



The 5th International Conference | November 2014

## **Monday Program**

### **Opening Plenary, Monday, Nov. 17, 09:00-10:30** *Healthy Lands – Healthy People*

#### **Evans Auditorium**

**09:00-09:30** Greetings

Moderator— Prof. Alon Tal, conference organizing committee, Ben-Gurion University of the Negev (in the absence of Prof. Isaac Meir, conference chair)

- Prof. Rivka Carmi, President, Ben-Gurion University of the Negev
- Mr. Francesco Maria Talò, Italian Ambassador in Israel
- Mr. Sergio A. Zelaya, Special adviser to the Secretariat of the United Nations Convention to Combat Desertification (UNCCD)

**09:30-10:10** Keynote Address: Prof. Colin MacDougall, Flinders University, Australia  
*"Healthy Lands- Healthy People"*

**10:10-10:20** Conference overview: Prof. Alon Tal, Conference Organizing Committee

### **Parallel Sessions 1 (PS1), Monday, Nov. 17, 11:00-12:30**

#### **Afforestation in Drylands**

**Chairs: Dr. David Brand, KKL-JNF, Israel; Mr. Itzhak Moshe, KKL-JNF, Israel**

**Monday, Nov. 17**

**11:00-12:30 (PS1)**

**Evans Auditorium**

Dr. Rakefet David-Schwartz, ARO, Volcani Center, Israel, *"Relationships between Hydraulic Parameters, Anatomical Traits and Drought Resistance in Pinus halepensis (Aleppo pine) Ecotypes."*

Mrs. Susan Braatz, Senior Forestry Officer, FAO Forestry Department, USA, *"FAO Forestry Case Studies and Restoration Guidelines in Support to Combating Desertification in Drylands."*

Mr. Patrick Kariuki, Kenya Forestry Service, Kenya, *"Kenya's Efforts in Afforestation and Combating Desertification of the Drylands."*



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Dr. Orna Reisman-Berman, Ben-Gurion University, Israel, “*Selection of Pistacia Atlantica Genotypes and Populations for Successful Dryland Afforestation.*”

### **AgroEcology**

**Chair: Dr. Eli Zaady, The Agricultural Research Organization, Israel**

**Monday, Nov. 17**

**11:00-12:30 (PS1)**

**Bio 32**

Dr. Gillian Maggs-Kölling, Gobabeg Research and Training Centre, Namibia, “*Sustainable Farming by Indigenous People in the Namib Desert.*”

Dr. Liora Shaltiel Harpaz, Tel-Hai Academic College, Israel, “*Development of IPM Tools to Control Tuta Absoluta in Open Field Tomato Crops in Israel.*”

Dr. Yoav Motro, Plant Protection and Inspection Services, Ministry of Agriculture and Rural Development, Israel, “*Economic Evaluation of Biological Rodent Control Using Barn Owls Tyto Alba in Alfalfa.*”

### **Cook Workshop Sessions**

**Chair: Prof. Guedi Capeluto, Technion, Israel**

**Monday, Nov. 17**

**11:00-12:30 (PS1)**

**Classroom 1**

Dr. Eran Kaftan, Ben-Gurion University of the Negev, Israel, “*Recommendation for Daylighting in Sunny Regions.*”

Prof. Agis Papadopoulos, Aristotle University Thessaloniki, Greece, “*Implementing Energy Efficiency Measures for Buildings in Extreme Climatic Conditions.*”

Profs. Maria and Walter von Roth, UANL, Mexico, “*Green House Construction.*”

### **Environmental Education**

**Session 1: Desert as Home - Place Identity and Community in Deserts**

**Chair: Dr. Orit Ben Zvi Assaraf, Department of Science and Technology Education, Ben-Gurion University of the Negev, Israel**

**Monday, Nov. 17**

**11:00-12:30 (PS1)**

**Classroom 2**

Dr. Noa Avrieli-Avni, Dead Sea and Arava Science Center, Israel, “*Construction of New Sense of Place in an Unrecognized Bedouin Village.*”



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Ms. Wisam Sedawi, Ben-Gurion University of the Negev, Israel, *“Hebron Stream as a Place Identity Component for Primary School Students Living Nearby Bedouin Communities.”*

Dr. Arnon Ben-Israel, Ben-Gurion University of the Negev, Israel, *“‘This Road is in My Space-Map’ - Highway 31 as a Place in the Israeli Negev.”*

Mr. Lior Solomovich, Ben-Gurion University of the Negev, Israel, *“Collaboration of Multicultural Knowledge Through Communication Technology: Understanding the Social-Ecological Coupled Systems of the Desert.”*

### **Public Health**

#### **Session 1: Climate Change and Health**

**Conveners: Dr. Maya Negev, Haifa University, Israel; Prof. Nadav Davidovich, Ben-Gurion University, Israel**

**Monday, Nov. 17**

**11:00-12:30 (PS1)**

**Water Institute**

Prof. Colin MacDougall, Flinders University, Australia, *“Perspectives on Climate Change from Ecological Public Health.”*

Dr. Shlomit Paz, Haifa University, Israel, *“Climate Change Impacts on West Nile Virus.”*

Dr. Michael Gdalevich, South Health District, Ministry of Health, and Faculty of Health Sciences, Ben-Gurion University, Israel, *“Climate Change and Health - an Israeli Perspective.”*

### **Remote Sensing**

**Session 1; Convener: Prof. Arnon Karnieli, Ben-Gurion University, Israel**

**Monday, Nov. 17**

**11:00-12:30 (PS1)**

**Old Administration**

Dr. Garick Gutman, NASA, USA, *“The NASA Land-Cover and Land-Use Change Program: Focus on Drylands.”*

Mr. Jisung Chang, Technion, Israel and Korea, *“Modeling Shrublands Biomass Using Radar Polarization Parameters.”*

Dr. Jintaridth Bunjirtluk, Department of Land Development, Thailand, *“Using Visible Spectroscopic Based Analytical Methods for Assessing Labile Carbon on Agricultural Areas.”*

Dr. Hannelore Kusserow, Free University, Germany, *“Re-greening of the Sahel - A Myth? Case studies from Mali, Niger and Darfur/Sudan.”*

Prof. Lev Spivak, International University of Nature, Society, and Man, Russia, *“Some Results of Space Monitoring of Droughts in Kazakhstan.”*

## Mini field trips, Monday, Nov. 17, 12:45-14:45

Bus tours and outdoor lunch (pre-registration required)

- ✓ Tour I: Ben-Gurion's desert home: visit to Israel's first Prime Minister's kibbutz home
- ✓ Tour II: Rock art in the desert
- ✓ Tour III: Avdat ancient agriculture (Mashav Courses: Spanish, Russian, English)
- ✓ Tour IV: Bedouin culture and traditions
- ✓ Tour V: Wadi Karkash (hiking shoes needed)

