3rd UNCCD Scientific Conference

9-12 March 2015, Cancún, Mexico

"Combating desertification/land degradation and drought for poverty reduction and sustainable development: the contribution of science, technology, traditional knowledge and practices"

Programme

The Scientific and Traditional Knowledge for Sustainable Development (STK4SD) Consortium

United Nations Convention to Combat Desertification | UNCCD | AGROPOLIS INTERNATIONAL | DesertNet International | CGIAR Consortium | OSS | IADIZA CONICET U.N.CUYO GOBIERNO DE MENDOZA

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http://3sc.unccd.int

Programme

The contents of this document do not represent the views of the UNCCD or of its member Parties

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Welcomes

UNCCD Executive Secretary's welcome

The UNCCD simply would not be where it is today without the contribution of science. The joint expertise and pragmatism of scientists can provide workable solutions with a difference.

Yet, the significance of this conference for present and future generations cannot be overstated. Scientists at this conference have a truly unique opportunity to shape the future of how climate change will impact the land. The world is listening for actions that will enhance climate change resilience of the land that sustains us.

Land is also on the international agenda. The Sustainable Development Goals under negotiation could enable us to meet growing land and water demands. Land Degradation Neutrality may well become a global goal.

Caring for the land can solve some of the world's greatest challenges – conflict, migration, food insecurity and climate change. We live in a complex world. But perhaps we have been trying to solve things from the wrong end. Let's give the world simple ways to rebuild, from the ground up.

We received over 200 scientific submissions for the conference. Transforming this intellectual effort into practical, real-world solutions is another major task of this conference.

We're at a crucial tipping point. With bold, practical solutions, this conference can enable a large population that is on the forefront of climate change to adapt swiftly.

Monique Barbut, UNCCD Executive Secretary

UNCCD CST Chair's welcome

As the Chair of the UNCCD's Committee on Science and Technology, it is my pleasure to welcome you to the 3rd UNCCD Scientific Conference, which has been charged by the Conference of the Parties of the UNCCD with addressing "Combating desertification/land degradation and drought for poverty reduction and sustainable development: the contribution of science, technology, traditional knowledge and practices". This title alone makes one appreciate the courage of the organizers and contributors to this conference in grappling with this astounding challenge. So what is it all about that brings us all to Cancun?

In a nutshell, it is about land – not so much about land degradation, as one might gather from the conference title – but rather about the land's value, defined for us long ago in the Genesis narrative: "God formed Adam (man) from the soil of the adama (land)… and out of the adama God made to grow every tree pleasant to the sight and good for food … and out of the adama God formed every beast of the field and bird of the air". These biblical passages attest to the unity of traditional knowledge and science regarding the significance of land to mankind – directly and through biodiversity – and they address as well man's engagement in land functions.

Although in recent decades the significance of the atmosphere and biosphere to human well-being has received due attention of science and of global governance, the same cannot be said of the land. Despite the prevailing perception that the land constitutes a global natural capital instrumental in regulating the global water, carbon and nutritional mineral cycles, and that it intensively interacts with the atmosphere and the global climate through its infrastructural and functional support of terrestrial biodiversity, this area of science is of a limited effect on the global policy-making.

Against this backdrop, the UNCCD, the major multilateral environmental agreement mandated to directly address land issues, has made commendable strides in advancing the significance of land to greater prominence within the global international and intergovernmental development/environment arena and discourse. The UNCCD identified the need to rally the scientific community to focus more deeply on land-related research and initiated, six years ago, the Scientific Conference mechanism. Since then, it has nurtured and supported these conferences and benefited from their output. Furthermore, the UNCCD also set out to explore and improve the flow of knowledge from its generators to its consumers and beneficiaries through establishing a robust and, hopefully, effective mechanism for land-related science-policy interfacing, known as the Science-Policy Interface (SPI). The SPI members have been involved in developing the current 3rd Scientific Conference and are intensively engaged in its various functions in Cancun.

I have full confidence that the 3rd Scientific Conference will provide an excellent opportunity to explore, address and highlight new and innovative knowledge and measures to be adopted by policymakers for coping with the mounting challenges of managing critically functional components of the environment, especially that of the global land. I invite you to engage and contribute to the conference discussions and participate in the efforts of interfacing and incorporating new science into better policies for maintaining environment-supported human development.

Uriel Safriel, UNCCD CST Chair

SAC Chair's welcome

On behalf of the Scientific Advisory Committee, it is my sincere pleasure to welcome you to this, the 3rd UNCCD Scientific Conference. When Garrett Hardin developed his concept of the Tragedy of the Commons in 1968, his first example was a pasture "open to all." "It is to be expected," he wrote, "that each herdsman will try to keep as many cattle as possible on the commons. Such an arrangement may work reasonably satisfactorily for centuries… Finally, however, comes the day of reckoning, that is, the day when the long-desired goal of social stability becomes a reality. At this point, the inherent logic of the commons remorselessly generates tragedy." The tragedy is that "Each man is locked into a system that compels him to increase his herd without limit – in a world that is limited… Freedom in a commons brings ruin to all."

We in the biophysical sciences have made dramatic improvements in recent years in our ability to better understand and monitor drought, land degradation, desertification, and their various component processes. Through remote sensing, we can monitor larger and larger tracts of land with greater resolution and less cost than ever before, and through sophisticated simulation models we can not only predict the effects of future management decisions, but the impact of past policy changes, with greater and greater accuracy and precision. But we know relatively little how land degradation processes interact with the various social systems around the world, or how they might interact in the future. Yet better understanding of the social component and its linkages to agroecosystems in particular is critical if we intend not only to better understand and monitor drought, land degradation and desertification, but to reverse or mitigate these processes and achieve sustainable land use systems. In many social systems, humans have learned to cope with these issues and climate change through generations of learning. Traditional knowledge is therefore invaluable to any discussion about the restoration or development of sustainable land use systems. Furthermore, because land degradation, desertification and even drought often are the result of human activities, it follows that their reversal or mitigation will also require human organization and activity. Any systems-based research designed to reverse land degradation should therefore have as key components farmer communities and other stakeholders who are actively involved in defining problems and solutions, and scientists with different backgrounds to foster multi-disciplinary research. Ultimately, solutions will require societal answers. This, we believe, is why Hardin stated that problems that fall into the category of tragedy of commons have no technical solutions — instead, they require changes in human attitudes and behavior.

I wish all participants an engaging and fruitful conference that will serve as a model for future exchanges between scientists and stakeholders, and that will provide us with the valuable input we need to advise policymakers on robust solutions to attaining sustainable land management.

Bill Payne, SAC Chair

STK4SD Chair's welcome

On behalf of the STK4SD Consortium, it is my pleasure to welcome you to the 3rd UNCCD Scientific Conference in Cancun. Today, when one considers the complex challenges to humanity's future, which include drought, land degradation, and desertification, it seems that there is stronger need than ever for researchers to interact with their diverse stakeholders. For there are several interrelated and interdependent dynamics that link the world through demography, economics, and social and environmental issues, and it is through these many stakeholders that innovation can occur, and traditional boundaries between disciplines and sectors can be overcome.

We must recognize that, when addressing such challenges, the research process is inseparable from decision-making. Scientific investigation of a problem is central to the design of its solutions, but solutions require that explicit choices be made. When we as researchers use science to proscribe solutions or to predict the consequences of different choices, we must recognize there are implied consequences of these decisions and predictions to several actors or stakeholders. That is why we must also recognize that research in the social sciences must be closely linked to that in the biophysical sciences, with the goal of empowering actors to innovate and not be constrained by rigid thinking. With many currently prevailing development models, whose validity is sometimes taken as self-evident, it is a challenge for citizens to find alternatives that are outside of a model's ideological foundations. Similarly, science can provide a range of models to support decisions or social choices to make in a democratic society, but answers provided by Science can also be shaped by theoretical frameworks and paradigms that are not necessarily definitive and might not take into account all factors, such as social and political ones. It is only through interaction with diverse stakeholders that these "external" factors will be identified and addressed.

Therefore, in this conference, rather than following the usual format of a scientific conference, which typically consists of a succession of brief presentations without sufficient time for meaningful exchange, we will instead try an alternative format with a view toward enhancing interactions between scientific and stakeholder participants. All presentations will be made through posters in order to preserve enough time for discussions. The parallel sessions will be organized into two phases: the first, which will last 45 minutes and consist of viewing posters with their authors in front; and the second, which will consist of a full hour of discussion introduced by two "rapporteurs" and led by a facilitator, who will monitor and record key points exchanged. We hope this new feature, as a learning process, will allow fruitful discussion leading to relevant recommendations. We hope that all of you will appreciate it. I wish you an enjoyable, efficient, and productive 3rd UNCCD Scientific Conference!

Bernard Hubert, STK4SD Consortium Chair

Programme at a glance

<table>
<tr><th></th><th>Monday 9 March</th><th>Tuesday 10 March</th></tr>
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09:00</td><td rowspan="2">Registration</td><td rowspan="2">Side-events</td></tr>
<tr><td>09:00
10:00</td></tr>
<tr><td>10:00
11:00</td><td rowspan="2">CST Opening</td><td>Session 2. Responses / keynote</td></tr>
<tr><td>11:00
12:00</td><td rowspan="2">Conference opening session &
Introductory keynote</td><td rowspan="2">Session 2. Responses / parallel workshops*</td></tr>
<tr><td>12:00
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<tr><td>13:00
14:00</td><td rowspan="2">Side-events</td><td rowspan="2">Side-events</td></tr>
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15:00</td></tr>
<tr><td>15:00
16:00</td><td>Session 1. Diagnosis of constraints / keynote</td><td>Invited keynote “Local knowledge & DLDD**”</td></tr>
<tr><td>16:00
17:00</td><td rowspan="2">Session 1. Diagnosis of constraints / parallel workshops*</td><td>Session 1. Diagnosis of constraints / wrap-up</td></tr>
<tr><td>17:00
18:00</td><td>Session 2. Responses / wrap-up</td></tr>
<tr><td>18:00
19:00</td><td rowspan="2">18:30-19-30:
Cocktail offered by Mexico</td><td rowspan="2">Side-events</td></tr>
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*Workshops’ organization:

- Poster session – 45 minutes (in the exhibition hall)
- Introduction and discussion – 1 hour 15 minutes (in the meeting rooms)

