



TERRA
ENVISION

Preliminary program TERRAenVISION 2025

**Nature-based Solutions to Facilitate the
Transitions for living within the
Planetary Boundaries**

**Granada, Spain, 8-11 July, 2025
(pre-post conferences 6-7 and 12-13 July)**

Organisers:

Jesús Rodrigo Comino, Associate Professor, University of Granada, Spain

Saskia Keesstra, Senior researcher, Climate- Kic Foundation, The Netherlands

Margot de Cleen, Senior Advisor, Ministry of Infrastructure and Water Management, The Netherlands

Ioannis Daliakopoulos, Assistant Professor, Hellenic Mediterranean University, Greece



**UNIVERSIDAD
DE GRANADA**



**GRANADA
TIERRA VIVA**



SEDER
soil erosion
and degradation
research group



Rijkswaterstaat

Pre-conference excursions

Date	Topic
6/07/2025	With “Salvemos La Vega, La Vega-Educa”, we will learn how traditional and modern production can articulate an vulnerable territory close to Granada city. Nature-based solutions as key environmental tools to achieve sustainable development. Meeting point (8:00): https://maps.app.goo.gl/WsQwyymJGRcyKTtS9 (on front of the Congress venue, close to the hotel Granada center).  

07/06/2025

Tropical fruit production, cultivation and development of past emerging crop and current consolidated sector (Vélez Málaga).

Meeting point (7:30): <https://maps.app.goo.gl/WsQwyymJGRcyKTtS9> (on front of the Congress venue, close to the hotel Granada center). 9:00 in Vélez Málaga with prof. José María Senciales-González (University of Málaga)



Tuesday 8th of July:

8.30-10.00	City walk for NBS in Granada city. Meeting point: (main entrance at the Paseo Prof. Juan Ossorio, https://maps.app.goo.gl/1PBPTob1aHnHWSxA6)
10.00-11.00	Registration: <u>Main Hall, -2 floor</u> of the Escuela Técnica Superior de Ingeniería de Caminos, Canales y Puertos de la Universidad de Granada https://g.co/kgs/BNMVL2C
11.30-12.10	Opening by University of Granada: Vice-cancellor of transference (Esteban Romero), Dean of Faculty of philosophy and letters, and director of the Polytechnic school Link: Main room → https://meet.google.com/vur-mtqt-pka
12.10-13.30	Opening panel: Innovative solutions for sustainable agriculture in Andalusia chair: Jesus Rodrigo-Comino Pitches by panelists: • Margarita Sepulveda: Approach to a Potential Strategy for Improving Agricultural Soil Quality Through the Use of Pig Slurry in Olive and Cereal Crops • David Colado: SOCIAL-AGRI: Digital innovation and collaboration for sustainable agriculture • Laura Cambroneró Gonzales Vivar: GOSOSVITI: Innovation in Viticulture through an Integrated DSS (Decision Support System) for Soil and Water Conservation • Jesus Vivar: Perception and Use of Precision Agriculture Technologies in Viticulture: Preliminary Results from the GO SOSVITI Project • Lourdes Vega Espinar: Implementation of innovative practices for the reduction of the alcohol content of Andalusian biologically aged wines Discussion Link: Main room → https://meet.google.com/vur-mtqt-pka
13.30-15.00	LUNCH
15.00-16.30	Parallel session AN1/3: Soil and water conservation for sustainable land management in grazing Organisers: Manuel Seeger and Jesus Barrena 1. Spatial patterns of soil bacterial communities in Mediterranean agrosilvopastoral system by Jesus Barrena Gonzalez 2. Enhancing Climate-Resilient Irrigation for Fruit Production through Reference Evapotranspiration Calibration and Nature-Based Solutions in Bosnia and Herzegovina by Natasa Cerekovic 3. Farm dams as climate-smart adaptations for agricultural water storage in Sweden by Melissa Reidy

