



# Restoring Nature, Reconnecting People

**ABSTRACTS BOOK** 



1

Welcome

2

Organizing Committee

3

-Scientific Committee

4

Programme detail

5

Presentations & workshops Abstracts

6

Posters List

7

Posters Abstracts

8

Sponsors

9

-Participants List







# Welcome to the 13th European Conference on Ecological Restoration! Welcome to SER Europe 2022!

The Society for Ecological Restoration (SER) is the professional Society of reference in the field of ecological restoration. It promotes the science, practice, and policy of ecological restoration to protect biodiversity, improve adaptation to climate change, mitigate its effects, and restore a healthy relationship between nature and society. For three decades, SER has given voice to this discipline and provided leadership in all aspects of its development. The European Chapter of the Society, acquaints hundreds of experts and organizational members in 37 countries, and has affiliated organizations in 6 of them.

These are crucial times for ecological restoration in Europe and globally. Ecological restoration is essential to combat climate change, protect biodiversity and reverse desertification, and thus contribute to human wellbeing. Under the UN Decade of Ecosystem Restoration (2021-2030) and the EU Biodiversity Strategy for 2030, we can reverse the global environmental crisis, and give Anthropocene a chance. Yet, to obtain all the benefits that ecological restoration can provide and ensure a fair distribution of wealth, we must promote its practice and strive to increase the quality of restoration programs. Bridges between science, practice and policy must be built, based on scientific excellence, to better understand socio-ecological systems and their management.

SERE2022 represents an excellent opportunity to foster efficient reciprocal exchanges between managers, decision and policymakers and the academia across Europe. It is also the place where experts from different restoration sectors (forests, wetlands, rivers, agroecosystems, marine areas, urban environments, extractive industries, etc.) have the unusual chance to sit together and learn from each other.

There are many reasons to meet in Alicante, including high levels of biodiversity, long history of interactions between humans and nature, nice examples of socio-ecological co-evolution, the combination of land and sea, and the long history of actions to combat degradation and desertification. Last, but not least, the strong commitment of the government of the Region of Valencia and the Spanish government with ecological transition and ecological restoration.

For one week, we will gather in Alicante to assess recent advances in the theory and practice of ecological restoration and discuss future priorities. We invite you to take full advantage of the many events that will be organized under the umbrella of SERE 2022 and contribute to build the European leadership in ecological restoration.

JORDI CORTINA-SEGARRA Chair SER Europe University of Alicante

# 2

#### - Organizing Comittee







Jordi Cortina Segarra Department of Ecology. University of Alicant



José Antonio Alloza Millán CEAM Foundation



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Paula Lopezosa
Department of Ecology.
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Fernando T. Maestre Gil Department of Ecology. University of Alicante



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Luna Morcillo Julià CEAM Foundation



Hassane Moutahir CEAM Foundation



Amalia Muñoz Cintas CEAM Foundation



Adrián Maturano Multidisciplinary Institute for Environmental Studies (IMEM) "Ramon Margalef", University of Alicante, Spain



Jorge Olcina
Department Regional Geographical
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Víctor M. Santana Pastor CEAM Foundation / Department of Ecology. University of Alicante



Elysa Silva Morales Department of Ecology. University of Alicante



Susana Silvestre CREAF, Spain



Alejandro Valdecantos Dema Department of Ecology. University of Alicante



Alberto Vilagrosa Carmona CEAM Foundation / Department of Ecology. University of Alicante



Ramón Vallejo Calzada CEAM Foundation

# 3 - Scientific Comittee







Jordi Cortina Segarra
Department of Ecology.
University of Alicant



Berit Köhler Norwegian Institute for Nature Research (NINA) Norway



Kris Decleer
Research Institute for Nature
and Forest
Belgium



Anne Tolvanen Natural Resources Institute Finland, Oulu Unit Finland



Aveliina Helm Institute of Ecology and Earth Sciences, University of Tartu Estonia



Johannes Kollmann Technische Universität München, Dept. Ökologie und Ökosystemmanagement Lehrstuhl für Renaturierungsökologie Germany



Melinda Halassy Institute of Ecology and Botany, Centre for Ecological Research Hungary



Sabine Tischew Hochschule Anhalt (FH), Fachbereich 1 Germany



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Josu Alday
Dep. of Vegetal Production
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Universitat de Lleida
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Alice Nunes
Centre for Ecology, Evolution
and Environmental Changes.
Faculdade de Ciências,
Universidade de Lisboa
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Richard Scott
UK Urban Ecology Forum.
Eden Project
United Kingdom



Kristin Svavarsdottir Soil Conservation Service of Iceland (SCSI) Island





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#### Monday, 5th September 2022

Programme







#### 8.30-17.00 | Pre-Conference Courses

(Aulari II - General Lecture Hall II, University of Alicante) Room: Seminar of Ecology (Sciences Faculty II, UA)

8.30-13.30 - 15.00-17.00 Introduction to Soil and Water Bioengineering for ecological restoration. Sangalli P., Arizpe D. & Pirrera G.