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<tr><th></th><th>Wednesday 11 March</th><th>Thursday 12 March</th></tr>
<tr><td>08:00
09:00</td><td rowspan="2">Side-events</td><td rowspan="2">Side-events</td></tr>
<tr><td>09:00
10:00</td></tr>
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11:00</td><td>Session 3. Monitoring and assessment / keynote</td><td rowspan="2">Invited keynotes “Combating DLDD** in Mexico”</td></tr>
<tr><td>11:00
12:00</td><td rowspan="2">Session 3. Monitoring and assessment / parallel workshops*</td></tr>
<tr><td>12:00
13:00</td><td rowspan="2">Conference conclusions</td></tr>
<tr><td>13:00
14:00</td><td rowspan="2">Side-events</td><td rowspan="2">Side-events</td></tr>
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15:00</td></tr>
<tr><td>15:00
16:00</td><td rowspan="2">Invited keynotes “Synergies between the three Rio Conventions”</td><td rowspan="3">CST Closing</td></tr>
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17:00</td></tr>
<tr><td>17:00
18:00</td><td>Session 3. Monitoring and assessment / wrap-up</td></tr>
<tr><td>18:00
19:00</td><td rowspan="2">Side-events</td><td rowspan="2"></td></tr>
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20:00</td></tr>
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** DLDD: Desertification, Land degradation and Drought

Day-to-day programme

Monday, March 9th

10:00-11:30 Committee on Science and Technology (CST) opening session

- Opening statements by host country representatives:

  Juan Jose GUERRA ABUD, *Minister of Environment and Natural Resources*
  Jorge RESCALA PEREZ, *General Director of the National Forestry Commission*
  Roberto BORGE ANGULO, *Governor of the State of Quintana Roo*
- Opening statement by **Monique BARBUT**, *Executive Secretary of the United Nations Convention to Combat Desertification (UNCCD)*
- Opening statement by **Uriel SAFRIEL**, *Chair of the UNCCD Committee on Science and Technology (CST), Emeritus Professor at the Ben-Gurion University of the Negev – Israel*
- Statements by representatives of regional and interest groups

11:30-12:15 3rd UNCCD Scientific Conference opening session

Session Chair: **Uriel SAFRIEL**

- Welcome address by **Bernard HUBERT**, *Chair of the STK4SD consortium in charge of the conference organization, President of Agropolis International – France*
- Welcome address by **Bill PAYNE**, *Chair of the conference Scientific Advisory Committee (SAC), Dean and Professor at the College of Agriculture, Biotechnology and Natural Resources, University of Nevada – USA*
- Welcome address by **Tarja HALONEN**, *UNCCD Drylands Ambassador, former President of Finland*

12:15-13:00 Introductory keynote by **Mark REED**, *Director of the Knowledge ExCHANGE Research Centre, Birmingham City University – UK*

15:00-18:00 Session 1 – DIAGNOSIS OF CONSTRAINTS

How to best characterize and understand the vulnerability and adaptive capacities of ecosystems (in particular agro-ecosystems) and populations in affected regions, including regions newly vulnerable to the consequences of climate change?

Session Chair: **Bill PAYNE**

15:00-15:45: Session introductory keynote by **Uriel SAFRIEL**

16:00-18:00: Parallel workshops (16:00-16:45: poster session in the exhibition hall – 16:45-18:00: introduction and discussion in the workshop rooms)

- **Workshop 1.1: Climate change**
- **Workshop 1.2: Environmental and ecological set up**
- **Workshop 1.3: Food security, agriculture, pastoralism**
- **Workshop 1.4: Socio-economics**
- **Workshop 1.5: Integrated methodology and policy making**

Tuesday, March 10th

10:00-13:00 Session 2 – RESPONSES

How can adaptive capacities be developed or maximized at short, medium and long term? What are the major contributions from traditional and local practices and scientific research? How are they related to specific settings? How can they be generalized so that they can be adapted and applied to broader settings? What are the obstacles to more widespread use?

Session Chair: **Matthias MAGUNDA**, *Member of the CST Bureau, Researcher at the National Agricultural Research Institution – Uganda*

10:00-10:45 Session introductory keynote by **Richard THOMAS,** *Director of the Dryland Systems CGIAR Research Program, International Center for Agricultural Research in the Dry Areas (ICARDA) – Jordan*

11:00-13:00 Parallel workshops (11:00-11:45: poster session in the exhibition hall – 11:45-13:00: introduction and discussion in the workshop rooms)

- **Workshop 2.1: Crops, livestock, genetics and seed systems**
- **Workshop 2.2: Agro-ecosystems**
- **Workshop 2.3: Soil and water issues**
- **Workshop 2.4: Knowledge and knowledge transfer**
- **Workshop 2.5: Desertification, land degradation and restoration**

15:00-16:00 The role of local knowledge in addressing land degradation, desertification and drought

Session Chair: **Mariam AKTHAR-SCHUSTER**, *Member of the SAC, Member of the UNCCD Science-Policy Interface (SPI), Coordinator of the Advisory Board of DesertNet International*

Keynote speech by:

- **Úrsula OSWALD SPRING,** *Professor at the Regional Multidisciplinary Research Centre, National Autonomous University of Mexico (UNAM) – Mexico*

16:00-17:00 Session 1 – DIAGNOSIS OF CONSTRAINTS: Wrap-up

Session Chair: **Bill PAYNE**

Presentations by the rapporteurs of each workshop

17:00-18:00 Session 2 – RESPONSES: Wrap-up

Session Chair: **Matthias MAGUNDA**

Presentations by the rapporteurs of each workshop

Wednesday, March 11th

10:00-13:00 Session 3 – MONITORING AND ASSESSMENT

How can we best measure the performance of actions to combat land degradation and desertification? How can we cost-effectively evaluate the efficiency of drought-mitigation strategies?

Session Chair: **Tao WANG,** *Member of the SAC, Member of the UNCCD SPI, Director and Research Professor at the Key Laboratory of Desert and Desertification, Chinese Academy of Sciences (CAS) – China*

10:00-10:45 Session introductory keynote by **Elena Maria ABRAHAM**, *Director of the Argentine Dryland Research Institute (IADIZA), National Scientific and Technical Research Council (CONICET) – Argentina*

11:00-13:00 Parallel workshops (11:00-11:45: poster session in the exhibition hall – 11:45-13:00: introduction and discussion in the workshop rooms)

- **Workshop 3.1: Indicators**
- **Workshop 3.2: Remote-sensing and mapping**
- **Workshop 3.3: Drought, water, hydrology**
- **Workshop 3.4: Sustainable land management / Land degradation neutrality**
- **Workshop 3.5: Processes of degradation**

15:00-17:00 Synergies between the three Rio Conventions

Session Chair: **Uriel SAFRIEL**

Keynote speeches by:

- **Tomasz CHRUSZCZOW**, *Chair of the Subsidiary Body for Scientific and Technological Advice (SBSTA) of the United Nations Framework Convention on Climate Change (UNFCCC)*
- **Graciela METTERNICHT**, *Director of the Institute of Environmental Studies, University of New South Wales (UNSW) – Australia*
- **Graham VON MALTITZ**, *Researcher at the Council for Scientific and Industrial Research (CSIR) – South Africa*

17:00-18:00 Session 3 – MONITORING AND ASSESSMENT: Wrap-up

Session Chair: **Tao WANG**

Presentations by the rapporteurs of each workshop

Thursday, March 12th

10:00-11:30	Combating desertification, land degradation and drought in Mexico

Session Chair: **Cuauhtemoc OCHOA FERNANDEZ,** *Undersecretary of Environmental Development and Regulation of the Ministry of the Environment and Natural Resources (SEMARNAT), Technical Secretary of the National System to Combat Desertification and Degradation of Natural Resources (SINADES) – Mexico*

Moderator: **Norma Salome MUNGUIA ALDARACA**, *Director General of Primary Sector and Renewable Natural Resources of SEMARNAT– Mexico*

Keynote speeches by:

- **Jorge RESCALA PEREZ,** *Director General of the National Forestry Commission (CONAFOR), UNCCD Focal Point – Mexico*
- **Cuauhtemoc OCHOA FERNANDEZ**
- **Jesus David GOMEZ DIAZ,** *Professor at the Chapingo Autonomous University (UACh), Science & Technology Correspondent to the UNCCD – Mexico*

11:30-13:00	Conference conclusions

Session Chair: **Bernard HUBERT**

- Main scientific conclusions by **Bill PAYNE** and **Mélanie REQUIER-DESJARDINS,** *Vice-Chair of the SAC, Researcher at the International Centre for Advanced Mediterranean Agronomic Studies – Mediterranean Agronomic Institute of Montpellier (CIHEAM-IAMM) – France*
- Main policy recommendations by **Mariam AKTHAR-SCHUSTER** and **Elena Maria ABRAHAM**

15:00-18:00	CST closing, adoption of the report

Session Chair: **Uriel SAFRIEL**

- Provision of scientific advice on the topic: "Explore the options to achieve land degradation neutrality in the context of sustainable development"
- Adoption of the report of the CST
- Closing remarks by **Uriel SAFRIEL**

List of poster presentations per session and workshop

(see the book of abstracts for details)

1. DIAGNOSIS OF CONSTRAINTS

Workshop 1.1: Climate change

IMPACT OF CLIMATE CHANGES ON PRODUCTIVITY AND BIODIVERSITY OF GRASSLAND IN WESTERN UKRAINE

PANAKHYD, GALINA; KOTYASH, ULYANA; BUGRYN, LYUBOMUR; YARMOLYUK, MICAEL; SMETANA, SERGIJ; PUKALO, DANYLO; KOBURENKO, YULYA; DIDUCH, GALINA; KONYK, GRYGORIY

ANALYSIS OF CLIMATE CHANGE IMPACT BY MODELING HYDRIC EROSION TO SOILS OF AGUASCALIENTES, MEXICO

LÓPEZ, SANTOS ARMANDO ; MARTÍNEZ, SANTIAGO SANTOS ; GERARDO, ARRIAGA GERARDO

PROJECTED PATTERNS OF PRECIPITATION AND TEMPERATURE ANOMALIES IN OMAN UNDER RCPS SCENARIOS OF CIMP5

CHARABI, YASSINE ABDULRAHMAN ; AL-WARDY, MALIK MOHAMED ; AL-RAWAS, GHAZI ALI

ASSESSING THE VULNERABILITY OF RANGELAND ECOSYSTEMS TO GLOBAL CLIMATE CHANGE IN THE DRYLAND AREAS OF THE MIDDLE EAST AND NORTH AFRICA REGION

LOUHAICHI, MOUNIR ; OULED BELGACEM, AZAIEZ

IMPACT OF CLIMATE CHANGE ON LAND-WATER-ECOSYSTEM QUALITY IN POLAR AND MOUNTAINOUS REGIONS: IDENTIFYING THE KNOWLEDGE GAPS

