meeting since her appointment.

This emphasis on synergies was substantive, and the Impulse Report and keynotes emphasized the complex feedback loops through which land degradation, climate change and biodiversity are tightly interconnected, moving beyond the common understanding of climate change and land degradation as two separate drivers. Some noted they hoped this shift in understanding could bring attention to the need to synergize how the Rio Conventions are implemented on the ground. The presence of Tomasz Chruszczow, Chair of the UNFCCC's SBSTA, who also delivered a keynote address, was also pointed to as a signal of interest of the UNFCCC to address this tight coupling between land degradation and climate change.

Forging connections was also at the root of repeated calls for the UNCCD to more meaningfully involve land users themselves, especially as they hold valuable traditional, practical and local knowledge, with civil society organizations, in particular, underscoring that real work needs to be done in combating DLDD on the ground. On that front, some participants noted with optimism the constructive cross-regional exchanges during the poster sessions, workshops, and side events to identify practices that can be translated to varied local contexts. There was also a great deal of excitement for those technological applications (many smart-phone driven) presented during the week that promise to facilitate both the crowd-sourcing of ground-proofing data and the sharing of modeling and data-intensive processing results. While many noted these have the potential to empower local communities and facilitate the sharing of best practices and, they hope, bring more engagement in the long-run of those on the front lines, others underscored the need to strengthen these connections even further to enable the co-production of knowledge by all concerned stakeholders.

Synergies were also evident in the emphasis, in the Impulse Report and in discussions, on “win-win” strategies that could, for example, facilitate adaptation and build local resilience to climate change while also bringing about SLM, or even the elusive “triple-wins” that would also reduce biodiversity loss and enhance the provision of ecosystem services. Some participants nevertheless cautioned that “win-lose” situations are also inevitable. They underscored that policymakers need the evidence to help them set priorities and decide how to make strategic trade-offs. In this context, participants were enthusiastic at an evening side event on plans to complete a Global Land Outlook that could underpin these decisions. The first chapter, on climate change and land degradation, is supposed to be ready in time for the 2015 Paris Climate Change Conference.

LEARNING PATH

In addition to these synergies with developments on the climate front, there will be many opportunities for further science-policy interfacing and harnessing of synergies before delegates meet again in Ankara for COP 12. As several participants noted at the close of CST S-4, there is still the need for a more detailed and coordinated discussion on the indicators for land degradation neutrality under Sustainable Development Goal 15, including within the UNCCD’s Intergovernmental Working Group on the follow up to Rio+20.

There will also be opportunities for SPI members to draw from relevant scientific proceedings and developments, including the Global Soil Week in April in Berlin. These events, in addition to the CRIC meeting in Bonn in just a few weeks, will mean there is little downtime in coming months.

UPCOMING MEETINGS

Third Global Science Conference on Climate-Smart

Agriculture: This conference will continue the work of the first and second conferences, held in Wageningen, the Netherlands, in 2011, and Davis, California, US, in 2013. **dates:** 16-18 March 2015 **location:** Montpellier, France **contact:** Agropolis International **phone:** +33-4-67-04-75-75 **fax:** +33-4-67-04-75-99 **email:** csa2015.montpellier@agropolis.fr **www:** <http://csa2015.cirad.fr/index.php/csa2015>

Intergovernmental Negotiations on the Post-2015

Development Agenda: The intergovernmental negotiations on the post-2015 development agenda, which will prepare for the UN Summit, will hold the following sessions: 23-27 March (SDGs and targets); 20-24 April (MOI and Global Partnership for Sustainable Development); 18-22 May (Follow up and review); and 22-25 June, 20-24 July, and 27-31 July (intergovernmental negotiations on the outcome document). **location:** UN Headquarters, New York **contact:** UN Division for Sustainable Development **phone:** +1-212-963-8102 **fax:** +1-212-963-4260 **email:** dsd@un.org **www:** <https://sustainabledevelopment.un.org/post2015>

