

ECODESERT

DAY 1 SCHEDULE

- 8:00** **Helpdesk opening**
- 8:30** **Welcome by CSIC delegate [Margarita Paneque](#)**
- 9:00** **Tribute conference by [Cai Puigdefabregas](#)**
The Namib dune field and the Kuiseb river: two competing dynamic systems
[Cai Puigdefabregas](#) and [Roger Swart](#)

SECTION 1: EFFECTS OF ABIOTIC FACTORS ON ECOSYSTEMS

- 9:30** **Keynote paper by [A. Calvo-Cases](#)**
Spatial and temporal scales in the eco-geomorphological interactions
- 10:00** **Keynote paper by [F.T. Maestre](#)**
Organisms as modulators of ecosystem functioning in global drylands
- 10:30** **Coffee break**

Oral presentations: 15 min each

- 11:00** **Land and water management in dry climates, an unresolved dilemma** [Francesc Gallart](#), [Mariano Moreno de-las Heras](#), [Antonio J. Molina](#), [Carles Cayuela](#), [Juan Pinos](#), [Narcís Prat](#), [Jérôme Latron](#), [Pilar Llorens](#)
- 11:15** **Functional performance of biocrust communities across Europe: a global perspective** [Jose Raggio](#), [Allan Green](#), [Ana Pintado](#), [Leopoldo G Sancho](#), [Burkhard Büdel](#)
- 11:30** **Surviving droughts and flood events. The case of *Prosopis pallida* populations in the North Peruvian coast** [Pablo Salazar Zarzosa](#), [Rafael Navarro](#), [Gastón Cruz](#), [Nora Grados](#) & [Rafael Villar](#)

Poster defences: 4 min each

- 11:45** **Ventilation and its relevance at global scale** [M. Rosario Moya](#), [Enrique P. Sánchez-Cañete](#), [Andrew S. Kowalski](#), [Penélope Serrano-Ortiz](#), [Ana López-Ballesteros](#), [Cecilio Oyonarte](#), [Francisco Domingo](#)
- 11:49** **Sources and meteorology prompting the observed rapid variability of dust composition in the Saharan Air Layer** [Sergio Rodríguez](#), [Franco Lucarelli](#), [Silvia Nava](#), [M. Isabel García](#), [Giulia Calzolari](#), [Massimo Chiari](#), [Emilio Cuevas](#), [Javier López-Solano](#), [Carlos Marrero](#), [Natalia Prats](#)
- 11:53** **Learning from Landscape: Natural biocrust and vegetation distribution as eco-hydrological model for restoration ecology** [Emilio Rodríguez-Caballero](#), [José Raúl Román Fernández](#), [Sonia Chamizo de la Piedra](#), [Beatriz Roncero Ramos](#), [Yolanda Cantón Castilla](#)
- 11:57** **Effects of afforestation and natural reforestation of abandoned croplands on water yield in the Central Spanish Pyrenees.** [Khorchani M.](#), [Nadal-Romero E.](#), [Lasanta T.](#), [Zabalza J.](#), [Tague C.](#)
- 12:01** **Palaolake sediments of the Sahara Desert as indicators of paleoenvironmental changes: case study of the Ouargla basin, Algeria** [Fouzia Youce](#), [Baelhadj Hamdi-Aïssa](#), [Rezka Khemis](#), [Fatma Bencherouda](#) & [Khaoula Hadjadj](#)