## Parallel Sessions 2 (PS2), Monday, Nov. 17, 15:00-17:00

### AgroEcology

#### Session 2

**Chair: Dr. Anat Levengart, The Agricultural Extension Service of Israel, Israel**

**Monday, Nov. 17**

**15:00-17:00 (PS2)**

**Bio 32**

Prof. Simeon Materechera, North West University, South Africa, "*Land Use and Management Practices Used By Smallholder Agricultural Farmers in Semi-Arid Areas of the North-West Province in South Africa: A Review.*"

Mr. Rami Zaidenberg, The Soil Conservation and Drainage Department, Ministry of Agriculture and Rural Development, Israel, "*Mismanagement of Agricultural Soil as a Cause for Desertification.*"

Dr. Utlwang Batlang, Botswana College of Agriculture, "*Comparative Analysis of the Environment and Productivity of Cowpea in two Contrasting Agro-Ecological Zones: The Kalahari Desert and the Eastern Hard Veld Of Botswana.*"

### Drip Irrigation

#### Session 1: Facing Global Challenges with Drip Irrigation

**Chair: Dr. Alon Ben-Gal, The Agricultural Research Organization, Israel**

**Monday, Nov. 17**

**15:00-17:00 (PS2)**

**Evens**



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Prof. Ram Fishman, George Washington University, USA, “*Why Are Farmers Adopting Drip Irrigation (Or Not) in India? Lessons from a Study Of 450,000 Drip Purchasers in Gujarat.*”

Dr. Rohitashw Kumar, SKUAST-Kashmir, India, “*Augmentation and Enhance Water Use Efficiency Through Farm Pond and Micro Irrigation Rainfed Area of Kashmir Valley.*”

Dr. Adam Abramson, UC San Diego, USA, “*Drip Irrigation to Save Water or Economize Labor? A Choice Experiment in Remote Zambia.*”

Ms. Tammy Erann-Soussan, Mashav, Israel, “*Technological- Innovation for Poverty Alleviation (TIPA).*”

Discussion

### **Environmental Education**

#### **Session 2: The Role of EE in Facing the Challenges of Desertification**

**Chair: Dr. Noa Avriel-Avni, Dead Sea and Arava Science Center, Israel**

**Monday, Nov. 17**

**15:00-17:00 (PS2)**

**Classroom 2**

Prof. Annette Gough, RMIT University, Australia, “*(De)centering the Margins: The Role Of Environmental Education in Facing the Challenges of Desertification.*”

Ms. Nirit Lavie Alon, Technion, Israel, “*Inquiry in Science or Scientific Inquiry: What official Documents Say and What Teachers Believe?*”

Prof. Tali Tal, Technion, Israel, “*Learning about the desert or about the coast line: A dichotomy or a continuum?*”

### **Math Sessions: Ecohydrology of Dryland Landscapes; Mathematical Aspects of Desertification and Restoration; Dryland Landscapes as Pattern Forming Systems: Modeling and Analysis**

#### **Session 1: Ecohydrology of Dryland Landscapes**

**Conveners: Dr. Golan Bel, Ben-Gurion University, Israel; Prof. Ehud Meron, Ben-Gurion University, Israel**

**Monday, Nov. 17**

**15:00-17:00 (PS2)**

**Bio 136**

Dr. Tal Svorai, Ben-Gurion University, Israel, “*Relationships Between Primary Productivity and Rainfall in a Semiarid Ecosystem.*”

Prof. Jost von Hardenberg, Institute of Atmospheric Sciences and Climate – CNR Turin, Italy, “*Climate Changes in Precipitation Variability and Dryland Vegetation.*”



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Dr. Shmuel Assouline, Volcani Center, Israel, *“Rainfall-Infiltration-Runoff Relationships in a Semi-Arid Hillslope and their Interactions with Vegetation Cover.”*

Prof. Ulrike Feudel, University of Oldenburg, Germany, *“Competition of Species Using a Synthesizing Unit Approach.”*

### **On-site Waste Collection**

**Convener: Prof. Amit Gross, Ben-Gurion University, Israel**

**Monday, Nov. 17**

**15:00-17:00 (PS2)**

**Classroom 1**

Prof. David Waite, The University of New South Wales, Australia, *“Solar Driven Removal of Contaminants from Brackish Waters Using Capacitive Deionisation Technologies.”*

Prof. Eran Friedler, Technion, Israel, *“Greywater Resuse: Challenges and Opportunities.”*

Ms. Maya Benami, Ben-Gurion University, Israel, *“Assessment of Pathogenic Bacteria in Greywater Systems and Irrigated Soils.”*

Ms. Allison Busgang, Ben-Gurion University, Israel, *“Quantitative Assessment of Microbial Risks Associated with Greywater.”*

Mr. Mario Schmack, Murdoch University, Australia, *“The condensing Greenhouse - A Holistic Sustainable Approach to Small-Scale Water Desalination in Remote Regions - Using Solar, Wind and Wave Energy.”*

Mr. Dimitris Xevgenos and Prof. Maria Loizidou, National Technical University of Athens, Greece, *“Securing Water Supply in Israel: An Eco-Innovative Water Treatment Solution Applied to the Desalination Brine Effluent.”*

### **Public Health**

#### **Session 2: Infectious Diseases and Sexual Health in Arid Zones**

**Conveners: Dr. Maya Negev, Haifa University, Israel; Prof. Nadav Davidovich, Ben-Gurion University, Israel**

**Monday, Nov. 17**

**15:00-17:00 (PS2)**

**Water Institute**

Ms. Ikram Salah, Ben-Gurion University, Israel, *“Infectious Disease Ecology and Epidemiology: Case study: the Eco-epidemiology of Cutaneous Leishmaniasis caused by Leishmania tropica in Bethlehem.”*

Prof. Nadav Davidovitch, Ben-Gurion University, Israel, *“Brucellosis in the Negev: Epidemiological, Social and Economic Perspectives.”*

Ms. Yael Goor, Ministry of Health, Tel Aviv Health District, Israel, *“Levinsky Clinic for Detecting Sexually Transmitted Diseases and HIV: Access to Health and Social Services for People with No Legal Status or Asylum.”*





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Dr. Zohar Mor, Ministry of Health, Israel, *“Tuberculosis Screening and Disease Among Migrants from the Horn of Africa Arriving in Israel.”*

Ms. Tsega Gebreyesus, School of Public Health, Johns Hopkins University, USA *“The Factors Influencing the Sexual and Reproductive Health of Eritrean Asylum-Seeking Women While En-Route to and in Israel”*