UNCCD CRIC 13: CRIC 13 will be preceded by consultations of affected country parties of the Convention’s Regional Implementation Annexes from 23-24 March 2015. Delegates will also discuss how to integrate ongoing processes to align national action programmes with the proposed SDGs

relating to sustainable land management. **dates:** 25-27 March 2015 **location:** Bonn, Germany **contact:** UNCCD Secretariat **phone:** +49-228-815-2800 **fax:** +49-228-815-2898/99 **email:** secretariat@unccd.int **www:** <http://www.unccd.int/en/about-the-convention/the-bodies/The-CRIC/Pages/default.aspx>

Indicators and Data for Climate Resilient Development: From Data to Information and Knowledge to Policy Actions:

This workshop aims to identify a core set of indicators and data sets for gauging climate-resilient development to enable measurement in areas such as natural hazards, vulnerability, adaptive capacity, mitigation, resilience and development. The European Commission’s Joint Research Centre Institute for Environment and Sustainability (JRC-IES) and the Climate Change Unit of the Directorate-General for International Cooperation and Development are organizing the workshop as part of efforts by the Global Climate Change Alliance’s Flagship Initiative to strengthen policy dialogue and cooperation on climate change issues. **dates:** 25-26 March 2015 **location:** Brussels, Belgium **contact:** European Commission JRC **email:** climindicators@jrc.ec.europa.eu **www:** <https://ec.europa.eu/jrc/en/event/workshop/indicators-and-data-climate-resilient-development?search>

Third Working Session of the Intergovernmental Technical

Panel on Soils: The Intergovernmental Technical Panel on Soils (ITPS) was established at the first Plenary Assembly of the Global Soil Partnership (GSP) to provide scientific and technical advice and guidance on global soil issues to the GSP primarily, and to specific requests submitted by global or regional institutions. **dates:** 13-17 April 2015 **location:** Potsdam, Germany **contact:** ITPS **email:** ITPS@fao.org **www:** <http://www.fao.org/globalsoilpartnership/intergovernmental-technical-panel-on-soils/en/>

3rd Global Soil Week: The 3rd Global Soil Week will provide a platform for discussions on issues related to soils and land, and facilitate the emergence of new initiatives and strengthen existing ones. The event is hosted by the Global Soil Forum at the Institute for Advanced Sustainability Studies (IASS), in partnership with several UN agencies, intergovernmental and international organizations and German government agencies. **dates:** 19-23 April 2015 **location:** Berlin, Germany **contact:** IASS Potsdam **phone:** +49-331-28822-374 **email:** globalsoilweek@iass-potsdam.de **www:** <http://globalsoilweek.org/>

UN Forum on Forests: The eleventh session of the UN Forum on Forests (UNFF11) will consider the future of the international arrangement on forests, based on challenges and its effectiveness. **dates:** 4-15 May 2015 **location:** UN Headquarters, New York **contact:** UNFF Secretariat **phone:** +1-212-963-3401 **fax:** +1-917-367-3186 **email:** unff@un.org **www:** <http://www.un.org/esa/forests/session.html>

42nd Sessions of the UNFCCC Subsidiary Bodies: The 42nd sessions of the Subsidiary Bodies to the UNFCCC will take place in June 2015 alongside the *Ad Hoc* Working Group on the Durban Platform for Enhanced Action. **dates:** 1-11 June 2015 **location:** Bonn, Germany **contact:** UNFCCC Secretariat **phone:** +49-228 815-1000 **fax:** +49-228-815-1999 **email:** secretariat@unfccc.int **www:** <http://www.unfccc.int>

48th Meeting of the GEF Council: The Global Environmental Facility (GEF) Council meets twice per year to approve new projects with global environmental benefits in the GEF's focal areas, and to provide guidance to the GEF Secretariat and Agencies. **dates:** 2-4 June 2015 **location:** Washington D.C., US **contact:** GEF Secretariat **phone:** +1-202-473-0508 **fax:** +1-202-522-3240/3245 **email:** secretariat@thegef.org **www:** <http://www.thegef.org/gef/node/10938>

Land Quality Conference 2015: This conference, organized under the auspices of the International Year of Soils 2015, aims to facilitate the exchange of information and views among scientists and stakeholders involved in land resources research, land management and land-use policy planning. **dates:** 2-4 June 2015 **location:** Keszthely, Hungary **contact:** Secretariat **email:** lq2015@georgikon.hu **www:** <http://lq2015.georgikon.hu/>