STOTT, TIM ; DERCON, GERD ; JUREK, MATTHIAS

DROUGHT FREQUENCY AND INTENSITY AT REGIONAL LEVEL IN MEXICO

GOMEZ DIAZ, JESUS DAVID ; MONTERROSO RIVAS, ALEJANDRO ISMAEL ; LECHUGA GAYOSSO, LIZETH MARGARITA ; GARCIA RODRIGUEZ, JORGE LUIS ; VILLEGAS FLORES, JOEL

VARIATIONS IN METEOROLOGICAL PARAMETERS LEADING TO LAND DEGRADATION AND DESERTIFICATION: A MICRO LEVEL CASE STUDY FROM SOUTH INDIA

MUDIGERE SANNEGOWDA, UMESHBABU; NAUTIYAL, SUNIL

PRECIPITATION TREND AND ITS IMPACTS ON LAND DEGRADATION IN SOUTHERN OMAN

AL RAWAS, GHAZI ALI ; AL WARDY, MALIK MOHAMED ; CHARABI, YASSINE ABDULRAHMAN

THE IMPORTANCE OF REGIONAL COOPERATION AND COMMUNICATION IN THE CASE OF LAND DEGRADATION CAUSED BY NATURAL DISASTERS: SAVA RIVER BASIN CASE STUDY

BRZINA, AIDA; HUSNIC, ELMA

Workshop 1.2: Environmental and ecological set up

ESTIMATING SPATIAL PRODUCTIVITY OF A TEMPERATE FOREST OVER THE DISTRIBUTION AREA OF PINUS ARIZONICA AT THE NORTH OF MEXICO

MARTINEZ-SALVADOR, MARTIN ; MATA-GONZALEZ, RICARDO ; VALDEZ-CEPEDA, RICARDO-DAVID

NEXUS AMONG WATER, SOIL, FOOD AND BIODIVERSITY IN MEXICO

OSWALD-SPRING, URSULA

QUANTITATIVE APPROACH TO CHARACTERIZE AND UNDERSTAND THE NATURE OF WIND EROSION APPEARANCE UNDER UNTYPICAL CONDITIONS OF UKRAINE WEST FOREST ZONE

KOLIADA, VALERIJ PETROVICH; TIMCHENKO, DMYTRO OLEGOVICH

DESERTION - A THREAT WHICH CAN BE STOPPED

DEGODYUK, EDYARD; DEGODYUK, STANISLAV

AEOLIAN DESERTIFICATION AND ITS CONTROL IN NORTHER CHINA

WANG, TAO

CONSERVATION AND RECONSTRUCTION OF THE OASIS ECOSYSTEM OF LOIYANGALANI - PROJECT TO COMBAT DESERTIFICATION AND FOR WATER RESOURCES MANAGEMENT - TURKANA LAKE, LOIYANGALANI DISTRICT, MARSABIT COUNTY

VALLERINI, LORENZO ; BUONO, NICOLETTA ; FALQUI, ALFONSO

WIND EROSION QUANTIFICATION AND MOVING DUNES IMPACTS IN THE SOUTH EAST NIGER

ABDOURHAMANE TOURE, AMADOU ; RAJOT, JEAN LOUIS ; TIDJANI, ADAMOU DIDIER ; MARTICORENA, BÉATRICE ; GARBA, ZIBO ; MAMADOU DABOUA, MAHAMADOU

FOREST ECOSYSTEM RESILIENCE AND RAINFALL VARIABILITY ANALYSIS, A BRIDGE BETWEEN CLIMATE CHANGE AND DESERTIFICATION PROCESS ASSESSMENT, THE CASE OF MADAGASCAR

RAKOTO RATSIMBA, HARIFIDY ; RATOVOSON, ARIMINO AINA NAVALE ; RAKOTO, PERCY YVON ; RAVOKATRA, TOVO ; RABENILALANA, MIHAJAMANANA ; RAMAMONJISOA, BRUNO ; BOGAERT, JAN

LAND-USE IMPACTS ON PLANT DIVERSITY AND CARBON STORAGE AT ITAPARICA RESERVOIR, NORTHEAST BRAZIL

ALMEIDA-CORTEZ, JARCILENE ; SCHULZ, KATHARINA ; SENA, FERNANDO HENRIQUE ; TAVARES, FERNANDA MEIRA ; LUSTOSA, BRUNO MELO ; OLIVEIRA, DÉBORAH ALANI ; CIERJACKS, ARNE

EFFECT OF DROUGHTS ON THE ECOSYSTEMS IN THE CARPATHIAN REGION

SZALAI, SANDOR

METROPOLITAN AREAS IN MEXICO, THEIR CURRENT LAND DEGRADATION AND FUTURE CONSIDERATION

MONTERROSO RIVAS, ALEJANDRO ISMAEL ; GOMEZ DIAZ, JESUS DAVID ; LECHUGA GAYOSSO, LIZETH MARGARITA ; GARCIA RODRIGUEZ, JORGE LUIS ; VILLEGAS FLORES, JOEL

CARBON STORAGE SYSTEMS IN THE REGION OF THE MOUNTAINS, VERACRUZ, MEXICO

VALDES-VELARDE, EDUARDO ; CUEVAS-TREJO, SARAHI ; LOPEZ-VELASCO, MELINA ; ORDAZ-CHAPARRO, VICTOR MANUEL ; AYALA-ARREOLA, JUAN ; JUAREZ-HERNANDEZ, MARIA DE JESUS ; GUTIERREZ DEL POZO, DIEGO ; GALLARDO-LANCHO, JUAN FERNANDO

ENVIRONMENTALLY SENSITIVE AREAS TO DESERTIFICATION IN THE WATERSHED SAN ANDRÉS AZUMIATLA, PUEBLA, MEXICO

TAMARÍZ FLORES, JOSÉ VICTOR ; CASTELÁN VEGA, ROSALÍA ; LÓPEZ TELOXA, CITLALY ; CRUZ MONTALVO, ABEL

GEOCHEMICAL AND MINERALOGICAL APPROACH TO SOIL AND WATER POLLUTION CONTROL IN MINING AND FLOODS AFFECTED AREA IN THE DRINA RIVER BASIN

GRUJIC, GORDANA

Workshop 1.3: Food security and agriculture, including pastoralism

ASSESSMENT OF THE IMPACT OF SUSTAINABLE LAND USE PRACTICES ON FOOD SECURITY IN WEST USAMBARA MOUNTAINS, TANZANIA

TEMU, EMMANUEL JOHN; HELLA, JOSEPH PHILIP

CLIMATE CHANGE AND AGRICULTURAL INSURANCE SYSTEM IN TURKEY

OZEVREN, AYNIYE SULE ; YEŞİLYURT ER, AYSEL ; ENGURULU, BEKIR

BEDOUIN LIVELIHOODS AND RANGELAND MANAGEMENT IN THE MIDDLE EAST; ANALYSIS OF CONSTRAINTS TO AND PRECONDITIONS FOR LOCAL OWNERSHIP IN SUSTAINABLE RANGELAND MANAGEMENT

LABAN, PETER ; HADDAD, FIDAA

EFFECT OF CLIMATE CHANGE ON COCOA YIELDS AND EXPORT IN NIGERIA

OMUEMU, EFE

COMBATTING AGRICULTURAL DROUGHT BEFORE DESERTIFICATION IN TURKEY

OZEVREN, AYNIYE SULE ; ENGURULU, BEKIR ; UNAL, MEHMET

ENHANCED ADAPTATION OF WINTER PULSES TO RAIN-FED FARMING SYSTEMS IN SOUTH ASIA

SARKER, ASHUTOSH; AGRAWAL, SHIV KUMAR; KUMAR, JITENDRA; DIKSHIT, H.K.; DEY, T.K.; GHARTI, D.B.; ALI, AZGAR

DROUGHT PERCEPTION AND SUSTAINABILITY OF DAIRY FAMILY FARMING IN THE SOUTHERN RURAL REGION OF PERNAMBUCO STATE IN BRAZIL

FAGES, MARJOLAINE ; LE GUEN, ROGER ; SILVA DE MELO, AIRON APARECIDO

COMBINING FARMERS' PERCEPTIONS AND CROPPING SYSTEM MODELLING TO ADDRESS CLIMATE CHANGE IMPACTS: A CASE STUDY ON IRRIGATED FORAGE SYSTEMS UNDER MEDITERRANEAN CONDITIONS

NGUYEN, THI PHUOC LAI ; MULA, LAURA ; SEDDAIU, GIOVANNA ; DORO, LUCA ; LEDDA, LUIGI ; PASQUI, MASSIMILIANO ; GUTIERREZ, LUCIANO ; DONO, GABRIELE ; ROGGERO, PIER PAOLO

FOOD SECURITY AND SOVEREIGNTY IN DESERTIFICATION AREAS OF NORTH-WEST OF ARGENTINA

CORSO, MARÍA LAURA ; PIETRAGALLA, VANINA ; POSSIDONI, CRISTINA ISABEL

THE IMPLICATION OF LAND USE AND CLIMATE VARIABILITY ON LIVESTOCK PRODUCTION IN NKAMBE PLATEAU OF CAMEROON: ADAPTATION STRATEGIES AND CONSTRAINTS

NFOR, JULIUS TATA; MARTIN, KUETE

PASTORALISM AND THE GREEN ECONOMY – A NATURAL NEXUS? STATUS, CHALLENGES AND POLICY IMPLICATIONS

MCGAHEY, DANIEL ; DAVIES, JONATHAN ; HAGELBERG, NIKLAS ; OUEDRAOGO, RAZINGRIM A.

SOCIO-ECONOMIC DRIVERS OF PASTORAL DROUGHT

TAHMASEBI, ASGHAR

FACTORS INFLUENCING FARMERS ATTITUDE ON NEW IRRIGATION TECHNOLOGY DEVELOPMENT IN UPPER KARKHEH RIVER BASIN

DEHGHANISANIJ, HOSSEIN ; AZAMI, A. ; ZARAFSHANI, K. ; REZAEI, A.