- 12:05** **Floodwater infiltration and alluvial aquifer recharge along a Mediterranean ephemeral stream: A multi-source data approach** Gerardo Benito, Francisco Sanchez-Martos, Blanca Botero, Alicia Medialdea, Ofer Dahan, Christoph Külls
- 12:09** **Soil surface spatial heterogeneity along hillslopes under inspection: a 1D approach** Eva Arnau-Rosalén, Carolina Boix-Fayos, Elias Symeonakis, Adolfo Calvo-Cases
- 12:13** **How far surface water fluxes determine restoration success in mediterranean degraded areas?** Valdecantos, A., Fuentes, D., Fuente, P.
- 12:17** **Biocrusts as fundamental players in hydrological and erosion processes in drylands** Sonia Chamizo, Emilio Rodríguez-Caballero, Beatriz Roncero-Ramos, José Raúl Román, Francisco Domingo, Roberto Lázaro, Albert Solé-Benet, Yolanda Cantón
- 12:21** **Analysis of a heavy rainfalls in two contrasted mediterranean watersheds from 1993 to 2017** Sillero-Medina, José Antonio, Hueso-González, Paloma, Martínez-Murillo, Juan Francisco, Ruiz-Sinoga, José Damián
- 12:25** **Looking to the sources and sinks paradigm from infiltration patterns perspective at hillslope scale: a conjecture from simulation approaches with empirical basis** Eva Arnau-Rosalén, Carolina Boix-Fayos, Adolfo Calvo-Cases
- 12:29** **Why do the badlands in the Region of Murcia (SE of Spain) have different morphologies?** Romero-Díaz, A., Ruiz-Sinoga, J.D., Belmonte-Serrato, F.
- 12:33** **Catchment asymmetry in Tabernas Desert (Almería, Spain)** Lázaro R., Calvo-Cases A., Rodríguez-Caballero E., Arnau-Rosalén E., Alexander R., Rubio C., Cantón Y., Solé-Benet A., Puigdefábregas J.
- 12:37** **Prescribed fire and its effects on a Mediterranean Experimental Plots Study: soil properties, erosion and vegetation recovery** Paloma Hueso González, Jose Antonio Sillero, Juan Francisco Martinez Murillo and Jose Damian Ruiz Sinoga
- 12:41** **Insights into the role of abiotic soil surface components (SSC) enhancing the vegetation driven spatial heterogeneity (VDSH) on a semiarid hillslope.** Eva Arnau
- 12:45** **Impact on soil degradation factors of changes in rain intensity patterns in southern Spain** Ruiz Sinoga, Jose Damian, Hueso Gonzalez, Paloma, Sillero Medina, Jose Antonio, Romero Diaz, Asuncion.
- 12:49** **The geomorphological rainfall as an accelerated modelling agent in contrasted Mediterranean environments. South of Spain** Sillero Medina, Jose Antonio, Hueso Gonzalez, Paloma, Perez Gonzalez, M. Eugenia, Ruiz Sinoga, Jose Damian
- 12:53** **Hydrological response and sediment yield dynamics in a middle mountain humid badland area (Central Spanish Pyrenees)** Regüés, D., Peña-Angulo, D., Nadal-Romero, E.
- 12:57** **Runoff and erosion models demonstrate the importance of biocrusts in the spatial distribution of sediment fluxes within the landscape** Emilio Rodríguez-Caballero, José Raúl Román Fernández, Sonia Chamizo de la Piedra, Beatriz Roncero Ramos, Roberto Lazaro, Alber Solé, Yolanda Cantón Castilla
- 13:01** **Examination of the habitat exclusivity of biological soil crust communities in the El Cautivo badlands, SE Spain** J. Bevan, R. Alexander, and R. Lazaro-Suau