Room: A2/E22 (Aulari II - General Lecture Hall II)

8.30-11.30 - 13.30-16.30 Prioritizing restoration areas using Spatial Multicriteria Analysis. Mchich Derak & Jordi Cortina-Segarra

17.00-18.00 | Restoring nature, reconnecting people: the 13th European Conference on Ecological Restoration for beginners

(Room: Rafael Altamira - Seu Ciutat d'Alacant, Alicante city centre)

17.00 | Registration and delivery of documentation (Panoramis Terrace, Alicante city centre)

19.00-21.00 | Welcome party (Panoramis Terrace, Alicante city centre)

#### Welcome addresses by:

Dr. Jordi Cortina, Chair European Chapter, Society for Ecological Restoration and SERE 2022 Conference organizer.

*Dr. James Hallett*, Chair of the Board of Directors, Society for Ecological Restoration.

Dr. Cara Nelson, Leader Ecosystem Restoration Thematic Group, Commission on Ecosystem Management, IUCN.

Mr. Stefan Leiner, Head of Unit Natural Capital & Ecosystem Health (ENV.D.2) Directorate-General for Environment, European Commission.

Mr. Manuel Villar, Deputy
Mayor and Councilor for the
Environment, City Council of
Alicante.
Dr. Amparo Navarro, President

of the University of Alicante.

#### Cocktail

Exhibition of traditional Alicante music, folk dances, and costumes.

### Tuesday, 6th September 2022

#### Programme

Main Hall Aulari II - General Lecture Hall II, University of Alicante 08.30 | Registration and delivery of documentation

#### Sala d'actes

#### Aulari II -Auditorium General Lecture Hall II, University of Alicante

#### 9.15-10.00 | Opening ceremony

- **9.15** | **Salutation.** Juan Mora, Vicerrector de la Universidad de Alicante (Deputy President of the University of Alicante).
- **9.20 | Welcome address.** Jordi Cortina-Segarra, Chair of SER Europe
- **9.30 | Introducting online speakers.** Juan Mora, Vicerrector de la Universidad de Alicante (Deputy President of the University of Alicante).
- 9.35 | Welcome address. Mireia Mollà, Consellera d'Agricultura, Desenvolupament Rural, Emergència Climàtica i Transició Ecològica de la Generalitat Valenciana (Secretary of Agriculture, Rural Development, Climate Emergency and Ecological Transition of the Regional Government of Valencia)
- **9.40 | Welcome address. H**ugo Morán, Ministerio para la Transición Ecológica y el Reto Demográfico del Gobierno de España (Secretary of State for the Environment, Ministry for the Ecological Transition and the Demographic Challenge, Government of Spain)
- **9.45 | Welcome address.** Virginijus Sinkevičius (online) (Commissioner D.G. Environment, Oceans and Fisheries)
- **9.50 | Official inauguration.** Juan Mora, Vicerrector de la Universidad de Alicante (Deputy President of the University of Alicante).
- 10.00-10.30 | Stefan Leiner (EC) Chair: Anne Tolvanen
- 10.30-11.15 | Plenary 1. Towards a Decade of Social-Ecological Restoration. Fischer, Joern - Chair: Anne Tolvanen

11.15-11.45 | Coffee

11.45-14.00 | W4. Rewilding: challenges and opportunities. Chair: José M. Rey Benayas

11.45-12.00 | Rewilding agricultural landscapes.- Rey Benayas, José M.

12.00-12.15 | Exploring the potential for rewilding in Spain.-

12.15-12.30 | Scaling up rewilding. Nature as our ally in socioeconomic challenges.- *Helmer, Wouter* 

12.30-12.45 | Psychological and ecological potential of rewilding in different continents.- *Jiménez, Ignacio* 

12.45-13.00 | Restoration of wild reindeer (Rangifer tarandus tarandus) ranges in Norway.- *Gundersen, Vegard* 

13.00-13.15 | Evaluation of the habitat of Lynx rufus (Schreber, 1777) in two windfarms of Tamaulipas, Mexico.-Sarmiento-Muñoz, Tania

13.15-13.30 | Assessing the ecological suitability of the Irish landscape for the Eurasian lynx (Lynx lynx).- Guilfoyle, Colin

13.30-13.45 | Using a Restoration Diagnostic tool to assess barriers and opportunities to restoration: Experience of the Endangered Landscapes Programme .- Thomas, David