Workshop 1.4: Socio-economics

APPROPRIATION OF LAND AND GREEN GRABBING IN SUB-SAHARA AFRICA

ELEMIDE, ADEBOLA

RURAL DEVELOPMENT PROJECTIONS IN THE FOREST VILLAGES OF CENTRAL ANATOLIA DROUGHT BASIN OF TURKEY

GÖRÜCÜ, ÖZDEN

ASSESSMENT OF SOCIO-ECONOMIC ASPECTS OF DESERTIFICATION IN RELATION TO FARMER CHOICE PARAMETERS USING AN AGENT-BASED DECISION-MAKING SYSTEM (CASE STUDY: SEGZI PLAIN, IRAN)

AMIRASLANI, FARSHAD ; ASKARI SHAHID, MARZIYE ; MESGARI, MOHAMMAD ; ALAVIPANAH, SEYED KAZEM

COLLECTIVE ACTION FOR SUSTAINABLE LAND MANAGEMENT: THE CASE OF BOSOKHA LABOUR SHARING GROUP "MANY HANDS MAKE WORK EASIER, LIGHTER AND FASTER"

WANGDI, TASHI ; DORJI, KARMA DEMA

APPLYING NEXUS THINKING IN DRYLAND SOCIAL-ECOLOGICAL SYSTEMS IN MALAWI: CONSEQUENCES FOR JUSTICE AND EQUITY

QUINN, CLAIRE HELEN; STRINGER, LINDSAY

EVALUATION AND SELECTION OF SOCIOECONOMIC INDICATORS FOR LAND DEGRADATION MONITORING IN OMAN

AL-HATRUSHI, SALIM MUBARAK ; AL-BULOSHI, ALI SAID ; ZEKRI, SALIM ; AL--WARDY, MALIK MOHAMED ; CHARABI, YASSINE ABDUALRAHMAN ; AL-RAWAS, GHAZI ALI

DROUGHTS ARE SILENT, HEALTH IS INVISIBLE

SENA, ADERITA ; BARCELLOS, CHRISTOVAM ; FREITAS, CARLOS ; SILVA, DIEGO ; CORVALAN, CARLOS

WATER MANAGEMENT IN THE TIOUT OASIS IN MOROCCO: FRICTION BETWEEN TOURISM DEVELOPMENT AND AGRICULTURAL IMPROVEMENTS

BARBE, AUDREY, CORINE, LAURENCE ; MAHDANE, MHAMED ; RUF, THIERRY

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PUBLIC PERCEPTION OF AN ECOLOGICAL REHABILITATION PROJECT IN INLAND RIVER BASINS IN NORTHERN CHINA

QI, FENG; WEI, LIU

THE ENDURING DILEMMA BETWEEN MAPPING DESERTIFICATION AND ITS MITIGATION

ZDRULI, PANDI

TEN YEARS OF LARGE-SCALE REFORESTATION IN THE OFFICE NATIONAL DU BOIS: ACHIEVEMENTS, CONSTRAINTS AND PROSPECTS FOR SUSTAINABLE FOREST MANAGEMENT AND THE REDUCTION OF POVERTY IN BENIN

DOSSA, OGOUGBÉ SOUROU NOUNAGNON LÉONCE

STATUS OF ECOLOGICAL, DEMOGRAPHIC AND SOCIOLOGICAL BALANCE OF THE MEDITERRANEAN DINARIC KARST AREA OF BOSNIA AND HERZEGOVINA HAVING A FUNCTION OF SUSTAINABLE DEVELOPMENT AND POVERTY REDUCTION

ČUSTOVIĆ, HAMID; LJUŠA, MELISA

ISSUES RELATED TO POLICY AND MEASURES TO COMBAT DESERTIFICATION IN MONGOLIA

JAMSRAN, TSOGTBAATAR ; DOLJIN, DASH ; NYAMTSEREN, MANDAKH ; ZAMBA, BATJARGAL

VULNERABLITY AND ADAPTIVE CAPACITY OF AGROFORESTRY BASED AGROECOSYSTEMS: IDENTIFICATION OF CONSTRAINTS, BARRIER ANALYSIS AND SUGGESTED POLICY OPTIONS

SAXENA, VIVEK

MODELLING THE CAUSALITY OF LAND DEGRADATION WITH BAYESIAN NETWORKS LINKING DRIVERS AND PRESSURES TO STATE INDICATORS UNDER THE DPSIR APPROACH

PONCE-HERNANDEZ, RAUL; AHMED, OUMER; DIXON, REBECCA

DEFORESTATION, VULNERABILITY AND ADAPTATION STRATEGIES OF RURAL FARMERS: THE CASE OF CENTRAL RIFT VALLEY REGION OF ETHIOPIA

GEBEYEHU, DEMBEL BONTA

RESIIENCE, INEQUALITY AND ECOLOGICAL SOIL CLASSIFICATION AS DIAGNOSTIC TOOLS

HARTMANN, INGRID

2. RESPONSES

Workshop 2.1: Crops, livestock, genetics, seed systems

GENETIC ANALYSIS FOR WATER USE EFFICIENCY TRAITS AND YIELD UNDER DROUGHT STRESS CONDITIONS IN GROUNDNUT

JOHN, KOMMALAPATI ; RAGHAVA REDDY, POLI ; RAJA REDDY, K.

OVERCOMING CLIMATE CHANGE EFFECT TO INCREASE PRODUCTION OF QUALITY WHEAT SEED THROUGH PUBLIC-PRIVATE PARTNERSHIP FOR COMBATING LAND DEGRADATION IN POTOHAR-PAKISTAN

RAJA, MUHAMMAD OMER ; MUHAMMAD, TARIQ ; MUHAMMAD, ASHRAF MIAN ; IFTIKHAR, ABBASS ; OBAID, UR REHMAN

LEAF TRAIT VARIATIONS AND MORPHOLOGICAL DIFFERENCES FROM CORK OAK POPULATIONS ALONG TEMPERATURE AND PRECIPITATION GRADIENT IN NORTHERN TUNISIA

ENNAJAH, AMEL ; MOUILLOT, FLORENT ; SALMA, SAY KACHOUT ; GARCHI, SALAH ; LAAMOURI, ABD ELWEHED ; MARIEM, ALOUI

EFFECT OF INTEGRATED WATER AND NUTRIENTS MANAGEMENT ON RUNOFF AND CROP PERFORMANCE IN CONSTRAINED INDIGENOUS SOIL AND WATER CONSERVATION SYSTEMS OF NORTHWESTERN BÉNIN

MOUTOUAMA, FIDÈLE TCHOSSI; AKPONIKPE, PIERRE IRÉNIKACHÉ; SOKPON, NESTOR

THE DIVERSIFICATION OF THE AGRICULTURAL CROPS FOR IMPROVED NUTRITIVE BASE OF LIVESTOCK ON SALINE SOILS IN TAJIKISTAN FARMS

AHMADOV, HUKMATULLO MAHMUDOVICH ; TODERICH, KRISTINA NIKOLAEVNA

SUSTAINABILITY THROUGH PROTECTION AND PROPAGATION OF INDIGENOUS LIVESTOCK BREEDS- CHOLISTANI BREED OF CATTLE AS MODEL FROM CHOLISTAN DESERT, PAKISTAN

FAROOQ, UMER

USE OF MUTUALISTIC SYMBIONTS AS A STRATEGY FOR REHABILITATION OF TEPETATES

SANTIAGO MARTÍNEZ, MARÍA GUADALUPE ; HERNÁNDEZ CUEVAS, LAURA ; GALINDO FLORES, GEMA ; NAVA GUTIERREZ, YOLANDA ; GUERRA DE LA CRUZ, VIDAL

PRODUCTION POTENTIAL OF RAINFED GROUNDNUT/PIGEONPEA INTERCROPPING SYSTEM AS INFLUENCED BY CLIMATE RESILIENT FARM POND TECHNOLOGY IN SEMI- ARID TROPICS

TIMMAVAJJULA, GIRIDHARA KRISHNA; GUDUPALLI, KRISHNA REDDY; PULI, MAHESHWARA REDDY; ACHUKATLA, MUNEENDRA BABU

ARBUSCULAR MYCORRHIZA: AN ESSENTIAL COMPONENT FOR THE ESTABLISHMENT OF WILD PLANTS ON "TEPETATES"

NAVA GUTIÉRREZ, YOLANDA ; SANTIAGO MARTINEZ, MA GUADALUPE ; HERNÁNDEZ CUEVAS, LAURA ; GALINDO FLORES, GEMA ; MARTÍNEZ Y PÉREZ, J LUIS ; GUERRA DE LA CRUZ, VIDAL

PROMOTION OF PARTICIPATORY GROUNDNUT BASED CROPPING SYSTEMS IN SEMI-ARID TROPICS TO COMBAT CLIMATE CHANGE AND IMPROVE PRODUCTIVITY FOR SUSTAINABLE LIVELIHOODS

LEVAKA, SURYA NARAYANA REDDY; S, RAJENDRA NATH; KUNUTHUR, SRINIVASA REDDY

ENHANCING LAND REHABILITATION, ECOSYSTEM RESTORATION AND CLIMATE CHANGE RESILIENCE IN THE DEGRADED LAND AREAS THROUGH SALINE AGRICULTURE

SAQIB, MUHAMMAD ; AKHTAR, JAVAID ; ABBAS, GHULAM ; WAHAB, HAFIZ ABDUL ; MURTAZA, GHULAM

RISKS AND OPPORTUNITIES OF EUCALYPTUS PLANTING (CASE STUDY IN THE FRAMEWORK OF THE GIZ-GERMAN-MADAGASCAN ENVIRONMENTAL PROGRAM)

PRILL, LAURA ANTONIA ; PLUGGE, DANIEL ; KÖHL, MICHAEL

DROUGHT VIS-A-VIS NATURAL RESOURCE MANAGEMENT-A MEANS FOR ATTAINING SUSTAINABILITY AND LIVELIHOOD SECURITY OF FARMING COMMUNITY

PAMULA, VENKATA SATHYA GOPAL; KANDURI, SHIREESHA

DIRECT SEED METHOD OF RICE CULTIVATION USING DRUMSEEDER - A SUSTAINABLE TECHNOLOGY FOR SEMI ARID TROPICS

REDDY POLU, BALA HUSSAIN ; SAKAMURI, SREENIVASULU

INTRODUCTION OF RESPROUTER SPECIES TO INCREASE RESILIENCE OF MEDITERRANEAN ECOSYSTEMS TO COPE WILDFIRES

GRANADOS, MARÍA ELENA ; VILAGROSA, ALBERTO ; CHIRINO, ESTEBAN ; VALLEJO, VICTORIANO RAMÓN

HOW DO FARMERS PERCEIVE BENEFITS OF PARTICIPATORY TREE DOMESTICATION OF PRUNUS AFRICANA IN THE WESTERN HIGHLANDS OF CAMEROON?