### **Remote Sensing**

#### **Session 2**

**Convener: Prof. Arnon Karnieli, Ben-Gurion University, Israel**

**Monday, Nov. 17**

**15:00-17:00 (PS2)**

**Old Administration**

Dr. Andrew French, USDA/ARS, USA, *“Remote Sensing of Evapotranspiration over Irrigated Farms in Central Arizona, USA.”*

Mrs. Anna Zanchetta, Università di Bologna, Italy, *“Change Detection in Drylands: Validity of the Tasselled Cap Transform.”*

Dr. Uri Gilad, Australia, *“Environmental Monitoring of Queensland’s Coal Seam Gas Infrastructure by Remote Sensing Methods.”*

Ms. Tarin Paz-Kagan, Ben-Gurion University, Israel, *“Structural Changes of Desertified and Managed Shrubland Landscapes in Response to Drought: Spectral, Spatial and Temporal Analyses”*

Mr. Giorgi Kohzoridaze, Ben-Gurion University, Israel, *“Present, Past and Future of Global Distribution of Pistacia Species in Relationship to Climate Change - Remote Sensing and GIS Analyses.”*

Mr. Assaf Chen, Ben-Gurion University, Israel, *“Evaluating and Predicting Water Consumption by Irrigated Agriculture in the Semi-Arid Regions of the North-Western Negev, Israel”*

### **Parallel Sessions 3 (PS3), Monday, Nov.17, 17:30-18:45**

#### **Carbon Footprint**

**Conveners: Prof. Goen Ho, Murdoch University, Australia; Prof. Amit Gross, Ben-Gurion University, Israel**

**Monday, Nov. 17**

**17:30-18:45 (PS3)**

**Classroom 1**

Mr. David Goodfield, Murdoch University, Australia, *“Buildings and Carbon Emissions: Sources and Sustainable Solutions for Reduction.”*



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Prof. Goen Ho, Murdoch University, Australia, *“Remote Indigenous Community Water Management and Related Carbon Impacts.”*

Dr. Stefan Leu, Ben-Gurion University, Israel, *“Rapid Mitigation of Global Warming by Dryland Rehabilitation: A Win-Win Development Strategy for Marginal Dryland Areas.”*

Ms. Revital Riklin, Ben-Gurion University, Israel, *“Integrating Anaerobic Manure Digestion with Algal Cultivation for Decentralized Near-Zero Discharge Waste Management.”*

Dr. Roy Posmanik, Ben-Gurion University, Israel, *“Onsite Carbon and Nutrients Recovery from Dairy Manure Waste in a Rural Desert Farm by Hybrid Hydrothermal Carbonization and Gas Biofiltration.”*

### **Climate Change**

**Chair: Yeshayahu Bar-Or, EnvConsult, Israel**

**Monday, Nov. 17**

**17:30-18:45 (PS3)**

**Bio 32**

Dr. Hanan Ginat, Dead Sea and Arava Science Center, Israel, *“Fluctuation in Precipitation Levels and out of Ordinary Rain Events in the Southern Arava Valley 1949-2014.”*

Prof. Sharon Megdal, University of Arizona, USA, *“Connecting Climate Change and Surface Water Flows to Aquifer Recharge and Groundwater Management.”*

Dr. V. Vijay Kumar, Gujarat Institute of Desert Ecology, *“Climate Change and its Uncertainty in Drylands of Kachchh, Gujarat, India.”*

Dr. Martin Baumgart, AFC Consultants International Bonn, Germany, *“Erosion Control, Restoring Soil Fertility and Agro-Economic Valorization of Degraded Land by Inclusive Watershed Management: The Case of South West of Burkina Faso.”*

### **Cook Workshop Sessions**

**Session 2: Sustainability in the Built Environment—Israeli Case Studies**

**Chair: Prof. Guedi Capeluto, Technion University, Israel**

**Monday, Nov. 17**

**17:30-18:45 (PS3)**

**Classroom 1**

Prof. Guedi Capeluto, Technion Israel Institute of Technology, *“A Multifunctional Energy Retrofit Façade System for Different Climates.”*

Ms. Gertel Shulamith, Ministry of Housing, Israel, *“Application of Sustainable Building and Operating Technologies in Residential Units – Cost and Benefit.”*

### **Drip Irrigation**





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## **Session 2: Drip Irrigation Applications**

**Chair: Mr. Ilan Fluss, MASHAV, Israel**

**Monday, Nov. 17**

**17:30-18:45 (PS3)**

**Evens**

Dr. Keith Bristow, CSIRO, Australia, *“Use of Polymer Membranes in Drip Irrigated Systems.”*

Dr. Arnon Dag, Agricultural Research Organization, Israel, *“The Implications of Fertigating Olives with Reclaimed Wastewater”*

Dr. Zaochang Liu, Shanghai Academy of Agricultural Sciences, China, *“Agronomic and Ecological Evaluation on Growing Water-Saving and Drought-Tolerant Rice Through Drip Irrigation.”*

Discussion

## **Public Health**

### **Session 3: Ecosystem Services and Health**

**Conveners: Dr. Maya Negev, Haifa University, Israel; Prof. Nadav Davidovich, Ben-Gurion University, Israel**

**Monday, Nov. 17**

**17:30-18:45 (PS3)**

**Water Institute**

Dr. Alon Lotan, HaMaarag, Israel, *“Introduction to the Israeli National Assessment of Ecosystem Services.”*

Prof. Nadav Davidovitch, Ben-Gurion University, and Dr. Maya Negev, Haifa University, Israel, *“Health Aspects of Ecosystem Services.”*

Dr. Shlomit Paz, Haifa University, Israel, *“Climate Change, Health and Ecosystems.”*

Dr. Shirra Freeman, The Hebrew University, Israel, *“Agriculture, Health and Ecosystems.”*

Dr. Ronit Endevelt and Mr. Yannai Kranzler, Ministry of Health, Israel, *“Food, Health and Ecosystems.”*

Ms. Dana Ziv, Hebrew University, Israel, *“Air Pollution, Health and Ecosystems.”*

## **Remote Sensing**

### **Session 3**

**Convener: Prof. Arnon Karnieli, Ben-Gurion University, Israel**

**Monday, Nov. 17**

**17:30-18:45 (PS3)**

**Old Administration**



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Prof. Zhihao Qin, Chinese Academy of Agricultural Sciences, China, *“Monitoring Dynamics of Grassland Resources in Southeast Inner Mongolia and Great Wall Region, China.”*