13.45-14.00 | Large-scale rewilding of European landscapes: concepts, monitoring and scenarios.- *Nestor Fernández* 

13.45-15.00 | Lunch





15.00-15.45 | Plenary 2. The United Nations Decade on Ecosystem Restoration: an opportunity to upscale restoration and to share good practices in Europe by 2030.
Besacier. Christophe - Chair: Kristin Svavarsdóttir

15.45-17.45 | S5. Restoration Monitoring. Chair: Susana Bautista

15.45-16.00 | Evaluation of the restoration of formerly dyked marshes, using the recovery wheel 2.0..- Gallet, Sébastien

16.00-16.15 | Vegetation succession in abandoned fields: chronosequence data verified by permanent plots.Rehounkova. Klara

16.15-16.30 | Social-ecological post hoc assessment of ecosystem restoration from a system archetype perspective.-Pacheco-Romero, Manuel

16.30-16.45 | Ecosystem composition, structure and function of afforested areas in Portuguese drylands.- Köbel Batista, Melanie

16.45-17.00 | Gathering knowledge on ecological restoration practices in European forest ecosystems.- Rubio Cuadrado, Álvaro

17.00-17.15 | Challenges in Monitoring Tree Survival and Development.- Dwver. Edward

17.15-17.30 | Assessing the impact of post-fire restoration interventions using spectral vegetation indices: A case study in El Bruc, Spain.- Dorado Guerrero, Bernat

17.30-17.45 | How remote sensing choices influence monitoring and evaluation results of ecological restoration.Willemen, Louise

#### Tuesday, 6th September 2022

#### Programme



11.45-13.45 | W1. Enhancing capacities for effective ecosystem restoration throughout the UN Decade and beyond. Facilitators: James G. Hallett (SER) & Cara R. Nelson (IUCN CEM & University of Montana)

11.45-11.53 | Opening: Key gaps and capacity priorities for restoration to support the United Nations Decade on Ecosystem Restoration – Besacier, Christophe (FAO)

11.53-12:00 | Development of a Capacity, Knowledge and Learning Action Plan for the UN Decade –Chazdon, Robin (Forestoration International)

12.00-12:20 | Proposed flagship products that could be elaborated in the context of the UN Decade –Chazdon, Robin (Forestoration International) and Andrea Romero (FAO)

12:20-13.20 | Small group discussions on proposed flagship products

13.20-13.40 | Participants comments

**13.40-13.45 | Closing remarks.** Besacier, Christophe (FAO)

13.45-15.00 | Lunch

15.45-17.45 | W3. Developing Guidance for Effective Ecosystem Restoration. Facilitators: Boze Hancock (TNC), Emanuela Weidlich (Leuphana University), George Gann (SER & Institute for Regional Conservation), Robin Chazdon (Forestoration International) & Victoria Gutierrez (Commonland)

#### 15.45-16.10 | Opening plenary

- Welcome and goals of the session Andrea Romero (FAO)
- Background and development of Standards of Practice for Ecosystem Restoration -James G. Hallett (SER)
- Introduction to participant exercise -Cara R. Nelson (IUCN CEM & University of Montana)

16.10-17.20| Small group discussions

17.20-17.45 | Closing plenary

- · Participant comments
- Closing remarks, Christophe Besacier (FAO)





# A2/D02 room, Aulari II - General Lecture Hall II, University of Alicante

11.45-13.45 | W8. Ecosystem health, ecological restoration, and human health: let's identify and strengthen the linkages.

Chair: Aronson, James

Prof. Ása Aradóttir

Dr. Katalin Torök

Dr. Melinda Halassy

Dr. Þórunn Wolfram Pétursdóttir

Dr. Eric Bourguignon

13.45-15.00 | Lunch

15.45-17.45 | W11. Mind Your Language! Restoration, Regeneration or Rewilding? What is the best way to communicate conservation strategies to the public? *Chair: Woodworth. Paddy* 

Woodworth, Paddy

Aronson, James

Peláez, Sara

17.45-19.15 | Coffee + posters

### Tuesday, 6th September 2022

#### Programme

# A2/C4 room, Aulari II - General Lecture Hall II, University of Alicante

11.45-13.00 | W6.1 Education and Training in Ecological Restoration: Restoring hope – opportunities for international and intergenerational knowledge exchange. Chair: Rodríquez González. Patricia María

11.45-11.50 | Introduction

11.50-12.10 | Wanted! Chief Ecosystem
Orchestrators. - Moolenaar, Simon Willem

12.10-12.25 | WWF Spain experience on participation in ecological restoration. - *Melero de Blas. María* 