CHIATOH, Maryben Kuo ; GYAU, Amos ; ASAAH, Ebenezar

PUBLIC MANAGEMENT OF ECOSYSTEM SERVICES ESS FOR PRODUCTIVITY INCREASE IN SMALLHOLDER FARMING THROUGH BIODIVERSITY: ON ESS VALUATION, PES AND GOVERNANCE

NUPPENAU, Ernst-August

ENHANCING LIVESTOCK MARKET ACCESS FOR SUSTAINABLE RANGELAND MANAGEMENT AND IMPROVED LIVELIHOODS IN KENYA

KIHIU, Evelyne Nyathira ; AMUAKWA-MENSAH, Franklin ; MIRZABAEV, Alisher

STRATEGIES OF FARMERS TO RAINFALL VARIATIONS IN THE MUNICIPALITY OF ZÈ IN BENIN

ADJAHOSSOU, Vidédji Naéssé; ADJAHOSSOU, Sêdami Baï; DOVONOU, Flavien Edia; ADJAHOSSOU, Firmin Dossou

FOOD SECURITY AND THE ENVIRONMENT

ADEDUGBE, Adebola Adebiyi

RESTORATION OF DEGRADED PEATLANDS AS A TOOL FOR SUSTAINABLE LAND USE AND CLIMATE CHANGE MITIGATING: THE BEST PRACTICES FROM BELARUS

YATSUKHNO, Valentin ; ZHARKINA, Natalia

TECHNICAL, ENVIRONMENTAL AND ECONOMICAL REVIEW OF ICARDA TARGETED TECHNOLOGY PACKAGES FOR ADOPTION IN THE PRESENT ARABIAN PENINSULA FARMING SYSTEMS: THE CASE OF UAE

NEJATIAN, Arash; BELGACEM, Azaiez Ouled

FIGHT AGAINST DEFORESTATION AND DESERTIFICATION THROUGH THE OCCUPATION OF THE HOLES RELATED TO LOGGING BY THE RESPONSIBLE FOREST AGRO PRACTICE IN THE PEA-187 IN CENTRAL AFRICAN REPUBLIC

POPOCKO, Boniface

SUCCESSFUL AGROFORESTRY SYSTEMS IN THE ARID AND SEMI-ARID REGIONS OF LATIN AMERICA

REDDIAR, Krishnamurthy Laksmi; RAJAGOPAL, Indumathi

MITIGATION AND ADAPTATION POTENTIAL OF AGROFORESTRY BASED CONSERVATION AGRIGULTURE PRACTICES FOR COMBATING DLDD,POVERTY REDUCTION AND SUSTAINABLE LIVELIHOODS:A CASE STUDY FROM NORTHERN PLAINS OF INDIA

SAXENA, Vivek

MEETING THE DEMAND OF LOCAL POPULATIONS THROUGH PURPOSEFUL SUSTAINABLE DRY FOREST MANAGEMENT - UNDERSTANDING GROWTH PATTERNS OF HEAVILY USED TREE SPECIES

PLUGGE, Daniel ; KÜBLER, Daniel ; RATOVONAMANA, Yedidia

BUILDING RESILIENCE OF RURAL POORS IN THE SAHEL: CLIMATE SMART AGRICULTURE TECHNIQUES AND POOR HOUSEHOLD FOOD SECURITY

SUBSOL, Sébastien; BILGO, Ablassé

LIVELIHOODS OF THE RANGELANDS, PARTICIPATORY APPROACHES TO LIVESTOCK PRODUCTION IN THE WESTBANK'S MOST UNPRODUCTIVE AGROECOSYSTEMS

DODGE, Kristofer

IMPROVING THE EFFICIENCY OF NUTRIENT CYCLING IN AGRICULLTURAL-LIVESTOCK PRODUCTION SYSTEMS THROUGH PROPER MANAGEMENT OF NUTRIENTS IN ANIMAL MANURE

GOMEZ-ROSALES, Sergio; ANGELES, Maria de Lourdes

AWARENESS OF CLIMATE CHANGE AS A FACTOR OF ADAPTATION IN THE AGRICULTURAL SECTOR

DONO, GABRIELE ; CORTIGNANI, RAFFAELE ; DORO, LUCA ; PASQUI, MASSIMILIANO ; ROGGERO, PIER PAOLO

RETHINKING FORMAL AGROFORESTRY PRACTICES FOR SAVANNA ECOSYSTEM MANAGEMENT TO REDUCE DESERTIFICATION IN NORTHERN GHANA

KRANJAC-BERISAVLJEVIC, GORDANA

Workshop 2.3: Soil and water issues

CHECK DAMS PROMOTE IRRIGATION, RECHARGE GROUNDWATER, REDUCE POVERTY AND MITIGATE CLIMATE CHANGE IN INDIA'S ECOLOGICALLY-SENSITIVE DRYLANDS

AGORAMOORTHY, GOVINDASAMY

GREEN COVER EFFECTS ON SOIL PROPERTIES AND EROSION SUSCEPTIBILITY AT EROSION CONTROL TERRACES IN TURKEY

SARIYILDIZ, TEMEL

MANAGEMENT OF SCARCE WATER RESOURCES FOR REHABILITATION OF DEGRADED LANDS IN ARID AND SEMI-ARID REGION OF SOUTHERN PAKISTAN

KHAN, SAHIBZADA IRFANULLAH

PERCEPTION AND STRATEGIES TO RECOVER SOIL DEGRADATION IN A TROPICAL DRY FOREST WATERSHED OF MEXICO

COTLER, HELENA

SCIENTIFIC APPROACHES TO THE IRRIGATIONAL SOIL DEGRADATION ASSESSMENT AND WAYS TO PREVENT OR OVERCOME IT FOR SECURING THE SUSTAINABLE DEVELOPMENT OF AGRICULTURE IN UKRAINE

BALIUK, SVIATOSLAV ANTONOVICH; ZAKHAROVA, MARYNA ANATOLIIVNA; DROZD, ELENA MIKOLAIVNA; NOSONENKO, ALEXANDER ANATOLIIVICH; VOROTYNTSEVA, LUDMILA IVANIVNA; AFANASYEV, YURI OLEKSANDROVICH

FOGGARA AND THE OASIS IN ALGERIA IS ONE OF THE TEMPLATES THAT COMBATS AGAINST THE DESERTIFICATION.

ANSARI, TAHA; BENHAMZA, MESSOUAD

RAINWATER HARVESTING TO REVERSE LAND DEGRADATION, TO MITIGATE DROUGHT EFFECTS AND TO INCREASE FOOD PRODUCTION

ANAYA-GARDUÑO, MANUEL ; CHACÓN-RODRÍGUEZ, JHONATAN

EFFECT OF CLAY AMENDMENT ON WATER RETENTION IN SANDY SOIL OF ARID AREAS: SOIL EL FJE MEDENINE IN SOUTHEASTERN TUNISIATHIS WORK DESIGNED TO STUDY THE EFFECT OF CLAY AMENDMENT ON THE WATER RETENTION OF

KARBOUT, NISSAF

USING THE DISTRIBUTED MODEL EROSAR AND REMOTELY SENSED DATA FOR REGIONAL ASSESSMENT OF SOIL WATER EROSION IN SEMI-ARID RANGELANDS

BLANCO, PAULA DANIELA ; DEL VALLE, HECTOR FRANCISCO ; BOUZA, PABLO JOSE ; METTERNICHT, GRACIELA ISABEL ; HARDTKE, LEONARDO

LAND DEGRADATION IN MEXICO: PROPOSALS TO STABLISH THE NATIONAL SOIL COMMISSION

ANAYA-GARDUÑO, MANUEL ; MONCADA-DE LA FUENTE, JESÚS ; ORTIZ-SOLORIO, CARLOS ALBERTO ; GARCIA-SANCHEZ, PROMETEO ; CHACON-RODRIGUEZ, JHONATAN

A STRATEGY FOR FOOD SECURITY AND ECOSYSTEM SERVICES IN WATER-SCARCE AND DEGRADED DRYLANDS: CONNECTING THE WATER AND CARBON CYCLES

PONCE-HERNANDEZ, RAUL; BURKE, SHIVAAN

GULLY EROSION AND REGULATED RIVER IN ALGERIA

ARABI, MOURAD; KEDAID, OUMELKIR; BOUROUGAA, LAKHDAR

WATER EROSION AND SOIL MANAGEMENT PRACTICES IN A MEXICAN ARID SMALL WATERSHED

LOREDO, CATARINA ; LARA, JOSÉ LUIS ; ANGELES, BETSAIDA ; BELTRAN, SERGIO ; TOVALÍN, JORGE ; WOO, JOSÉ LUIS

USE OF WIND ENERGY FOR DRY SEASON IRRIGATION OF VEGETABLES - OPTIONS FOR SUSTAINABLE DEVELOPMENT OF DRIER REGIONS OF GHANA

KRANJAC-BERISAVLJEVIC, GORDANA

Workshop 2.4: Knowledge, knowledge transfer, traditional knowledge

TRADITIONAL KNOWLEDGE IN LAND DEGRADATION MANAGEMENT AND CLIMATE CHANGE ADAPTATION – ANAMBRA STATE, NIGERIA CASE STUDY

CHINWEZE, CHIZOBA

A TREND ANALYSIS OF THE EMERGENCE OF SCIENTIFIC AND KNOWLEDGE-BASED CONCEPTS FOR COMBATING DESERTIFICATION AT GLOBAL LEVEL OVER THE YEARS (1977-2012)

AMIRASLANI, FARSHAD

A PARADIGM OF AGRO-ECOSYSTEMS OF DATE PALM OASES UNDERSTOOD IN THE WIDER CONTEXT OF ECONOMIC AND CULTURAL ECOSYSTEMS THROUGH TRANSFER OF KNOWLEDGE AND TECHNOLOGY IN THE DESERT REGIONS.