	- Using Policy Innovation to Scale Biochar as a Nature-Based Solution for Climate-Resilient Land Management: Insights from Ireland by Lena Grobusch - Environmental factors regulating the fire effects on soil organic carbon across Malagasy ecosystems by Miralalaina Lovafitia Ratovoarimanana - Biochar as a nature-based solution in runoff and soil erosion control: plot-scale measurements under natural rainfall by Atollah Kavian (online) - Assessment of Nature-Based Agricultural Practices for Soil and Water Conservation Using SWAT+ by Brigitta Szabo (online) ROOM 1: LINK: https://meet.google.com/wsj-aeyj-njp
	NH1: Innovative solutions for increasing resilience to water-related hazards and soil erosion in agricultural areas Organisers: Valerio Vivaldi, Valentina Vaglia, Chiara Toffanin - Water as a Foundation for Climate Resilience: Integrating Energy Production and Agricultural Sustainability at Cascina Vialone by Nadia Bertolino - Evaluation and innovative study of the vine according to new agronomic scenarios for Oltrepì Pavese, Italy by Giovanni Marchese - Hydrogeological characterization of steep vineyard slopes through a combined approach for shallow slope failures susceptibility estimation by Valerio Vivaldi - Nature-based Solutions in vineyards of Oltrepì Pavese (Northern Italy): effects on land degradation by Antonio Gambarani - Mechanical behavior of clayey soil treated with <i>Trichoderma asperellum</i> by Ali Hajian - Effect of fungal treatment with <i>Penicillium chrysogenum</i> on mechanical properties of a clayey soil by Kima Saber Sichanii - Spaceborne monitoring of vineyards: optical and multipolarized radar-based indices tested on a wine-producing area in Northern Italy in the context of the NODES project by Fabio Dellacqua (online) ROOM 2: LINK: https://meet.google.com/wce-hqnf-dhk
16.30-17.00	Coffee/tea break
17.00-18.30	Plenary session NATURE BASED SOLUTIONS FOR AGRICULTURE AND NATURE AREAS (SOIL, WATER AND LANDSCAPE) (Aula): Saskia Keesstra Keynote: Juan Francisco Delgado (EU Foundation, Spain) <i>Cultivating Resilience: Nature-Based Solutions for Soil, Water, and Agricultural Landscape in the Era of Climate Change (2025/26)</i> Keynote: Douglas McMillan (GRI, Ireland) <i>Paludiculture – Silver Bullet Solution for landscape-level NBS (Bridging the agricultural-conservation divide)</i> Panel discussion Link: Main room → https://meet.google.com/vur-mtqt-pka
18.30-20.00	Poster session with refreshments

Wednesday 9th July

8.00-9.00	Registration: Main Hall, -2 floor of the Escuela Técnica Superior de Ingeniería de Caminos, Canales y Puertos de la Universidad de Granada https://g.co/kgs/BNMVL2C
9.00-10.30	Plenary session theme Methodologies: how to measure processes and impact of Nature-based solutions (Aula) chair: Manuel Seeger Keynote 1: VÍCTOR RODRÍGUEZ GALIANO (Universidad de Sevilla, Spain) <i>Using hyperspectral remote sensing to detect effects of salinity and nutrient deficit in rice crops</i> Keynote 2: Javier Cabello (University of Almeria, Spain) <i>Traditional water management systems in the Mediterranean mountains.</i> Discussion between keynotes and audience Link: Main room → https://meet.google.com/vur-mtqt-pka
10.30-11.00	Coffee/tea break
11.00-12.30	Parallel session MET1/2/4: Advances and Best Practices in Ecosystem Restoration and Environmental Remediation: Integrating Remote Sensing, Machine Learning, and In Situ Technologies Organisers: Yannis Louloudakis and Alberto Leombruni 1. MEO-Carbon: A Decision-Support Tool to Identify Critical Areas and Guide Ecosystem Restoration by N. Sfaksi 2. Hazardous elements and pharmaceuticals in soils of a Mediterranean wetland (L'Albufera de Valencia, Spain). Possible interactions by Vicente Andreu 3. Fertile Islands from above: Utilizing UAV photogrammetry to map fertile forest patches in a UNESCO biosphere reserve by Lars Stefan Engelmann 4. Emerging Contaminants in Soil Ecosystems: Microbial Disruption and Antimicrobial Resistance from a One Health Perspective by Lyudmyla Symochko 5. AI-Generated Landscape Imagery: Towards a Comprehensive Assessment by Phoebe Koundouri and Fivos Papadimitriou (online). 6. Full-scale Application in Italy of an ERD Technology for the treatment of an Aquifer Impacted with Chlorocarbons near a salt pond ecosystem by Alberto Leombruni (online) 7. Land Restoration Effectiveness Assessed by Satellite-Based Remote Sensing Technologies as A New Monitoring Approach by Ghadir Zbedat (online) ROOM 1: LINK: https://meet.google.com/wsj-ayvj-njp
	MET3: Social Innovation Labs: A Collaborative Space for Co-creation and Social Transformation Organisers: Lucía Moreno-Cuenca, Maria Teresa González-Moreno 1. How Living Labs can support lasting transformation by Sonia Pietosi 2. A soil database for the province of Granada to support pedoclimatic modelling and environmental degradation assessment by Lucía Moreno-Cuenca