Prof. Zhao Shuhe, Nanjing University, China, *“Drought Monitoring in Northeast China Using an Improved Temperature Vegetation Precipitation Index (iTVPI) Based on MODIS Imagery and Meteorological Data.”*

Dr. Tsolmon Renchin, National University of Mongolia, *“Monitoring for Drivers of Land Degradation Using Remote Sensing and GIS in Mongolia.”*

Prof. Lev Spivak, International University of Nature, Society, and Man, Russia, *“Using Time Series of Satellite Vegetation Indices for Analyzing of the Dynamics of Vegetation Degradation in Kazakhstan.”*

### Evening Plenary, Monday, Nov. 17, 19:00-20:30

#### Evens Auditorium

18:30-19:00 Reception at the Evens lobby

19:00-19:30 Flash Presentations of Selected Posters

- Prof. Arnon Karnieli, conference chair, Ben-Gurion University of the Negev (moderator)
- Prof. Boris Zaltzman, Director, The Jacob Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev
- Selected Posters Mini-Presentations

19:30-20:30 Cook Prize Ceremony and Keynote Lecture

- Prof. Alon Tal, member of the Jeffrey Cook Charitable Fund
- Amb. Gil Haskel, Head of MASHAV, Israel's Agency for international Development, MFA
- Keynote Address: Mr. Luc Gnacadja (Architect), former secretary of the UNCCD

### Poster Session & Welcome Reception, Monday, Nov. 17, 20:30-22:00

#### French Associates Institute for Agriculture and Biotechnology of Drylands

20:30-22:00 Poster Session and Welcome Reception

## **Tuesday Program**

### **UNCCD-SPI Opening Plenary, Tuesday, Nov. 18, 09:00-10:30** *Land-based adaptation to climate change*

#### **Evans Auditorium**

- Prof. Uriel Safriel, Israeli Focal Point for the UNCCD, Chair of Israel National Man and Biosphere Committee, Chair of the Committee of Science and Technology of the UNCCD (SPI), and Co-Chair of Israel National Ecosystem Assessment Project (moderator)
- Mr. Sergio A. Zelaya, special adviser to the Secretariat of the United Nations Convention to Combat Desertification (UNCCD): *“The UNCCD, what is it all about?”*
- Prof. Barron Orr, University of Alicante, Faculty of Science, University of Arizona, College of Agriculture and UNCCD Science-Policy Interface (SPI): *“The UNCCD Science-Policy Interface (SPI) - exploring the sustainable land management nexus among the Rio Conventions.*
- Prof. German Kust, Moscow Lomonosov State University, Moscow, Russia and UNCCD Science-Policy Interface (SPI) *“The science of making land adapted to climate change – an attempted assessment.”*

### **Parallel Sessions 4 (PS4), Tuesday, Nov.18, 17:30-18:45**

#### **Deserts and Drylands in Ancient Literature and Archaeology**

**Convener: Dr. Haim Goldfus, Ben-Gurion University, Israel**

##### **Session 1**

**Chair: Dr. Haim Goldfus, Ben-Gurion University, Israel**

**Tuesday, Nov. 18**

**11:00-12:30 (PS4)**

**Classroom 2**



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Mr. Yonathan Yogev, Ben-Gurion University, Israel, *“The Ambivalent Attitude of Biblical Scribes towards the Desert.”*

Dr. Atar Livneh, Ben-Gurion University, Israel, *“The Wanderings in the Wilderness According to Pseudo-Philo.”*

Mr. Eli Cohen-Sasson, Ben-Gurion University, Israel, *“Trails and People: Selecting a Route in the Desert.”*

Dr. Davida Eisenberg-Degen, IAA, Israel, *“The People that Came and Went: Har Michia, Resources and Landscape, an Archaeological Approach.”*

Prof. Mark Sheridan, Pontificio Ateneo S. Anselmo, *“The Role of the Desert in Early Egyptian Monasticism and Christian Hagiography.”*

Dr. Jacob Ashkenazi, Kinneret College, Israel, *“Monasticism in Arid and Semi-Arid Landscapes in Late Antiquity: Between Holiness and Economy.”*

**Math Sessions: Ecohydrology of Dryland Landscapes;**  
**Mathematical Aspects of Desertification and Restoration;**  
**Dryland Landscapes as Pattern Forming Systems: Modeling**  
**and Analysis** Session 2: Mathematical Aspects of Desertification and Restoration

Conveners: Dr. Golan Bel, Ben-Gurion University, Israel; Prof. Ehud Meron, Ben-Gurion University, Israel

Tuesday, Nov. 18

10:30 – 12:30 (PS4)

Bio 32

Prof. Nadav Shnerb, Bar-Ilan University, Israel, *“Stochastic Desertification.”*

Dr. Anna Maria Cherubini, University of Salento, Italy *“Early-Warning Signals for Desertification: A Percolation Framework.”*

Dr. Golan Bel, Ben-Gurion University, Israel, *“Critical and Gradual Transitions in Pattern-Forming Systems.”*

Prof. Ehud Meron, Ben-Gurion University, Israel, *“Reversing Desertification as a Spatial Resonance Problem.”*

**Public Health**

**Session 4: Environment, Health and Social Justice in Arid Areas**

Conveners: Dr. Maya Negev, Haifa University, Israel; Prof. Nadav Davidovich, Ben-Gurion University, Israel

Tuesday, Nov. 18

11:00-12:30 (PS4)

Old Administration



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Mr. Ahmad Abu Halaweh, Augusta Victoria Hospital, *"Diabetes Care in Palestine; between Reality and Challenges."*

Mr. Ilan Fathi, AJEEC - NISPED, *"Installation of Solar Panels in Houses of Chronically Ill Infants and Children in the Arab Bedouin Villages of the Negev for the Operation of Medical Equipment and Reduction of use of Diesel Powered Generators."*

Dr. Marta Jaramillo, Universidad Icesi, Colombia, *"Desertification and Infant Mortality in Colombia."*

### **Rethinking Agricultural Technologies**

**Conveners: Dr. Yaakov Garb, Ben-Gurion University, Israel; Ms. Lonia Friedlander, Stonybrook University, USA**

**Tuesday, Nov. 18**

**11:00-12:30 (PS4)**

**Evens**

Mr. Martino Correggiari, International Center for Cultural Landscapes Studies, Italy, *"Alternative Technologies and Landscape Planning as Tools for Local Development, Water Management, and Agricultural Activities: A Pilot Project in the Atacama Desert and Some International Case Studies."*

Prof. Yaakov Garb, Ben-Gurion University, Israel, *"From Transfer to Translation: Using Systemic Understandings of Technology to Understand Drip Irrigation Uptake."*