PIESIK, SANDRA ; ZAID, ABDELOUAHHAB ; COLEMAN, JIM ; SHEEHAN, PETER ; MANGELSDORF, WOLF ; ALKHOURI, SAHER ; POPO-OLA, SUNDAY

IMPROVED EXTENSION METHOD OF PRACTICAL TECHNIQUE TO COPE WITH DESERTIFICATION IN NIGER, WEST AFRICA

SASAKI, YUKO ; TANAKA, UERU ; IKAZAKI, KENTA ; SHINJO, HITOSHI ; TOBITA, SATOSHI

CAPACITY BUILDING THROUGH AN ON-LINE COLABORATIVE PLATFORM: THE UNIVERSIDAD VIRTUAL DEL AGUA

MARIN, LUIS E ; LEAL, ROSA MARIA ; MIER, TOMAS

BEST PRACTICES ON SUSTAINABLE LAND & ECOSYSTEM MANAGEMENT: LESSONS LEARNT FOR INTEGRATING TRADITIONAL PRACTICES AND SCIENTIFIC RESEARCH FOR OPTIMIZING ADAPTIVE CAPACITY TO COMBAT DLDD

SAXENA, VIVEK ; SUD, RIDHIMA

CONSENSUS BUILDING FOR NEW APPROACHES TO SOIL CONSERVATION IN MEXICO

COTLER, HELENA ; ARELLANO, JOSÉ LUIS ; BAROIS, ISABELLE ; BURGOS, ANA ; CADENA, MARTIN; CAMAS, ROBERTONY ; CRAM, SILKE ; LÓPEZ, JAIME ; LOREDO, CATARINA ; MARTINEZ, MARIO ; MARTINEZ, SERGIO ; ORTEGA, MARIANA ; PINEDA, RAUL

RECENT ADVANCES IN THE DEVELOPMENT AND APPLICATION OF TOOLS TO SHARE AND USE LOCAL AND SCIENTIFIC KNOWLEDGE RELATED TO SUSTAINABLE LAND MANAGEMENT – THE WOCAT NETWORK

LINIGER, HANSPETER; MEKDASCHI STUDER, RIMA; PROVIDOLI, ISABELLE; GURTNER, MATHIAS

APPLICATION OF THE GLOBAL LAND-POTENTIAL KNOWLEDGE SYSTEM (LANDPKS) MOBILE APPS TO LAND DEGRADATION, RESTORATION, AND CLIMATE CHANGE ADAPTATION

HERRICK, JEFFREY E ; ACHEAMPONG, ERNEST ; BEH, ADAM ; BENISTON, JOSH ; KARL, JASON ; KIMITI, DAVID ; NDUNGU, LILLIAN

DEVELOPING AN ADVISORY AND RURAL DEVELOPMENT SERVICE TO SUPPORT DAIRY FAMILY FARMERS, TO COPE WITH THE WORSENING OF THEIR CONDITIONS OF PRODUCTION IN SEMI-ARID AREAS (BRAZIL)

FAGES, MARJOLAINE ; LE GUEN, ROGER ; SILVA DE MELO, AIRON APARECIDO

ACACIA TORTILIS AND REVIVAL OF TRADITIONAL NOMADIC RESOURCE MANAGEMENT UNDER NEW SOCIO-ECONOMIC REALITIES.

KRZYWINSKI, KNUT ; ANDERSEN, GIDSKE LEKNÆS ; HOBBS, JOSEPH ; TALIB, MOHAMED ; SAADALLA, AHMED EBAID MOHAMED ; PIERCE, RICHARD HOLTON

JOURNALMAP: DISCOVERING LOCATION-RELEVANT KNOWLEDGE FROM PUBLISHED STUDIES FOR SUSTAINABLE LAND USE, PREVENTING DEGRADATION, AND RESTORING LANDSCAPES

KARL, JASON W. ; HERRICK, JEFFREY E. ; GILLAN, JEFFREY K.

TRANSFORMING DROUGHT INFORMATION FOR AGRICULTURE PRODUCERS AND FACILITATING DECISION MAKING PROCESS

CAZAC, VALERIU ; DARADUR, MIHAIL

ENCOURAGING THE CAPACITY TO INNOVATE IN ORDER TO MEET THE CHALLENGES OF DRYLAND SYSTEMS

THOMAS, RICHARD JAMES

SCIENTIFIC KNOWLEDGE OF DDLD IN ARGENTINA: TENSIONS BETWEEN THE VISIBLE AND THE EXISTING

TORRES, LAURA; ABRAHAM, ELENA

Workshop 2.5: Desertification, land degradation and restoration

DEVELOPMENT OF BIOENERGY AGROECOSYSTEMS TO REDUCE THE IMPACT OF DESERTIFICATION

TARARIKO, YURI ALEKSANDROVICH; DATSKO, LUDMYLA VALERIEVNA

ADOPTION OF GREEN ECONOMY AS A RIGHT STRATEGY TO ADDRESS DESERTIFICATION: AN AFRICAN PERSPECTIVE

AMBALAM, KANNAN

DÉKPA BOTANICAL RESERVE, AN EXAMPLE OF INNOVATION AGAINST LAND DEGRADATION AND FOR CONSERVATION OF PLANT DIVERSITY ON MINE SITES (CÔTE D'IVOIRE)

VROH, BI TRA AIMÉ; OUATTARA, DJAKALIA; TIEBRE, MARIE-SOLANGE; N'GUESSAN, KOUAKOU EDOUARD

EXPERIENCE OF INTEGRATED DEVELOPMENT OF NIZHNEDNEPROVSK SANDS IN UKRAINE

SHEVCHUK, VICTOR VASILIEVICH

THE EFFECTIVENESS OF METHODS OF LAND REHABILITATION

AHMADOV, HUKMATULLO MAHMUDOVICH

DESERTIFICATION OF ALPINE PASTURES, SOIL AND BIODIVERSITY CONSERVATION IN TAJIK MOUNTAINS

AHMADOV, HUKMATULLO MAHMUDOVICH ; BRECKLE, SIEGMAR-W.

COMBATING LAND DEGRADATION IN PRODUCTION LANDSCAPES FOR ADAPTIVE AND RESILIENT LIVELIHOODS: LEARNING FROM GEF PROJECTS APPLYING INTEGRATED APPROACHES

BAKARR, MOHAMED IMAM; APEL, ULRICH; SINNASSAMY, JEAN-MARC; CHILOMBO, ANDREW

EFFECTS OF GRASSLAND DESERTIFICATION AND DUNE STABILIZATION ON PLANT DIVERSITY IN THE SEMI-ARID REGION OF INNER MONGOLIA, CHINA

LIU, ZHIMIN; QIAN, JIANQIANG; LIU, BO

INNOVATIONS IN USING DOCUMENTED KNOWLEDGE ON SLM BEST PRACTICES FOR VARIOUS STAKEHOLDERS AT DIFFERENT LEVELS

LINIGER, HANSPETER; HARARI, NICOLE

AN ECONOMIC VALUATION OF A LARGE-SCALE RANGELAND RESTORATION PROJECT THROUGH THE HIMA SYSTEM WITHIN THE ZARQA RIVER BASIN IN JORDAN

GUDKA, MASUMI SANDEEP; WESTERBERG, VANJA

DECISION SUPPORT FRAMEWORK FOR MAINSTREAMING AND SCALING-UP SUSTAINABLE LAND MANAGEMENT

LINIGER, HANSPETER ; BUNNING, SALLY ; HARARI, NICOLE ; MEKDASCHI STUDER, RIMA ; NACHTERGAELE, FREDDY

ENVIRONMENTAL CRISIS: LAND DEGRADATION OR SUSTAINABLE DEVELOPMENT? A CASE STUDY IN THE MIXTECA ALTA, OAXACA, MEXICO

OROPEZA-OROZCO, ORALIA; CRAM-HEYDRICH, SILKE; FERNÁNDEZ-LOMELÍN, MARÍA DEL PILAR

REVEGETATION OF ARID REGIONS: THE CASE OF MINING SITES IN ARGENTINA

CONY, MARIANO ANIBAL; PAEZ, JESÚS ANTONIO; FERNANDEZ, MARÍA EMILIA

SAND DUNE STABILIZATION THROUGH PROMOTION OF COTTAGE INDUSTRY BASED ON SACHCHARUM (KANA) SPECIES.

SHAHZAD, TAYYAB

TOWARDS A PROACTIVE SOIL SECURITY: A STRATEGY FOR A SUSTAINABILITY TRANSITION BY COMBATING DESERTIFICATION, LAND DEGRADATION AND DROUGHT FOR POVERTY REDUCTION AND SUSTAINABLE DEVELOPMENT

BRAUCH, GUENTER ; OSWALD, URSULA

WINDBREAK EFFECTS IN REGION OF MANGA (SOUTHEASTERN OF NIGER) ON ECOLOGICAL RESTORATION

TIDJANI, ADAMOU DIDIER ; AMBOUTA, KARIMOU ; ABDOURAHAMANE TOURÉ, AMADOU ; CHARLES, BIELDERS ; JEAN LOUIS, RAJOT

YOUTH EMPOWERMENT TO COMBAT DESERTIFICATION IN BRAZIL: CASE STUDY OF THE NGO "ENGAJAMUNDO".

ARAÚJO, BEATRIZ AZEVÊDO ; ARAUJO, FERNANDA CASTELO BRANCO

3. MONITORING AND ASSESSMENT

Workshop 3.1: Indicators

FUNCTIONAL DIVERSITY AS A POTENTIAL UNIVERSAL INDICATOR OF ECOSYSTEM TRANSITIONS BETWEEN SUB-HUMID AND SEMI-ARID

BRANQUINHO, CRISTINA ; NUNES, ALICE ; MATOS, PAULA ; PINHO, PEDRO

FOREST CARBON IN DRYLAND. AN EXPERIENCE IN SANTIAGO DEL ESTERO ARGENTINA

PEREZ PARDO, OCTAVIO

INDICATORS FOR ASSESSING THE IMPACT OF SLM PROJECTS AND PROJECTS TO COMBAT LAND DEGRADATION AND DESERTIFICATION

AMSALLEM, ISABELLE ; BIED-CHARRETON, MARC

BUILDING INDICATORS TO MEASURE VULNERABILITY FACING DESERTIFICATION: AGUA PRIETA, SONNORA, MEXICO, CASE OF STUDY

BERNAL, SANDRA MARIA

IDENTIFYING COMMON INDICATORS ON AGRO-ECOSYSTEM RESILIENCE ACROSS THE RIO CONVENTIONS

COWIE, ANNETTE ; O'CONNELL, DEBORAH ; GRIGG, NICKY ; ABEL, NICK ; WALKER, BRIAN

LANDSCAPE CHANGE ANALYSIS, A TOOL FOR THE IDENTIFICATION OF LAND DEGRADATION MITIGATION PRIORITY AREAS IN MADAGASCAR

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List of side-events

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Title	Hosting organization
Making a network of networks work to achieve land degradation neutrality: improving UNCCD stakeholders' use of scientific knowledge	*DesertNet International (DNI)*
Linking science and economics: maximizing technological uptake for widespread impact on land degradation	*Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)*
Combating land degradation in production landscapes for adaptive and resilient livelihoods: learning from GEF projects applying integrated approaches	*Global Environment Facility (GEF)*
The importance of quantitative soil erosion data: how isotopic techniques can provide evidence for combating desertification and climate change?	*International Atomic Energy Agency (IAEA)*
How to encourage innovative capacities to achieve land degradation neutrality?	*International Center for Agricultural Research in the Dry Areas (ICARDA)*
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Knowledge management for sustainable use of resources of natural landscapes promoting an application model of synergy between the Rio Conventions	*Ministry of Environment, Brazil*
Programa Prosperar – Formulation of a land conservation programme, based on the Brazilian base-zero concept, aimed at recovering the organic structure, bioactivity and the productivity of degraded soils in the Caatinga biome in the state of Pernambuco, Brazil	*Ministry of Environment, Brazil*