	3. Soil living labs as tools for sustainable land management: a conceptual and operational framework based on a systematic review by María Teresa Gonzalez-Moreno 4. Implementing NBS Solutions to enhance regional climate resilience through the co-creation approach of the NATALIE Transformations Labs by Beatriz Medina (online) 5. Participatory Local Governance of Soil Health by Josefa Sánchez Contreras and dr. Alberto Matarrán Ruiz (online) ROOM 2: LINK: https://meet.google.com/wce-hqnf-dhk
12.30-14.00	Lunch break
14.00-15.30	Plenary session theme: Nature-based solutions for natural hazards (Fire, Floods and Droughts) (Aula) chair: Artemi Cerdà Keynote 1: Jorge Castro, (University of Granada, Spain) <i>Restoring Burnt Forests for the Future: Shifting Paradigms Towards Nature-Based Solutions</i> Keynote 2: Elisa Furlan (CMCC, Italy) <i>Transformative Nature-Based Solutions for building climate resilience and addressing environmental challenges</i> Discussion between keynotes and audience Link: Main room → https://meet.google.com/vur-mtqt-pka
15.30-16.00	Coffee/tea break
16.00-17.30	Parallel session MET5/6: Nature-based solutions for transformation journeys Organisers: Elisa Furlan and Denyse Julien 1. Circularity and interconnectivity of sustainable bioeconomy and agriculture An optimisation of approaches to the nature-based solutions. By Lena Madden 2. Making Monitoring Work: Addressing Implementation Challenges in Nature-Based Solutions by Pilar Andres 3. Forests and Forest Management as NBS: Lessons learned from Co-Creation processes in the Upper Allgu (Germany) by Gerd Lupp 4. Making NbS work for transformational adaptation at the local level: What can we learn from comparative approaches? By Lena Grobusch 5. Developing a Comprehensive Framework for Upscaling Nature-Based Solutions for Wastewater Treatment in Urban India: A Case of Kachchh, Gujarat by Aswin S Kumar (online) ROOM 1: LINK: https://meet.google.com/wsj-aeyj-njp
	Parallel session AN6: Nature-based solutions for water quality and quantify in Agricultural land Organiser: Dara Park 1. Hydrogeological experiments on MAR efficiency in Oaxaca, Mexico by Roel Dijkema 2. Geomorphodynamic changes by land-use change in South Spain by Manuel Seeger

	3. Short-term Influence and Potential Long-term Impacts of Cover Crops on the Health of Southern United States Inceptisols by Dara Park 4. Effect of Hedgerows and Vegetation Cover as Decentralized Flood Protection Measures on the Drainage Behaviour of Arable Soil with a Historical Plough Pan by Mathias Jackel 5. Integrating Hydrogeological and Agronomical Sciences to Assess AgMAR Suitability in North Indian Region by Jadav Kartikkumar (online) 6. Territorial Center for Nature-based Solutions (NbS): An Inclusive Mechanism to Bridge Policy, Science, and Local Action in Southern Mauritania by Almamy Soumary (online) ROOM 2: LINK: https://meet.google.com/wce-hqnf-dhk
17.30-19.00	Poster session with refreshments