Dr. Ram Fishman, George Washington University, USA, *"Adoption of Water Saving Technologies in Drylands Agriculture - What Will It Take? Evidence from Western India."*

Dr. Michael Ben-Eli, Director, The Sustainability Laboratory, USA, *"Sustainability Innovations in Project Wadi Attir."*

### **Soil and Land Restoration**

#### **Session 1**

**Convener: Dr. Uri Mingelgrin, The Agricultural Research Organization, Israel**

**Tuesday, Nov. 18**

**11:00-12:30 (PS4)**

**Water Institute**

Dr. Guy Levy, The Agricultural Research Organization, Israel, *"Irrigation with Treated Wastewater (TWW): A Trigger for Subsurface Soil Sodification."*

Dr. Federico Rossi, University of Florence, Italy, *"Microbial Secreted Exopolysaccharides of Induced Biological Soil Crusts in Inner Mongolian Desert Soils: Chemical Characteristics and Role in Affecting Water-Soil Relations."*

Dr. Yu Jun, Institute of Applied Ecology, Chinese Academy of Sciences, China, *"Response of Soil Microbial Communities to Vegetation Rehabilitation in Semiarid Sandy Land."*



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Dr. Cyrus Githunguri, Kenya Agricultural and Livestock Research Organization,  
*“Appropriate Integrated Nutrient Management and Water Harvesting Options for Maize Production in the Semi-Arid Southern Rangelands of Eastern Kenya.”*

## **Land-Based Adaptation to Climate Change – UNCCD-SPI**

### **Session 2: Indicators and Monitoring**

**Chair: Luc Gnacadja**

**Tuesday, Nov.18**

**11:00 – 12:30**

**Classroom 1**

Mr. Sergio Zelaya, special adviser to the Secretariat of the United Nations Convention to Combat Desertification (UNCCD), *“Are There Indicators for Land-Based Adaptation to Climate Change?”*

Dr. Alan Grainger, SPI, UK, *“Monitoring Desertification after the AGTE”*

Prof. Rajendra Prasad Pandey, National Institute of Hydrology, India *“A Method for Integrated Assessment of Vulnerability to Drought,”*

Dr. Barron Orr, UNCCD SPI, USA, *“Time for Paradigm Shift in How We Transfer Knowledge? Making the Case for Translational Science and Public Engagement”*

**Open Campus & lunch Tuesday, Nov.18, 13:00-15:00**

**Parallel Sessions 5 (PS5), Tuesday, Nov.18, 15:00-16:30**

## **Cook Workshop Sessions**

### **Session 3: Bio-Climatic Urban Design in Hot-Arid Regions**

**Chair: Prof. David Pearlmutter, Ben-Gurion University, Israel**

**Tuesday, Nov. 18**

**15:00-16:30**

**Classroom 1**

Prof. Mat Santamouris, University of Athens, Greece, *“Cooling the Cities: Mitigation and Adaptation Techniques to Counterbalance Urban Overheating.”*

Ms. Silvia Coccolo, Italy, *“Improving Outdoor Comfort and Energy Consumption of a City District in a Desert Area.”*

Prof. Goen Ho, Murdoch University, Australia, *“Sustaining Residential Gardens in Arid Regions with Integrated Lot-Scale Water Systems.”*





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Mrs. Daphna Drori, Israel, *“A Design Tool for Water-Efficient Green Open-Spaces in the Israeli Arid Climate.”*

## **Desertification in Mongolia**

**Convener: Prof. Arnon Karnieli, Ben-Gurion University, Israel**

**Tuesday, Nov. 18**

**15:00-16:30 (PS5)**

**Bio 32**

Dr. Nick Middleton, University of Oxford, UK, *“Explaining Spatial Variations in Climate Hazard Impacts in Western Mongolia.”*

Dr. Henri Rueff, University of Oxford, UK, *“Contrasting Strategies in a Similar Environment: Comparing Gobi Pastoralists’ Livelihood Trajectories in Transformed Mongolia and China.”*

Dr. Batjav Batbuyan, Institute of Geography, Mongolia, *“Transformation of Traditional Organization in the Transitional Period of Rural Mongolia.”*

Dr. Tsolomon Renchin, National University of Mongolia, Mongolia, *“Dry Land Pasture Degradation and Climate Change Adaptation Development for Gobi Region in Mongolia.”*

## **Drip Irrigation**

### **Session 3: Local and Global Advances with Drip Irrigation**

**Chair: Dr. Shmulik Friedman, Agricultural Research Organization, Volcani Center, Israel**

**Tuesday, Nov. 18**

**15:00-16:30**

**Evens**

Prof. Jennifer Burney, UC San Diego, USA, *“Solar-Powered Drip Irrigation Impacts on Food Security, Economic Development, and Climate Resilience.”*

Dr. Uri Yermiyahu, Agricultural Research Organization, Israel, *“Drip Fertigation - An Ultimate Method for Nutrient Application.”*

Mr. Moshe Broner, NevaTeam Agricultural Applications, Israel, *“Unique Application of Drip Irrigation System for Improving WUE (Water Use Efficiency) and Soil Fertility in Arid Conditions.”*

Discussion

## **Geological Aspects of Deserts and Desertification**

**Convener: Dr. Yoav Avni, Geological Survey of Israel, Israel**



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**Tuesday, Nov. 18**

**15:00-16:30 (PS5)**

**Classroom 2**

Dr. Oren Ackerman, Bar-Ilan University, Israel, *“Life on Rock – Rock Outcrops as Key Component of the Natural and Human Systems in the Arid and Semi-Arid Areas.”*

Dr. Onn Crouvi, Geological Survey of Israel, *“Sand Dunes and the Downwind Accretion of Desert Loess.”*

Dr. Rivka Amit, Geological Survey of Israel, *“Pedogenesis in Response to Quaternary-Scale Aridification of the Negev Desert, Israel.”*

Dr. Yoav Avni, Geological Survey of Israel, *“The Geological Background of Desert Environments in the Middle East: Timing, Processes and Future Predictions.”*

### **Nutritional and Food Security**

**Conveners: Prof. Dov Chernichovsky, Ben-Gurion University, Israel; Prof. Hendrik Bruins, Ben-Gurion University, Israel**

**Tuesday, Nov. 18**

**15:00-16:30 (PS5)**

**Old Administration**

Prof. Hendrik Bruins, Ben-Gurion University, Israel, *“A Global Food System without Food Reserves: A Recipe for Disaster.”*

Dr. Zaochang Liu, Shanghai Academy of Agricultural Sciences, China, *“Development of Water Saving and Drought Resistant Rice and Culture Practice for Growing WDR by Means of Drip Irrigation.”*