Title	Hosting organization
COP12 in Turkey and Turkish experiences on combating desertification	*Ministry of Forestry and Water Affairs, Turkey*
Circum-Saharan vision for the fight against degradation and for land restoration	*Sahara & Sahel Observatory (OSS)*
Environmental monitoring and land degradation diagnostic tools in the circum-Sahara region	*Sahara & Sahel Observatory (OSS)*
The use of satellite data to measure and monitor land degradation over time at multiple scales	*Scientific and Technical Advisory Panel of the Global Environment Facility (GEF/STAP)*
The quest for resilience indicators – A resilience assessment framework	*Scientific and Technical Advisory Panel of the Global Environment Facility (GEF/STAP)*
Global Land Outlook	*United Nations Convention to Combat Desertification (UNCCD)*
Achieving Land Degradation Neutrality, how do we do it?	*United Nations Convention to Combat Desertification (UNCCD)*
Knowledge and knowledge transfer: The UNCCD Scientific Knowledge Brokering Portal (SKBP)	*United Nations Convention to Combat Desertification (UNCCD)*
Civil society and technology: research and uses	*UNCCD CSO Panel*
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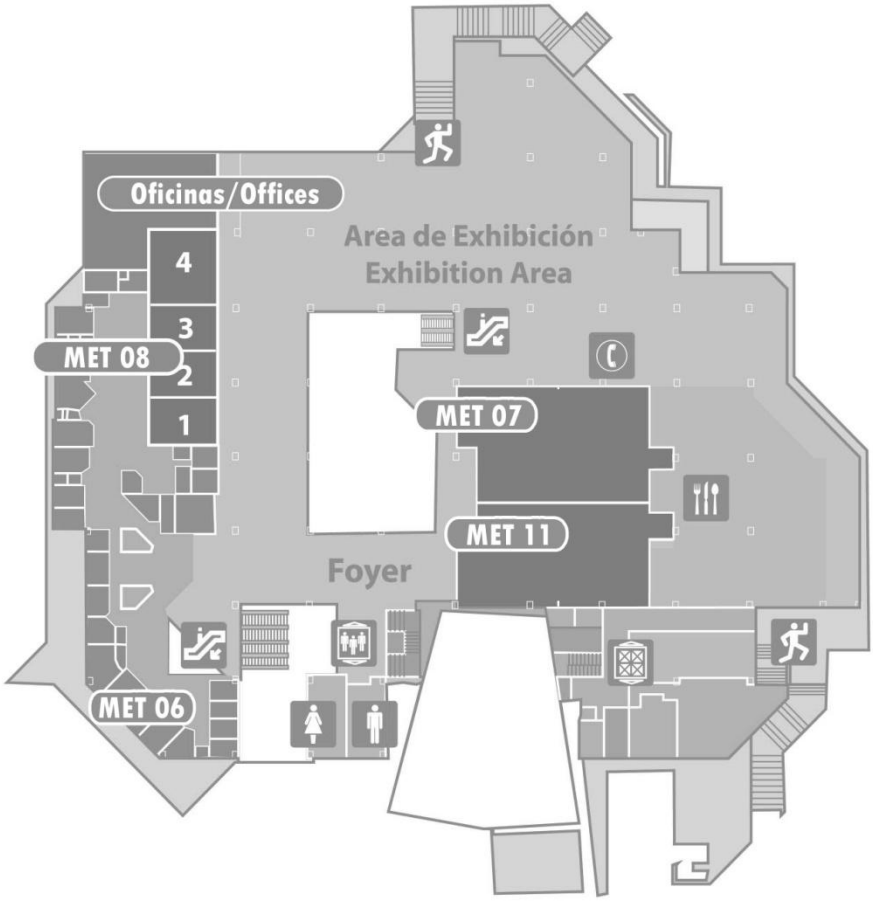
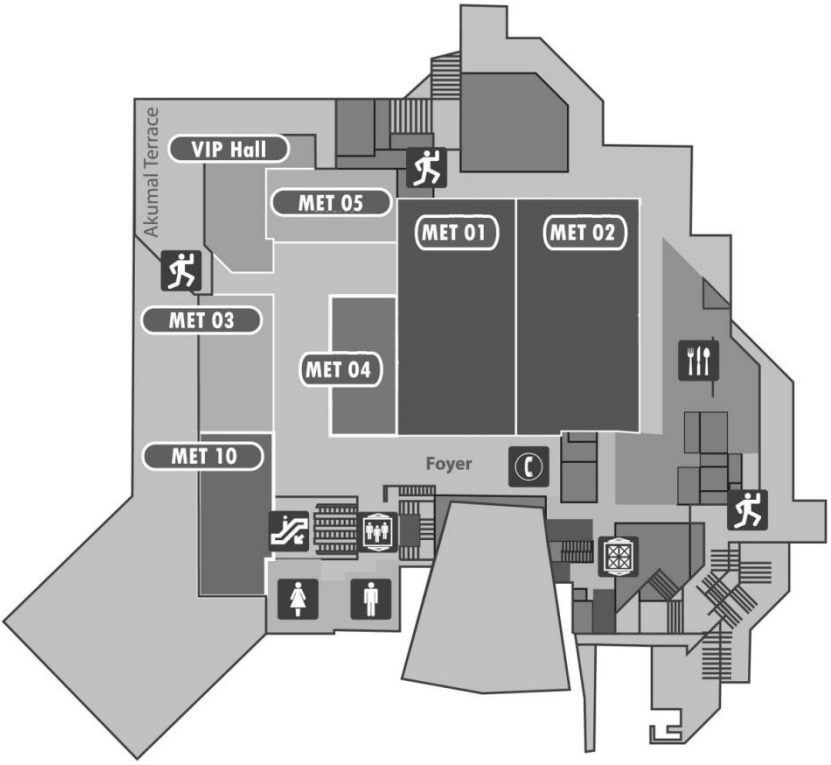
Venue Maps


Planta baja — Ground Level
Area de Exhibición
Exhibition Area
MET 09
Main Access

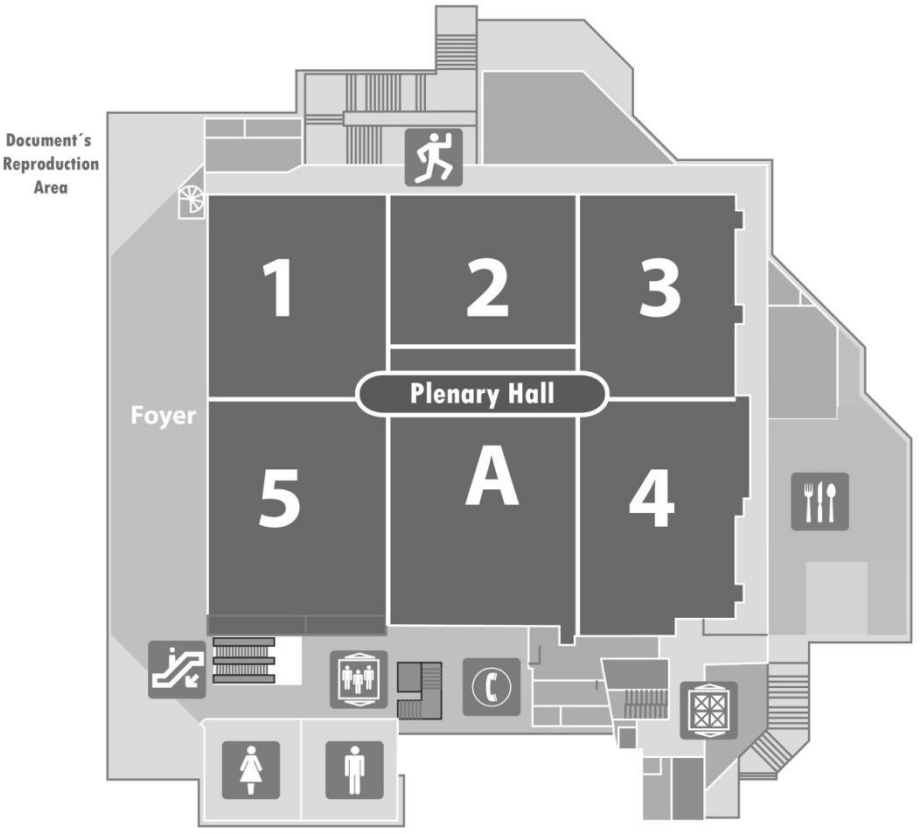
Primer piso — First level



Segundo piso — Second level



Tercer piso — Third level



Conference organizers

The 3rd UNCCD Scientific Conference is held from 9 to 12 March 2015 in Cancún, Mexico, during the 4th special session of the Committee on Science and Technology (CST S-4) of the United Nations Convention to Combat Desertification (UNCCD).

It has been organized, jointly with the UNCCD Secretariat and the CST Bureau, by five scientific organizations which joined their forces under the "*Scientific and Traditional Knowledge for Sustainable Development*" (STK4SD) consortium. A Steering Committee, comprising representatives of the UNCCD Secretariat, the CST Bureau, the STK4SD consortium and the host country, has been in charge of following-up the conference preparation.

An international Scientific Advisory Committee (SAC) was set up to provide guidance on the scientific content of the conference. This committee was responsible for the selection of contributions submitted to the conference, with the support of a wider abstracts' review board. The SAC also commissioned an 'impulse report' to stimulate discussion and debate during the conference, which is published as a separate document.

The conference has been organized thanks to the generous offer of the Government of Mexico to host the CST-S4 and its 3rd Scientific Conference. In addition to the generous contribution by the Government of Mexico, voluntary contributions were provided by the governments of China, Finland, France, Germany, Latvia, the Republic of Korea and Switzerland for the activities leading up to the organization of the 3rd UNCCD Scientific Conference.

The UNCCD

Together with the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity, the United Nations Convention to Combat Desertification (UNCCD) (http://www.unccd.int/) is one of the three conventions set up after the 1992 Rio Earth Summit. The UNCCD is the sole legally binding international agreement linking environment and development issues to the land agenda. The UNCCD has a subsidiary body, the Committee on Science and Technology (CST), to provide it with information and advice on scientific and technological matters. Since 2009, special sessions of the CST have been organized in a scientific conference-style format, with the objective to strengthen the scientific basis underpinning the Convention. Two previous such scientific conferences have been organized, in 2009 in Buenos Aires on "*Bio-physical and socio-economic monitoring and assessment of desertification and land degradation to support decision making in land and water management*" and in 2013 in Bonn on "*Economic assessment of desertification, sustainable land management and resilience of arid, semi-arid and dry sub-humid areas*".

