## science briefs series no.1

The recommendations were made by scientists that participated in the UNCCD 1st Scientific Conference and its process, organized under the theme, 'Bio-physical and socio-economic monitoring and assessment of desertification and land degradation, to support decision-making in land and water management', held on 22-24 September 2009 in Buenos Aires, Argentina. The conference was called for by the eighth session of the Conference of the Parties to the UNCCD upon the adoption of the UNCCD's 10-year strategic plan and framework for implementation (2008-2018) in Madrid, Spain, in 2007. The Conference recommendations will be studied by a special session of the CST in November 2010 and considered later by UNCCD Parties.

The scientific conference was organized by the UNCCD's Committee on Science and Technology, with the support of the Dryland Science for Development (DSD), a consortium of scientific institutions comprising European DesertNet, the International Center for Agricultural Research in Dry Areas (ICARDA), the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), the European Commission Joint Research Centre - Institute for Environment and Sustainability (JRC-IES) and the United Nations University's International Network on Water, Environment and Health (UNU-INWEH).

The UNCCD 2nd Scientific Conference will take place in 2012 under the theme, 'Economic assessment of desertification, sustainable land management and resilience of arid, semi-arid and dry sub-humid areas'.

The scientific conference was made possible through the generous support of the following donors, listed in alphabetical order: DSD core institutions, the European Commission, the Global Environment Facility with the United Nations Environment Programme (GEF/UNEP), the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), the International Fund for Agricultural Development (IFAD) and the UNCCD Secretariat.

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## **Land Matters**

Enhancing Synergies among the Rio Conventions on Land Use and Sustainable Land Management

Recommendations from the UNCCD 1 st Scientific Conference 22-24 September 2009, Buenos Aires, Argentina

Land use practices contribute to both the emission and sequestration of greenhouse gases. Land is where the struggle to adapt to climate change will be won or lost by the poorest of the poor. Land science is a priority area of collaboration between UNCCD and UNFCCC, if land-climate insights and actions are to be optimized. It can also foster the synergies continually called for by Parties to the three sister Rio Conventions.

Ten priorities on improving the monitoring and assessment of land degradation and sustainable land management, identified at the UNCCD 1st Scientific Conference in September 2009, are recommended for attention.





United Nations Convention to Combat Desertification

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Scientific Framework: People interact with ecosystems in diverse, complex and dynamic ways. There is need to develop a rigorous, science-based framework to monitor and assess desertification, land degradation and drought (DLDD). The framework must address complexity head-on and summarize it in useful ways for decision-makers situated at different levels.

Integrated Assessment Models: Advances in biophysical knowledge must be integrated with social, policy, economic and institutional knowledge because both dimensions strongly influence the condition of land. Integrated Assessment Models (IAMs) can provide that integration. They facilitate inclusive, participatory and trans-disciplinary monitoring and assessment and enable decision-makers to pierce through the complexity to understand crucial issues, priorities and tradeoffs.

Tools Relevant to Different Decision-making Levels: Stakeholders from different sectors of society value ecosystem services differently. Thus, monitoring and assessment should provide information that is relevant to different decision-making levels, and which is compatible across levels for unified understanding.

Attention to Sustainable Land Management (SLM): Monitoring and assessment should address not only the degradation of land, but land recovery and its continued healthy functioning through SLM practices as well.

Synergy: SLM increases the storage of carbon in soils and in vegetation, combating global warming. At the same time, SLM increases crop yields and farm incomes, helping the poor to adapt to climate change. SLM depends on synergies among diverse types of grasses, crops, and trees along with soil organisms, requiring attention to biodiversity. Thus, UNCCD, UNFCCC and CBD can find synergies in carbon and biodiversity monitoring and assessment.

Cost-benefit Analysis: Cost-benefit analyses can help decision-makers to make the case for investments to combat desertification. A valuation

of ecosystem services that includes both monetary and non-monetary benefits would help society to value the importance of sustaining such services. Services that cannot be assigned monetary value (e.g. aesthetic, cultural, spiritual services) should still be assessed in qualitative terms.

Knowledge Management: A knowledge management (KM) platform to integrate global knowledge relating to combating desertification, land degradation and drought (DLDD) would facilitate effective knowledge sharing on lessons learned from both successes and failures and integration of local and scientific knowledge for more insightful and relevant monitoring and assessment in support of decision-making.

Cross-Sectoral Capacity Building: KM partnership should build human capacities and cross-sector knowledge-sharing in order to confront the complexity of DLDD/SLM monitoring and assessment. Such broad collaboration sets the stage for mainstreaming needed actions into government agendas and policies.

Strengthening Scientific Capacities: An independent, international, interdisciplinary scientific mechanism to advise the UNCCD on a continuing basis should be established via a consultative process and positioned to complement mechanisms that serve sister UN environmental conventions and initiatives. Networking among scientists should also be fostered to improve the coherence and visibility of research in support of combating desertification and land degradation.

**DLDD/SLM** Monitoring System: Valuable information on monitoring and assessment is already being gathered by a wide array of international, national and local agencies, but much stronger integration, coordination and synthesis is needed. A comprehensive, regularized DLDD/SLM monitoring and assessment system should be established, harmonized with related systems that support the UNFCCC and CBD.

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