Thursday 10th July

8.00-9.00	Registration: <u>Main Hall, -2 floor</u> of the Escuela Técnica Superior de Ingeniería de Caminos, Canales y Puertos de la Universidad de Granada https://g.co/kgs/BNMVL2C
9.00-10.30	Plenary session theme: SCIENCE BROKERS FOR TRANSITIONING TO A CLIMATE RESILIENT AND CIRCULAR SOCIETY chair: Saskia Keesstra Keynote 1: Gerd Lupp (Technische Universität München, Germany) <i>The socio-cultural and socio-political dimensions of NBS and the relevance of Social Sciences and Humanities for mainstreaming NBS</i> Keynote 2: Manuela Martinez Jimenez (NGO “Salvemos la Vega-Vega Educa”, Spain) <i>Salvemos la Vega-Vega Educa: 20 years involving society and institutions in the protection and revitalization of the "Vega de Granada"</i> Discussion between keynotes and audience Link: Main room → https://meet.google.com/vur-mtqt-pka
10.30-11.00	Coffee/tea break
11.00-12.30	Parallel session NH3/4: Scaling and Integrating Nature-Based Solutions for Climate Action: Frameworks for Classification, Prioritization, and Resilience Strategies Organisers: Saskia Keesstra 1. Comparative Analysis of YOLO Models for Vineyard Abandonment Detection in Oltres Pavese by Sohail Anwar 2. Enhancing Regional Climate Resilience: A Comprehensive Evaluation Framework from the NATALIE Project by Jesus Soler 3. Mainstreaming nature-based solutions in practice across coastal and riverine areas of Europe by Geert van der Meulen 4. Rejuvenating India's Water Bodies: Nature-Based Solutions for Sustainable Water Security by Ankit Kumar (online) 5. Exploring the Roman Centuriation Northeast of Padua as a Historical Nature-Based Solution for Better Flood and Drought Resilience by Tanja Kremenec (online)

	ROOM 1: LINK: https://meet.google.com/wsj-aeyj-njp
	Parallel session UR2: Upscaling and effects of nature-based solutions in urban regions and metropolises 1. Assessing the short and long-term impact of green roofs on urban air quality: Eindhoven case-study by Miguel Rosa 2. Landscape based solutions for people and biodiversity by Nico Tillie 3. From water scarcity to resilience: Indicators for Nature-based Solutions in semi-arid urban environments by Liliana Mendiola 4. Green walls for water and waste circularity in urban water-scarce environments by G Vazquez 5. From fallow to flourishing: NBS ideas and implementation strategies for Belfast by Sean Cullen 6. Making a post-earthquake urban-rural landscape resilient: Landscape planning approach in Kahramanmaraş Province by Nilgun Karadeniz, Sule Kisakurek and Sebahat Aciksoz 7. Free the Wai by Matthew Bradbury ROOM 2: LINK: https://meet.google.com/wce-hqnf-dhk
12.30-14.00	Lunch break
14.00-15.30	Plenary session theme: Theme Nature-based solutions for urban and industrial areas (soil, water and spatial planning). (Aula) chair: Jesus Rodrigo-Comino Keynote: Belén Pérez Pérez (University of Granada) and Jesús M. González-Pérez (President of the Spanish Geographical Association) <i>Title: City and access to energy. Energy Communities from the Social Economy.</i> Keynote: Rob Roggema (Tecnológico de Monterrey Mexico) <i>Nature-driven spatial strategies to create a green metropolis</i> Panel discussion Link: Main room → https://meet.google.com/vur-mtqt-pka
15.30-16.00	Coffee/tea break
16.00-17.30	Parallel session SB1/2/3: Inclusive and Collaborative Governance of Nature-Based Solutions: Advancing Awareness, Partnerships, and Socio-Environmental Justice Organisers: Pavel Raska and Gerd Lupp 1. SUDS for Water and Climate Challenges in Murcia: A CARDIMED Case Study by Elena De Vicente 2. Measuring What Matters: Co-Creation Indicators for the Socio-Political Dimensions of Nature-Based Solutions by Gerd Lupp 3. Assessment and perception of rural socio-ecological system development in suburban conditions in Central Europe by Marta Dobrovadska 4. Designing for Transformation: A Framework for Resilient and Sustainable Food Systems within Safe and Just Operating Spaces by Denyse Julien 5. Multi-criteria participatory framework for NbS planning in urban environments by David Camacho 6. Introducing the Landscape Digital Twin by Henk Alkemade (online) ROOM 1: LINK: https://meet.google.com/wsj-aeyj-njp