The "Scientific and Traditional Knowledge for Sustainable Development" (STK4SD) Consortium

Following a call for proposal, the STK4SD Consortium was appointed by the CST Bureau to organize the 3rd UNCCD Scientific Conference. It is composed of five major organizations, bringing together a high level of scientific expertise and practical skills in the organization of international conferences with a long established commitment to the operations of the UNCCD. Its members are actively involved in all the regions concerned by the UNCCD, with the ability to mobilize resources, organizations and stakeholders at all levels:

- **Agropolis International** (http://www.agropolis.org/) is an association based in Montpellier supported by central and local government. Its members include nearly 30 research centers and higher education establishments in the Languedoc-Roussillon region, with 2,300 scientists, working in the fields of agriculture, food, biodiversity and the environment, much of their work focusing on the Mediterranean and tropical regions. As the leader of the consortium, Agropolis International benefits from the collective expertise of the **French Scientific Committee on Desertification (CSFD)** (http://www.csf-desertification.eu/) and hosts the Committee on its premises. CSFD includes 20 members from French universities and scientific institutions appointed by the Ministry for Higher Education and Research, and chosen to represent a wide range of expertise on desertification.
- **DesertNet International** (http://www.csf-desertification.eu/) is an international scientific network for research into desertification that brings together more than 300 experts from 50 countries and provides a platform for international science policy discussion.
- The **CGIAR Consortium** (http://www.cgiar.org/) is a global research partnership for a food secure future. The CGIAR aims to reduce rural poverty, improve food security, human health and nutrition and encourage more sustainable management of natural resources. The research is carried out by the 15 centers that are members of the CGIAR Consortium, including ICARDA and ICRISAT, and which work closely together with hundreds of partner organizations.
- The **Sahara and Sahel Observatory (OSS)** (http://www.oss-online.org/en) is an intergovernmental African organization based in Tunisia, focusing on concerted, sustainable management of natural resources in arid, semi-arid and dry sub-humid areas in Sahel/Sub-Saharan Africa. The OSS members include 22 African countries, 5 non-African countries and 10 international, sub-regional and non-government organizations.
- The **Argentine Dryland Research Institute (IADIZA)** (http://wiki.mendoza-conicet.gob.ar/iadiza) is an institute of the Argentine National Scientific and Technical Research Council (CONICET), whose aim is to improve understanding of the structure and functioning of arid zones and the transfer of technology and know-how through education/training and capacity-building.

The host country

The Government of the United Mexican States is pleased to welcome in the city of Cancun, Quintana Roo, the participants of the 4th Special Session of the Committee on Science and Technology and the 3rd Scientific Conference of the United Nations Convention to Combat Desertification (UNCCD).

Information about Mexico

- *Official name:* United Mexican States.
- *Capital:* Mexico Federal District
- *Official language:* Spanish.
- *Area:* 1,964,375 km², thirteenth largest country in the world.
- *Population:* 118.4 million people, eleventh most populated country in the world.
- *Economy:* Eleventh global economy, for GDP volume (IMF, 2014). Recently, Mexico has implemented structural reforms, among which the most important are energy, telecommunications, fiscal, financial and labor.
- *Biodiversity:* Mexico is the fourth of 17 mega-diverse countries which, together, host almost 70% of the known species on Earth.

  12% of the country area has a designation of protected area.

  In 2016, Mexico will host the 13th Conference of the Parties (COP 13) to the Convention on Biological Diversity (CBD).
- *Forest resources:* Mexico has a forest area of 138 million hectares, equivalent to 70% of the country, from which 64.8 million hectares have forest vegetation.

  Temperate forests, rainforests, mangroves and arid and semi-arid land are among the main vegetation areas in the country.
- *UNCCD Category:* Country Affected Party, and member of the Organization for Economic Cooperation and Development.

Cancun information

- *Location:* municipality of Benito Juarez in the state of Quintana Roo, in southeastern Mexico, at 1,700 km from Mexico City.
- *Population:* 676,000 inhabitants.
- *Economy:* touristic activities, Cancun is the main tourist center in the country.
- *Culture:* Important area of the Mayan culture. Nearby archaeological sites are Tulum, Chichen Itza and Uxmal.

Mexico's commitment to the Convention process

Mexico was the first country to comply on the preparation of the UNCCD Action Plan to Combat Desertification in 1994 and the first to ratify the UNCCD in 1995.

The country has a National Strategy for Sustainable Land Management and a National Action Program Against Desertification.

In 2013, the study for the determination of the National Baseline of Land Degradation and Desertification estimated that 116 million hectares are affected. 63 million people live in this area, therefore the importance of strengthening and integrating actions for the reduction of natural resources degradation.

Mexico has developed a multi-sectorial institutional strategy for the prevention and control of desertification, 38 federal programs are articulated directly and indirectly for this objective.

On the operational side, the most outstanding programs that have been implemented are: reforestation, soil conservation, monitoring of drought, modernization of crop irrigation and development of waterworks for rainwater harvesting. There are also important social programs such as the National Crusade Against Hunger, which coordinates with the efforts of restoration and prevention of degradation.

Organizing Mexican institutions

The **Ministry of Environment and Natural Resources (SEMARNAT)** is the federal agency in Mexico responsible of promoting the protection, restoration and conservation of ecosystems, natural resources and environmental goods and services in order to facilitate their sustainable use and development.

> *Ministrer:* Mr. Juan José Guerra Abud. He also chairs the National System to Combat Desertification and Degradation of Natural Resources (SINADES).

The National Forestry Commission (CONAFOR) is a federal institution sectoral to SEMARNAT, its objective is to develop, encourage and promote productivity, conservation and restoration in forest related activities and to participate in the formulation and implementation of plans, programs and policy for sustainable forest development.

> *Director General:* Mr. Jorge Rescala Perez. He is also the Technical National Focal Point to the UNCCD.

Participants to the Steering Committee

UNCCD Secretariat

STK4SD Consortium

Bernard HUBERT, Chair, President of Agropolis International, Montpellier, France

Richard ESCADAFAL, Vice-Chair, President of the Comité scientifique français de la désertification (CSFD), Montpellier, France

Mélanie BROIN, Scientific Officer, Agropolis International, Montpellier, France

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Former CST Bureau

Antonio ROCHA MAGALHÃES, Brazil

Jean NDEMBO LONGO, Democratic Republic of Congo

Stefan SOMMER, Western Europe and other Groups

Amjad Tahir VIRK, Pakistan

Yuriy KOLMAZ, Ukraine

Host Country

Miguel Angel ABAID-SANABRIA, National Forestry Commission – CONAFOR, Mexico City, Mexico

Members of the Scientific Advisory Committee (SAC)

The SAC comprises 12 experts, two from each of the five United Nations regions: Africa (AF), Asia (AS), Central and Eastern Europe (CEE), Latin America and the Caribbean (LAC), Western Europe and Other Groups (WEOG), plus two global experts (GE):

Mariam AKHTAR-SCHUSTER, Senior Scientific Advisor at the Project Management Agency PT-DLR, Berlin, Germany and coordinator of the advisory board of DesertNet International (GE)

Miriam DIAZ, Emeritus Professor at the Center for Ecology and Arid Lands, National Experimental University Francisco de Miranda, Coro, Venezuela (LAC)

Cristobal Felix DIAZ MOREJON, Environmental Specialist at the Environmental Directorate of the Ministry of Science, Technology and the Environment, Havana, Cuba (LAC)

Patrice DJAMEN NANA, Sub-regional Coordinator for West and Central Africa at Africa Conservation Tillage Network, Ouagadougou, Burkina Faso (AF)

Gordana GRUJIC, Environmental Specialist at Oasis association, Belgrade, Serbia (CEE)

Sahibzada Irfanullah KHAN, Provincial Project Coordinator for the Sustainable Land Management Program (SLMP), Planning & Development Department, Civil Secretariat in Peshawar, Peshawar, Pakistan (AS)

Ashot KHOETSYAN, Professor at the Department of physical geography and hydrometeorology of the Yerevan State University and the Armenian State Pedagogical University, Yerevan, Armenia (CEE)

Pietro LAUREANO, President of the International Traditional Knowledge Institute, Roma, and Director of Ipogea (Traditional Knowledge Research Centre), Florence, Italy (WEOG)

William Albert PAYNE, Dean and Professor at the College of Agriculture, Biotechnology, and Natural Resources and Director of the Nevada Agricultural Experiment Station at the University of Nevada, Reno, USA (GE), Chair of the SAC

Melanie REQUIER-DESJARDINS, Scientific Administrator at the International Center for Advanced Mediterranean Agronomic Studies – Agronomic Mediterranean institute of Montpellier (CIHEAM – IAMM), Montpellier, France (WEOG), Vice-chair of the SAC

Graham Paul VON MALTITZ, Senior Researcher at the Council for Scientific and Industrial Research, Pretoria, South Africa (AF)

Tao WANG, Director of the Key Laboratory of Desert and Desertification and Research Professor at the Cold and Arid Regions Environmental & Engineering Research Institute, Chinese Academy of Sciences, Beijing, China (AS)

ABOUT THE CONFERENCE

http://3sc.unccd.int

The 3rd UNCCD international scientific conference on "Combating desertification/land degradation and drought for poverty reduction and sustainable development: the contribution of science, technology, traditional knowledge and practices" is held from 9 to 12 March 2015 in Cancún (Mexico), during the 4th special session of the Committee on Science and Technology (CST S-4) of the United Nations Convention to Combat Desertification (UNCCD).

The conference aims to attract the widest possible range of scientific, local and traditional knowledge that can be harnessed to achieve poverty reduction and sustainable development in areas susceptible to desertification, land degradation and drought.

One of the major challenges facing delegates to the conference is the development of new scientific insights and recommendations to policy makers with regards to the assessment of vulnerability of socio-ecosystems to climate change and current and future capacities to adapt.

The conference addresses three major challenges:

- **Diagnosis of constraints:** How to best characterize and understand the vulnerability and adaptive capacities of ecosystems (in particular agro-ecosystems) and populations in affected regions, including regions newly susceptible to the consequences of climate change?
- **Responses:** How to build efficiently on available knowledge, success stories and lessons learnt to promote implementation of better adapted, knowledge-based practices and technologies?
- **Monitoring and assessment:** What are the new monitoring and assessment methods available to evaluate the effectiveness of these practices and technologies that provide improved insights on whether or how their implementation should be scaled up?

The conference is expected to contribute to the combat against desertification and land degradation and to addressing the impact of drought, through delivering the following outcomes:

- Better anticipation and prevention of the impact of climate change on land degradation and desertification through capacity building;
- Identification and promotion of sustainable and adaptive methods of using ecosystems to reduce poverty and environmental degradation while achieving sustainable development;
- Identification of pathways towards land-degradation neutrality: by way of reducing degradation processes and scaling up restoration activities, the objective is to maintain and improve the quantity and quality of productive land.