Ms. Esther Uushona, Gobabeg Research and Training Centre, Namibia, *“LC-MS Analysis of Cucurbitacins in Namib Endemic Fruit - !nara (Acanthosicyos Horridus).”*

Dr. Cyrus Githunguri, Kenya Agricultural and Livestock Research Organization, Kenya, *“Onfarm Performance of Three Elite Sweetpotato Varieties at Mukuyuni in Makueni County in Semi-Arid Eastern Kenya.”*

### **Public Health Workshop**

**Tuesday, Nov. 18**

**15:00-16:30 (PS5)**

**Bio 136**

### **Soil and Land Restoration**

**Session 2**

**Convener: Dr. Uri Mingelgrin, The Agricultural Research Organization, Israel**



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**Tuesday, Nov. 18**

**15:00-16:30 (PS5)**

**Water Institute**

Dr. Sarah Milliken, University of Greenwich, UK, “*A Decision Support System for Arid Lands Restoration.*”

Dr. Ilan Stavi, Dead Sea and Arava Science Center, Israel, “*No Adverse Effect of Stubble Grazing on Soil Quality Indicators in Dryland Wheat Agro-Ecosystems.*”

Ms. Hila Sagie, Open Landscape Institute, Israel, “*Using Agro(Eco)System Services Approach to Assess Tradeoffs of Various Tilling Methods as a Tool to Improve Sustainability and prevent Desertification Processes in Shikma Park, Israel.*”

### **Parallel Sessions 6 (PS6), Tuesday, Nov.18, 17:00-18:30**

#### **Cook Workshop Sessions**

##### **Session 4: Sustainability in the Built Environment: Around the World**

**Chair: Prof. David Pearlmutter, Ben-Gurion University, Israel**

**Tuesday, Nov. 18**

**17:00-18:30 (PS6)**

**Classroom 1**

Dr. Benz Kotzen, University of Greenwich, UK, “*Biophilia and drylands architecture: visions for future living.*”

Prof. Alejandro Hernida Garcia, Universidad Alfonso X / Terrachidia, Spain, “*Sustainable Development Promoting Local Tradition: The Work Of Terrachidia in the M'hamid Oasis (Morocco).*”

Mr. Jacob Florentin, Ben-Gurion University, Israel, “*Hempcrete Construction in Europe: The Green Alternative.*”

Mr. Alex Cicelsky, Israel, “*Environmentally Responsive Strategies for Building Design and Electricity Savings in Hot Hyper-Arid Regions.*”

#### **Deserts and Drylands in Ancient Literature and Archaeology**

**Convener: Dr. Haim Goldfus, Ben-Gurion University, Israel Session 2**

##### **Session 2**

**Chair: Dr. Peter Fabian, Ben-Gurion University, Israel**

**Tuesday, Nov. 18**

**17:00-18:30 (PS6)**

**Classroom 2**

Ms. Karni Golan, Ben-Gurion University, Israel, “*What a Relief – Stone Architectural Decorations in the Byzantine Negev.*”

Prof. Michael Lecker, The Hebrew University, Israel, *“Tribal Towns in the Arabian Peninsula.”*

Dr. Yifat Thareani, Nelson Glueck School of Biblical Archaeology, Hebrew Union College, Israel, *“The Negev in Imperial Eyes: A Frontier between Image and Reality.”*

Prof. Michal Biran, The Hebrew University, Israel, *“Cities in the Steppe Drylands: The Case of Qara Qorum, Capital of the United Mongol Empire.”*

Prof. Gideon Shelach-Lavi, The Hebrew University, Israel, *“The Long Wall(s) of China: An Ecological or Cultural Marker of the Borders Between the Agricultural Region and the Dry Lands.”*

## **Drip Irrigation**

### **Session 4: Drip Irrigation Case Studies and Applications**

**Chair: Dr. Naftali Lazarovitch, Ben-Gurion-University, Israel**

**Tuesday, Nov. 18**

**17:00-18:30 (PS6)**

**Evens**

Dr. Shmulik Friedman, Agricultural Research Organization, Israel, *“DIDAS: A User-Friendly Software Package for Assisting Drip Irrigation Design and Scheduling.”*

Prof. Ranjith Bandara, University of Colombo, Sri Lanka, *“Drip Irrigation as a Strategy For Water Scarcity at the Small Scale Farming Community Levels in the Arid Zones of Sri Lanka: An Empirical Study.”*

Ms. Dilia Kool, Agricultural Research Organization and Ben-Gurion University, Israel, *“Evaluating Below Canopy Evaporation in a Drip Irrigated Arid Vineyard.”*

Dr. Eviatar Ityel, Ministry of Agriculture, Israel. *“The Role of Capillary Barrier, Drip Laterals Number, and Splitting The Irrigation, on Salt Leaching from a non-Homogeneous-Highly-Porous Media.”*

Discussion

## **Family Planning and Development in Drylands**

**Convener: Alon Tal, Ben-Gurion University, Israel**

**Tuesday, Nov. 18**

**17:00-18:30 (PS6)**

**Old Administration**

Ms. Jane Mutune, Greenbelt Movement, Kenya, *“Status of Women, Sustainable Forestry and Family Planning in Kenya.”*

Professor Michele Rivkin-Fish, University of North Carolina Population Center, USA, *“Public Policies and Fertility, Present Thinking.”*

Dr. Marta Jaramillo-Mejía, Universidad Icesi, Colombia, *“Was Malthus Right After All? For Different Reasons Though.”*



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Professor Alon Tal, Ben-Gurion University of the Negev, Israel, “*The Evolving Role of religion in Family Planning, Examples from Dryland Countries.*”

**Math Sessions: Ecohydrology of Dryland Landscapes;**  
**Mathematical Aspects of Desertification and Restoration;**  
**Dryland Landscapes as Pattern Forming Systems: Modeling**  
**and Analysis** Session 3: Dryland Landscapes as Pattern Forming  
Systems: Modeling and Analysis

Conveners: Dr. Golan Bel, Ben-Gurion University, Israel; Prof. Ehud Meron, Ben-Gurion University, Israel

**Tuesday, Nov. 18**

**17:00 – 18:30 (PS6)**

**Bio 32**

Prof. Jonathan Sherratt, Heriot-Watt University, UK, “*Wavelength Selection and Hysteresis in Mathematical Models of Banded Vegetation.*”

Dr. Stephan Getzin, Helmholtz Centre for Environmental Research-UFZ, Germany, “*Adopting a Spatially Explicit Perspective to Study the Mysterious Fairy Circles of Namibia.*”

Prof. Maxim Shoshany, Technion–Israel Institute of Technology, Israel “*Modeling Power-Law Edge-Interior Area Decline in Shrubs’ and Soil Patch Patterns along Climatic Gradient.*”