	Parallel session URW2: Cultivating resilience: Urban agriculture as a nature-based solution Organisers: Greg Keeffe, Sean Cullen and Rebecca McConnell Talk by Igor Rubio-Cisneros (online): Outdoor urban milpa system next to the TEC greenhouse in Monterrey, Nuevo Len ROOM 2: LINK: https://meet.google.com/wce-hqnf-dhk
17.30-19.30	Poster session with refreshments and closing of indoor event

Posters to be presented all days	
1.	Mapping Soil Erodibility by means of Machine Learning Models in a Semi-arid Watershed by Artemi Cerdà
2.	Past herbivore grazing pressure on highly diverse open ecosystems in Central-Eastern Europe: a view from coprophilous fungal spores by Angelica Feurdean (online)
3.	FLOOD RISK COMMUNICATION INFRASTRUCTURE FOR RISK REDUCTION AND RESILIENCE by Muhammad Haq (online)
4.	Disentangling the green, grey, and hybrid in a complex nature-based framing by Pavel Raska
5.	Multi-objective, stakeholder-oriented planning of nature-based small water retention measures in an agricultural catchment by Ronald Andrees Kolcsar (online)
6.	BIOGAS RESIDUES IN THE BATTLE FOR TERRESTRIAL CARBON SEQUESTRATION IN THE GRASSLAND SOILS OF THE GREATER REGION by Bella Tsachidou
7.	Plant functional diversity and carbon storage along biological restoration operations at southern hill slopes Alborz Mountain by Zeinab Jafarian
8.	Principles for the Assessment of Natural Source Zone Depletion Based on Temperature Measurements in the Subsoil by Daniel Daz Casado
9.	Soil erosion in agriculture land in Spain. A review by Artemio Cerda
10.	Soil erosion control in citrus plantations. The use of Chipped Pruned Branches in sloping terrain as a mulch. By Artemio Cerda
11.	Soil erosion control in citrus plantations. The case of cover crops in the Montesa Experimental station by Artemio Cerda
12.	The effect of biochar from pruning wastes on CO2 emissions, hydrophysical and soil biological properties by Gabriel Gasco
13.	ASSESSING CLIMATE IMPACT IN VINEYARDS OF BODEGAS CALVENTE (PADUL, GRANADA) THROUGH ADVANCED DATA PROCESSING AND BIOCLIMATIC INDICES by Lucia Moreno Cuenca
14.	Moroccan vernacular knowledge: the genius of durability and adaptivity by Youssra ELMarini
15.	Scaling Soil-Based Farm Management: An Action Perspective on Carbon Sequestration and Agricultural Transition by Jennie van der Kolk
16.	Balancing Urban Densification and Climate Resilience with Nature-Based Solutions: Insights into 3D Spatial Patterns and Cooling Effects via Remote Sensing by Karolina Zieba-Kulawik (online)