Désertif'actions 2015: This international civil society forum is organized under the motto "Climate change and the preservation of drylands: time to act!" The conference will address the three themes of: desertification and land degradation – integrating climatic evaluations into decision making and action taking; development sustainability in drylands – creating greater synergy between the three Rio Conventions; and a pluralistic and organized civil society – having a true impact and doing what needs to be done. **dates:** 10-13 June 2015 **location:** Montpellier, France **contact:** CARI **phone:** +33-4-67-55-61- 18 **www:** <http://www.desertif-actions.fr/en>

DesertLand II: DesertLand, the Conference on Desertification and Land Degradation, will bring together academics, civil society, governments, scientists and other stakeholders to discuss challenges related to desertification and land degradation and develop appropriate solutions. **dates:** 16-17 June 2015 **location:** Ghent, Belgium **contact:** Secretariat **email:** info@desertland.eu **www:** <http://www.desertland.eu/>

2015 World Day to Combat Desertification: The UNCCD Secretariat has announced that the slogan for the 2015 World Day to Combat Desertification is "No such thing as a free lunch. Invest in healthy soils." National and global observances will convene under the theme, "attainment of food security for all through sustainable food systems." A global observance event will take place in Milan, Italy, during the UN Expo Milano 2015. **date:** 17 June 2015 **contact:** UNCCD Secretariat **phone:** +49-228-815-2800 **fax:** +49-228-815-2898/99 **email:** secretariat@unccd.int **www:** <http://www.unccd.int/en/programmes/Event-and-campaigns/WDCD/wdcd%202015/Pages/default.aspx>

ADP 3: As agreed in Geneva in February 2015, the third session of the *Ad Hoc* Working Group on the Durban Platform for Enhanced Action (ADP) will take place in Bonn, Germany. **dates:** 31 August - 4 September 2015 **location:** Bonn, Germany **contact:** UNFCCC Secretariat **phone:** +49-228-815-1000 **fax:** +49-228-815-1999 **email:** secretariat@unfccc.int **www:** <http://unfccc.int/bodies/body/6645.php>

UN Summit to Adopt the Post-2015 Development Agenda: The summit is expected to adopt the post-2015 development agenda, including: a declaration; a set of Sustainable Development Goals, targets, and indicators; their means of implementation and a new Global Partnership for Development; and a framework for follow-up and review of implementation.

dates: 25-27 September 2015 **location:** UN Headquarters, New York **contact:** UN Division for Sustainable Development **fax:** +1-212-963-4260 **email:** dsd@un.org **www:** <https://sustainabledevelopment.un.org/post2015/summit>

UNCCD COP 12: The 12th session of the Conference of the Parties (COP 12) to the UNCCD will take place over two weeks in Ankara, Turkey, to take decisions regarding the Convention's implementation. **dates:** 12-23 October 2015 **location:** Ankara, Turkey **contact:** UNCCD Secretariat **phone:** +49-228-815-2800 **fax:** +49-228-815-2898/99 **email:** secretariat@unccd.int **www:** <http://www.unccd.int>

GLOSSARY

CONAFOR	National Forestry Commission, Mexico
COP	Conference of the Parties
CRIC	Committee for the Review of the Implementation of the Convention
CST	Committee on Science and Technology
CST S-4	Fourth special session of the Committee on Science and Technology
DLDD	Desertification, land degradation and drought
GEF	Global Environment Facility
GRULAC	Latin American and Caribbean Group
ICARDA	International Center for Agricultural Research in the Dry Areas
IPBES	Intergovernmental Platform on Biodiversity and Ecosystem Services
IRD	Institut de recherche pour le développement
IWG	Intergovernmental Working Group on land degradation neutrality
LDN	Land degradation neutrality
MEAs	Multilateral environmental agreements
SAC	Scientific Advisory Committee
SBSTA	UNFCCC Subsidiary Body for Scientific and Technological Advice
SDGs	Sustainable Development Goals
SLM	Sustainable land management
SPI	Science-Policy Interface
STK4SD	Scientific and Traditional Knowledge for Sustainable Development
UNCCD	UN Convention to Combat Desertification
UNFCCC	UN Framework Convention on Climate Change