13:30 **Lunch**

14:30 **Section 1 plenary discussion**

SECTION 2: TRANSITIONS BETWEEN ECOSYSTEM MATURITY AND EXPLOITATION

- 15:30** **Keynote paper by E. Huber-Sannwald**
Land use and degradation: socio-economic pressure versus ecological resilience
Elisabeth Huber-Sannwald, San Luis Potosi
- 16:00** **Keynote paper by J.M. García Ruiz**
Origin and development of subalpine landscapes in the Central Spanish Pyrennees
José M. García-Ruiz, Lourdes Montes, Rafael Domingo, María Sebastián, Penélope González-Sam-
pérez, José Arnáez, Santiago Beguería
- Oral presentations: 15 min each
- 16:30** **Biodiversity in Andalusian olive orchards: assessing the effect of agricultural management and landscape simplification.** Francisco Valera, Pedro J. Rey, Antonio J. Manzaneda, Julio M. Alcán-
tara, José L. Molina-Pardo, Rubén Tarifa, Jorge Isla, Teresa Salido, Gemma Calvo, Carlos Martí-
nez-Nuñez, Carlos Ruiz y José E. Gutiérrez.
- 16:45** **Coffee break**
- Poster defences: 4 min each
- 17:15** **Applying what we have learned on biocrusts to restore drylands soil functions** Cantón, Y., Ron-
cero-Ramos, B., Román, J. R., Águila-Carricondo, P, Chamizo, S, Rodriguez-Caballero, E., Gómez,
C., M.J., Moro, Muñoz-Martín, M.A., Ación, G., Mateo, P.
- 17:19** **Dynamics of biocrust recovery after disturbance and impacts on soil properties** José Raúl Ro-
mán, Sonia Chamizo, Emilio Rodríguez-Caballero, Yolanda Cantón
- 17:23** **Soil erosion and soil hydrology recovery time and factors after agriculture abandonment** M. J.
Roxo, A. Calvo-Cases
- 17:27** **Erosive consequences of land abandonment in semi-arid environments** Romero-Díaz, A., Bel-
monte-Serrato, F., Ruíz-Sinoga
- 17:31** **Early evolution of selected Technosols in SE Spain** Lourdes Luna, Roberto Lázaro, Albert Solé-Be-
net
- 17:35** **Modifications in soil quality as consequence of abandonment and revegetation processes in a
mountainous Mediterranean watershed (South of Spain)** Juan F. Martínez-Murillo, José A. Sille-
ro, Paloma Hueso-González, José D. Ruiz-Sinoga
- 17:39** **A sustainable approach for restoration of post-fire soils based on inoculation with cyanobacte-
ria** Sonia Chamizo,, Alessandra Adessi, Enrico Nocentini, Giacomo Certini, Roberto De Philippis
- 17:43** **Iberian nature ¿Desertification and/or rewilding?** José Manuel Nicolau Ibarra
- 17:47** **Sediment connectivity feedbacking changes induced by land degradation processes in agricultu-
ral terraced fields** Arnau-Rosalén, E., Calsamiglia, A., Ruiz-Pérez, M., Estrany, J., Calvo-Cases, A.
- 17:51** **Effects of land use changes and land management after cropland abandonment in soil organic
carbon stocks in a sub-mediterranean mountain area (Iberian System)** Sánchez-Navarrete, P.,
Khorchani, M., Nadal-Romero, E., Lasanta, T.
- 18:00** **Section 2 plenary discussion**
- 19:00** **End of day 1**

DAY 2 SCHEDULE

8:00 Helpdesk opening

SECTION 3

SPATIAL/TEMPORAL SCALES OF ECOSYSTEM RESPONSE TO GLOBAL CHANGE

- 8:30 **Keynote paper by G. del Barrio**
The paradox of land degradation
Gabriel del Barrio, María E. Sanjuán, Jaime Martínez Valderrama, Alberto Ruiz and Juan Puigdefábregas
- 9:00 **Keynote paper by T. Wiegand**
Analyzing the spatio-temporal dynamics of semiarid plant communities
Thorsten Wiegand, Pablo A. Cipriotti
- Oral presentations: 15 min each
- 9:30 **Agregated spatial patterns as an indicator of ecosystem shift must distinguish long and short term processes** Concepción L. Alados, Hugo Saiz, Juan Escós, and Yolanda Pueyo
- 9:45 **Status and trend of the West African Crocodile in Mauritania: spatial and temporal patterns in distribution and population dynamics** José Carlos Brito, João C. Campos, Frederico Santarém, Andaack Saad Sow, Duarte V. Gonçalves, Fernando Martínez-Freiría, Guillermo Velo-Antón, Raquel Godinho
- 10:00 **Rising temperatures may enhance annual net carbon assimilation in a subalpine Mediterranean ecosystem based on 13 years of eddy covariance measurements** Belén Díaz-Collante, Enrique P. Sánchez-Cañete, Sergio Aranda-Barranco, M. Rosario Moya, Ana López-Ballesteros, Andrew S. Kowalski, Francisco Domingo, Cecilio Oyonarte Gutiérrez, Penélope Serrano-Ortiz
- 10:15 **Coffee break**
- Poster defences: 4 min each
- 10:45 **A characterization of the Status and Dynamics of Land cover in the active Okavango Catchment**
Marion Stellmes, David Frantz, Achim Röder, Thomas Udelhoven and Joachim Hill
- 10:49 **Natural catastrophes as landscape modellers in Bahía del Buen Suceso, eastern edge of Tierra del Fuego: landslides and wind waves in evergreen Nothofagus forests.** Francesc Gallard, Gabriel del Barrio, Oscar Bianciotto y Joan Puigdefábregas
- 10:53 **Characterizing the effect of the hypothetical ecological succession of biological soil crusts on soil-atmosphere CO₂ exchange in the Tabernas Desert** Clément J.R. Lopez, Roberto Lázaro Suau, Enrique Pérez Sánchez-Cañete and Francisco Domingo
- 10:57 **Clay dispersion: an important factor in channel runoff generation in a semi-arid, loess covered area with very low rain intensities.** Aaron Yair
- 11:01 **Is the NDVI really relevant in arid areas? The case of Algerian arid zones** Aziz Hirche, Mostefa Salamani, Dalila Nedjraoui, Boughani Abdelmadjid, Nacer Adi, Mohamed Grandi, Khaoauni Boumediene, Ait Hamouda Tahar, Oukil Youcef
- 11:05 **Spatial analysis of ecological impacts of Global Change on drylands and their implications for desertification In Algeria** ZEGRAR Ahmed, Bentekhici Nadjela, Djamel Mansour
- 11:09 **How water redistribution controls biomass, productivity and spatial pattern of *Macrochloa tenacissima* steppes under climate change scenarios** Rodríguez-Lozano Borja, Rodríguez-Caballero Emilio and Cantón, Yolanda.