17. Deriving forest cover rates from map sources: A contribution to official statistics and environmental reporting by Alessia D'Agata
18. Google Earth Engine-Based Land Use/Land Cover Mapping in Granada, Spain Using Sentinel-2 and Machine Learning Techniques by Sinan DEMiR (online)
19. Analysis of Tomato Yield Predictions with Sentinel-2 and UAV-Based NDVI: a case study in Northern Italian farms by Fabio Dell'Acqua (online)
20. Dendrogeomorphology in intertropical mountain environments: case of El Rosario, Michoacin. by Violeta Rangel-Velarde
21. Soil erosion in new citrus plantations. Rainfall simulation experiments. Montesa experimental station, Eastern Iberian Peninsula. By Artemio Cerda
22. Can Soil Water Repellency Impact the Function and Efficiency of Bioretention Cells? By Jack Cuneo
23. Agave salmiana as a Functional Component of Bioretention Devices in Semiarid Climates by Gabriela Vezquez-Rodriguez
24. Assessing the impact of afforested species on carbon sequestration in the green zones of an industrial site located in arid regions of Iran by Shamsholla Ayoubi (online)
25. Soil erosion dynamics in rehabilitated apple orchards, hilly region, Central Iran (Use of magnetic susceptibility and Cs-137 techniques) by Shamholla Ayoubi (online)
26. Proposing a Soil Quality Index for Cereal Croplands in Campo de Comara (Malaga, Spain) by Jesus Rodrigo-Comino
27. Mapping Soil Erosion in Vineyards to create the first national database: The ISUM Web-Based Approach by Jesus Rodrigo-Comino
28. A probabilistic approach for the analysis of susceptibility to shallow landslides in different soil managements by Matteo Giganti,
29. Connected Cities Strengthening Green Infrastructure through Data and Collaboration by Maria Glushkova (online)
30. Participatory Mapping for Wildfire Prevention: A Stakeholder-Based Approach in Sardinia (Italy) by Michela Bazzoni
31. Comparative Assessment of Enriched Compost and Biochar Application in an Olive Orchard in Crete by FENIA GALLIOU
32. Projection of Drought Tendencies in the Horno Pohronie Region (Central Europe, Slovakia) for the Period 2025,Äì2050 by Paulina Nalevankovi
33. Temporal Analysis of Dual-pol Scattering Powers over Wet and Dry Sown Rice Fields: A Case Study in Northern Italy by Fabio Dell'Acqua (online)
34. Revealing land management practices effects on ecosystem recovery using NDVI by Giannis Louloudakis
35. The impact of historical land cover change on soil organic carbon in Malagasy open grassy ecosystems : a stable isotope approach by Miralalaina Lovafitia Ratovoarimanana
36. Exploring the saprolite horizons as proxies for Enhanced Rock Weathering in tropical soil by Thairis Gomes dos Santos
37. An integrated multi-process evaluation of land degradation in Europe by Remus Pravalie
38. Join the Green Horizons farmers network: a European network of networks for farmers that want to transition to sustainability by Saskia Keesstra

**39. Advancing Climate Adaptation Through Forest-Based Nature-Based Solutions:
A European Database Approach by Saskia Keesstra**

11th July: Conference excursion

Join Us for an Exclusive Vineyard & Orchard Tour!

Meeting point (8:00): <https://maps.app.goo.gl/WsQwvymJGRcyKTtS9> (on front of the Congress venue, close to the hotel Granada center).

Jesús Rodrigo Comino. University of Granada. jesusrc@ugr.es

Discover the cutting-edge agricultural research happening in our experimental vineyard between Padul and Cozvíjar, part of regional (GOSOSVITI) and European (SOILCRATES & SOSVITI-MCSE) projects. Explore innovative sustainable practices in our olive and almond groves in Lanjarón, where experimental plots feature cover crops, aromatic plants, and more handled by IFAPA, the Agriculture Research Institute of Andalucía.

 **Location:** Padul-Cozvíjar & Lanjarón

 **Experience firsthand how science is shaping the future of viticulture and woody crops!**

Organizers: Laura Cambronero, Jesús González Vivar and Víctor Hugo Durán Zuazo.



Post-conference excursions

(see details on other page)

Date	Topic
12/07/2025	The impact of forest fires. Rehabilitation and restoration. Jorge Castro 
13/06/2025	Traditional water management systems in the Mediterranean mountains. Javier Cabello 