**Public Health Workshops**

**Tuesday, Nov. 18**

**17:00-18:30 (PS6)**

**Bio 136**

**Land-Based Adaptation to Climate Change – UNCCD-SPI**

**Session 3: Land Degradation Neutrality**

**Chair: Alon Tal**

**Tuesday, Nov.18**

**17:00 – 18:30 (PS6)**

**Water Institute**

Dr. Ephraim Nkonya, IFPRI, USA, “*Global Assessment of the Cost of Land Degradation & Strategies for Achieving Land Degradation Neutral World,*”

Mr. Tobias Gerhartsreiter, Economics of Land Degradation Initiative, Germany, “*The Economics of Land Degradation (ELD) Initiative - Integrating the Economics of Land Degradation into Policy Making,*”



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Dr. David Mutekanga, UNAS, Uganda, “*Avoiding Land Degradation and restoring Degraded Land: A Comparative Analysis of Asia and Africa (Sri Lanka & Uganda),*”

Panel Discussion: “*Land-Based Adaptation (LDA) and Land-Degradation Neutrality (LDN) – Slogans or Solutions?*”.

Panellists: Kust, Grainger, Orr, Rajendra, Safriel, Zelaya

## Thursday Program

### **Parallel Sessions 7 (PS7), Thursday, Nov.20, 08:30-10:00**

#### **Building Economic Resilience in the Drylands**

Convener: Aliza Inbal, Tel Aviv University, Israel

Thursday, Nov. 20

08:30-10:00 (PS7)

Evens

Professor Joseph Assan, Brandeis University, USA, “*Enhancing Livelihoods through Climate Change Adaptation: Challenges and Lessons from Practices of Smallholder Farmers in Ghana.*”

Mr. Hannes Etter and Tobias Gerhartsreiter, Economics of Land Degradation Initiative, Germany, “*The Economics of Land Degradation –An Initiative for Improving Land Use Management and Promote Resilient Economic Development.*”

Ms. Miri Arbiv, Ben-Gurion University, Israel, “*Economic Resilience in the Bedouin Community.*”

#### **Climate History, Drought and Desertification in Ancient Near East**

##### **Session 1**

Convener: Prof. Hendrik J. Bruins, Ben-Gurion University, Israel

Thursday, Nov. 20

08:30-10:00 (PS7)

Classroom 2

Ms. Sawsan Batersseh, USAID, Jordan, and Prof. Hendrik J. Bruins, Ben-Gurion University, Israel, “*Drought in Jordan: P/PET Classification and Tree Rings.*”

Dr. Chris Hunt, Liverpool John Moores University, UK, “*Climate Change, Human Action and Desertification in the Wadi Faynan, Jordan.*”





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Dr. Bernhard Lucke, FAU Erlangen-Nuremberg, Institute of Geography, Germany, “*A Rapid Landscape Change in 6th Century Northern Jordan: Desertification, or Driven by Climatic Extremes?*”

## **UK, Israel and Drylands Symposium**

**Thursday, Nov. 20                      08:30-10:00 (PS7)                      Water Institute**  
**Introductory Remarks** Mr. Alan Gemmell, Director, British Council, Israel

### **Rangeland Management**

**Chair: Prof. Uriel Safriel, Hebrew University, Israel**

Vijay Kumar, India, “*Natural Resource Management in Dryland of Kachchh— Pathways Towards Sustainability under Desertification and Climate Change.*”

Bajav Batbuyan, Mongolia, “*Pastoralism and Water in Mongolian Drylands: The Effects of Changing Climate and the Mining Industry.*”

Simeon A. Materechera, South Africa, “*A Review of Factors Affecting the Development of Smallholder Irrigation and Rangeland Grazing Schemes in semi-Arid Areas of the North-West Province in South Africa.*”

Questions and discussion

### **Cropland Management**

**Chair: Dr. Alan Grainger, University of Leeds, UK**

Rohitashw Kumar, India, “*Augmentation and Enhanced Water Use Efficiency through Farm Pond and Micro Irrigation in Rainfed Area of Kashmir valley.*”

Katharine Vincent, South Africa, “*Water and Climate Change Adaptation in Rural Africa.*”

Luuk Fleskens, UK, “*The Potential of Rainwater Harvesting for African Agriculture to Improve Food Security and Adapt to a Changing Climate.*”

Gillian Maggs-Kolling, “*Namibia, On-farm Conservation of Plant Genetic Resources for Dryland Agriculture in Namibia’s Northern Cropping Regions.*”

Questions and discussion

## **Water Management Challenges in the Drylands**



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**Convener: Prof. Sharon B. Megdal, University of Arizona, USA**

**Moderator: Dr. Adam Abramson, University of California, San Diego, USA**

**Thursday, Nov. 20**

**08:30-10:00 (PS7)**

**Old Administration**

Eng. Assaf Chen, Ben-Gurion University, Israel, *“A Tale of Two Rivers: Pathways for improving water management in the Jordan and Colorado River Basins.”*

Prof. Sharon B. Megdal, University of Arizona, USA, *“Transboundary Aquifer Assessment at the United States-Mexico Border.”*

Dr. Theo Wassenaar, Gobabeb Research and Training Centre, Namibia, *“Monitoring Impacts of a Critical Economic Sector on a Critical Resource: Minerals and Water Resources in the Central Namib.”*

Dr. Niels Thevs, University of Greifswald, Germany, *“Water Resource Management, Ecosystem Services, Land Use Changes in the Transboundary Ili River Basin.”*

### **Parallel Sessions 8 (PS8), Thursday, Nov.20, 10:00-11:30**

## **Climate History, Drought and Desertification in Ancient Near East**

### **Session 2**

**Convener: Prof. Hendrik J. Bruins, Ben-Gurion University, Israel**

**Thursday, Nov. 20**

**10:00-11:30 (PS8)**

**Classroom 2**

Dr. Revital Bookman, University of Haifa, Israel, *“Post Glacial and Holocene Dead Sea Levels as Indicators of Near East Paleoclimate.”*

Prof. Amos Frumkin, Hebrew University, Israel, *“Climatic Deterioration During the Middle Bronze Age Revealed by Subfossil Wood from the Southern Levant.”*

Dr. Oren Ackerman, Bar-Ilan University, Israel, *“Drought, Economic Crisis and Demography: Two Case Studies from the Byzantine and Early Arab Near East.”*

## **Desert Ecology**

**Conveners: Dr. Elli Groner, Dead Sea and Arava Science Center, Israel; Dr. Shirli Bar-David, Ben-Gurion University, Israel**