- 11:13 **How can vegetation cover changes affect water balance in the context of climate change?** [Aymen Moghli](#), [Hassane Moutahir](#), [Juan Bellot](#)
- 11:17 **Mid-term assessment of watering and fertilization effects on the restoration of a limestone quarry under semiarid conditions** [G. Elizabeth Gutierrez-Acevedo](#), [Jordi Cortina](#), [Santiago Soliveres](#)
- 11:30 **Section 3 plenary discussion**

SECTION 4

FEEDBACKS BETWEEN NATURAL LANDSCAPES AND HUMAN POPULATIONS

- 12:30 **Keynote paper by [Roy Alexander](#)**
Human interactions with landscapes / Some Observations on Human-Landscape interactions in Almería
- 13:00 **Keynote paper by [S. Bautista](#)**
Positive and negative feedbacks playing together in dryland grounds

13:30 Lunch

Oral presentations: 15 min each

- 14:30 **Desertification and Development: some broader contexts** [Mike Kirkby](#)
- 14:45 **The human hunter as predator: a new role under a food web restoration scenario** [Jorge Cassinello](#)
- 15:00 **Flagship species in Sahara-Sahel: opportunities for conservation marketing and community-based ecotourism** [Frederico Santarém](#), [João Carlos Campos](#), [Paulo Pereira](#), [Dieng Hamidou](#), [Jarkko Saarinen](#), [José C. Brito](#)
- 15:15 **Science and Policy Interacted for Combating Desertification in China** [Tao WANG](#)

Poster defences: 4 min each

- 15:30 **Competition for water in remote oasis. Assessment and comprehension through methods for sparse-data drylands** [Jaime Martínez-Valderrama](#), [Francisco J. Alcalá](#), [Manuel Martín-Martín](#), [Francesco Guerrera](#), [Pedro Robles-Marín](#), [Julián Tejera de León](#)
- 15:34 **Trading food security against plummeting water tables: Earth Observation archives unveil land change processes at China's dryland frontier** [Hill, Joachim](#)
- 15:38 **Land, water and energy: crossing of governance** [Carlos San Juan Mesonada](#)
- 15:42 **Water management and risk of desertification** [Abderrahmane El Harradji](#)
- 15:46 **Effect of grazing exclosure and introduced pastoral species on flora and soil surface in degraded steppe formations in Algeria** [Halima Kadi-Hanifi](#), [Riadh Aziz Hirsch](#), [Abdelli Selwa](#), [Benseghir Louai](#) [And Ihaddaden Akli](#)
- 15:50 **The Camel! A Choice of Sustainable Food Production in the Desert Ecosystem** [Raziq, A.](#)
- 15:54 **A neuroscientific approach to environment care** [Juan Puigdefabregas](#), [Miguel Pérez-García](#)

16:00 **Section 4 plenary discussion**

17:00 Coffee break

17:30 **Wrap-up plenary discussion**

18:30 End of day 2

23:30 Social dinner



DAY 3 SCHEDULE

08:30 Field trip departure

09:45 Stop: traditional runoff water harvesting

10:30 Stop: inherited desertification, deforestation

11:00 Stop: latent desertification, greenhouses

12:00 Stop: inherited desertification, mining

12:45 Stop: natural landscapes from Sierra de Gador

14:00 Lunch, local restaurant

17:00 Stop: badland landscapes of El Cautivo field site

19:30 Field trip arrival