**Thursday, Nov. 20**

**10:00-11:30 (PS8)**

**Classroom 1**



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Prof. Bertrand Boeken, Ben-Gurion University, Israel, *“Resilience and Recovery of Semi-Arid Annual Plant Communities to Drought.”*

Dr. Ariella Gotlieb, Dead Sea and Arava Center, Israel, *“Bee and Plant Species Diversity and Interactions along Climatic and Land Use Gradients: The Case of Wadi Nar and Wadi Daraje.”*

Dr. Amjad Hijazen, Dead Sea and Arava Center, Israel, *“Monitoring Acacia Trees in Wadi Araba in Jordan and Israel.”*

Mr. Titus Shuuya, Gobabeb Research and Training Centre, Namibia, *“Investigating Spatial and Temporal Patterns of Plant Health of Welwitschia Mirabilis in the Central Namib Desert.”*

## **Kidron River Restoration: Searching for Environmental Dignity in the Kidron/Nar Basin**

**Thursday, Nov. 20**

**10:00-11:30 (PS8)**

**Old Administration**

Prof. Richard Laster, Professor of law, Hebrew University; Partner- Laster Gouldman Law Offices, Israel, *“Introduction to the Kidron/Nar Master Plan.”*

Mr. Mohammed Nakhal, Geographer and Planner, Jerusalem *“Liaison with the Local Communities.”*

Mr. Rana Khalaf, Principal, Afaq School, East Jerusalem, *“Environmental Education in the Kidron/Nar Basin.”*

Mr. Avner Goren, Archaeologist and Tourism Expert, Israel, *“Spiritual Aspects of the Kidron/Nar Basin.”*

Ms. Liora Meron & Mr. Arie Rahamimoff, Architects and Planners, Israel, *“Overview of the Kidron/Nar Master Plan.”*

## **UK, Israel and Drylands Symposium**

**Thursday, Nov. 20**

**10:30-11:30 (PS7)**

**Water Institute**

### **Land and Water Use Policies**

**Chair: Prof. Amit Gross, Ben-Gurion University, Israel**

Henri Rueff, UK, *“Human Amplification of Climate Hazards: 2010 Floods in Pakistan.”*

Ranjith Bandara, Sri Lanka, *“Effective Community Participation in Managing Man-Made Rain Water Storage Systems in Sri Lanka.”*

Troy Sternberg, UK, *“Water Scarcity and Agricultural Challenges in Chinese Drylands.”*

Dr. Ilan Stavi, Dead-Sea & Arava Science Center, Israel, *“Agro-Ecosystems under Stress: Functioning and Management.”*



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Prof. Amit Gross, Ben-Gurion University, Israel, “*Sustainable Resource Use in Dry Lands - Utilization of Wastewater and Organic Waste.*”

Prof. Pedro Berliner, Ben-Gurion University, Israel, “*Sustainable Maize Production and Nutrient Cycling in a Runoff Agroforestry System.*”

Questions and discussion

## **Women and Economic Change in Rural Arid Lands**

**Convener: Dr. Sarab Abu-Rabia, Ben-Gurion University, Israel**

**Thursday, Nov. 20**

**10:00-11:30 (PS8)**

**Evens**

Dr. Sarab Abu-Rabia, Ben-Gurion University, and Dr. Avigail Morris, Dead Sea and Arava Science Center, Israel, “*Transforming Economies and Roles: Bedouin Women Recreate Economic Change.*”

Ms. Jane Mutune, The Greenbelt Movement, Kenya, “*Women in the arid land of Kenya: Challenges and interventions.*”

Ms. Priscilla Achakpa, Women Environmental Programme, Nigeria, “*Rural Women Energy Security Project as a Social Entrepreneurs Approach to Checking Desertification in Rural-Arid Regions.*”

Ms. Heidi Paredes, Sidreh, Israel, “*Bedouin Women at the Forefront of Development through Innovative Approaches: Sidreh’s Desert Gardens.*”

## **Parallel Sessions 9 (PS9), Thursday, Nov.20, 12:00-13:30**

### **Community and Technology in Project Wadi Attir**

**Convener and Moderator: Dr. Michael Ben-Eli, The Sustainability Laboratory**

**Thursday, Nov. 20  
Building**

**12:00-13:30 (PS9)**

**Old Administration**

#### **Panel Participants:**

Dr. Mohammed Alnabari, Mayor of Hura, Israel

Ms. Mariaam Abu Rakayek, Founding Member of Project Wadi Attir, Israel



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Prof. Isaac Meir, Ben-Gurion University, Israel

Prof. Amit Gross, Ben-Gurion University, Israel

Dr. Stefan Leu, Ben-Gurion University, Israel

Dr. Or Yogev, USA, Augwind Inc.

## **Climate History, Drought and Desertification in Ancient Near East**

### **Session 3**

**Convener: Prof. Hendrik J. Bruins, Ben-Gurion University, Israel**

**Thursday, Nov. 20**

**12:00-13:30 (PS9)**

**Classroom 2**

Dr. Jacob Vardi, Israel Antiquities Authority, Israel, “*Man-made Desertification? New Evidence from a Late Neolithic-Chalcolithic Occupation of Har Harif (Central Negev highlands, Israel).*”

Prof. Hendrik Bruins, Ben-Gurion University, Israel, “*Climate Change and Runoff/Floodwater Capturing Agriculture in the Central Negev: Dating, Temporal and Causal Relationships?*”

## **UK, Israel and Drylands Symposium**

**Thursday, Nov. 20**

**12:00-12:30 (PS9)**

**Water Institute**

### **Hints for Cooperation**

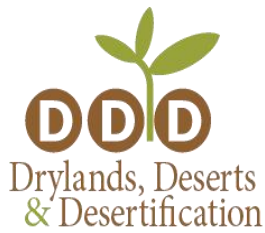
**Chair: Nick Middleton, UK**

Dr. Alan Grainger, University of Leeds, UK, “*Sustainable Resource Use in Drylands: Sharing UK and Israeli Expertise.*”

Prof. Noam Weisbrod, Ben-Gurion University, Israel, “*Rural Water Development: Should it be an Essential Course for Graduate Students?*”

## **Concluding Plenary, Thursday, Nov.20, 13:30-14:30**

**Moderator: Prof. Alon Tal, Ben-Gurion University of the Negev**



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- Prof. Uriel Safriel, Chair of the Committee of Science and Technology of the UNCCD (SPI) announcing the resolutions of the SPI deliberations
- Mr. Nakabayashi Kazuo, Advisor, Japan International Cooperation Agency, JICA
- Mr. Sergio A. Zelaya, special adviser to the Secretariat of the United Nations Convention to Combat Desertification (UNCCD)