12.25-12.40 | Facing-Fire: service learning for education and training in wildfires.- *Peña Molina*. *Esther* 

12.40-13.00 | Knowledge transfer among sectors to improve good practices in European riparian restoration.- Rodríguez González, Patricia María

13.45-15.00 | Lunch

15.45-16.45 | W6.2 Education and Training in Ecological Restoration: Restoring hope – opportunities for international and intergenerational knowledge exchange. Chair: Rodríguez González, Patricia María

15.45-16.00 | Challenges and opportunities for international collaboration in ecological restoration learning from experiences in Puerto Rico. – Kaufman, Breanna

16.00-16.15 | YoungER's on the road for restoring ecosystems.- Poalinelli Reis, Bruna

16.15-16.30 | Experiences sharing: How YoungER's are contributing to education and training in ecological restoration.- Poalinelli Reis. Bruna

**16.30-16.45 | YoungER Opportunity Board.** *Fraga Dornellas Cysneiros, Luísa* 

16.45-17.15 | Disscussion- opportunities for international and inter-generational knowledge exchange.- Maria Nolan & YOUNG#ER

17.45-19.15 | Coffee + posters





# A2/D03 room, Aulari II - General Lecture Hall II, University of Alicante

11.45-12.15 | E4. MITECO. The Spanish National Restoration Plan within the framework of the National Strategy on Green Infrastructure. Manuel Oñorbe

12.15-12.45 | E11. European Investment Bank initiatives on ecological restoration. Stephen Hart

12.45-13.15 | E2. Living Building Challenge: A Visionary Path to Regenerative Buildings. Júlia Perez Torres

13.15-13.45 | E13. The International Network for Seed-based Restoration (INSR): A SER Section. Emma Ladouceur

13.45-15.00 | Lunch

15.45-16.15 | E9. Presentation of SERIAC, the new Iberoamerican and Caribbean chapter of the SER. Eduardo Arellano, Pilar Andrés

16.15-16.45 | E12. Struggling for climate neutrality in Europe: carbon sequestration as an opportunity for large scale restoration of agricultural soils. *Pilar Andrés, Eduardo Arellano* 

#### Programme

Main Hall Aulari II - General Lecture Hall II, University of Alicante 08.30 | Registration and delivery of documentation

#### Sala d'actes - Aulari II - Auditorium General Lecture Hall II, University of Alicante

8.30-9.15 | Plenary 3. The European Green Deal and Systemic approaches to Nature Restoration. Bruyninckx, Hans Chair: Aveliina Helm

9.15-11.15 | S1.1 Restoration measures for landscape connectivity and implementation of Green Infrastructure. Chairs: Jiménez Franco, María Victoria and Rodríguez-Caro, Roberto C.

9.15-9.30 | Learning from secondary succession to assist in the restoration of semi-arid oldfields in SE Spain.- Robledano Aymerich, Francisco

9.30-9.45 | Amphibian road mortality in Spain: SAFE Project and other initiatives of AHE.-Caballero Díaz. Carlos

9.45-10.00 | Rehabilitation of bog woodlands and alluvial forests – best practice and lessons learned.- *Willecke, Inga* 

10.00-10.15 | Managing stress-inducing factors for better restoration outcomes, the case of low-lying Mediterranean Iberian coast.-Lascurain Golferichs, José

10.15-10.30 | The Role of Green Roofs in Urban Ecological Restoration.- Liberalesso, Tiago

10.30-10.45 | Do lowland semi-improved grasslands have a natural restorative capacity to revert to semi-natural grassland vegetation?.- O'Rourke-Griffin, Sally

10.45-11.00 | Recovering landscapes and its functionality. The holistic LIFE RIBERMINE project (Guadalajara, Spain).- *Martín Moreno, Cristina* 

11.00-11.15 | Early drought prevents annual species to persist on a Mediterranean extensive green roof.- *Vidaller, Christel* 

11.15-11.45 | Coffee

11.45-13.15 | S1.2 Restoration measures for landscape connectivity and implementation of Green Infrastructure. Chair: Jiménez Franco, María Victoria

11.45-12.00 | Identification of plant indicators for high pollinator diversity when prioritizing roadside restoration.- *Skrindo, Astrid Brekke* 

12.00-12.15 | LIFE PRIMED (LIFE17NAT/ GR/000511): promoting interdisciplinarity and ecosystem-based approach when restoring declined Mediterranean forest.- Cambria, Vito Emanuele

12.15-12.30 | A proposal for classifying nature-based solutions.- Mayor Farguell, Xavier

12.30-12.45 | Assessing limiting factors for natural regeneration in Mediterranean hedgerows.- *García de León, David* 

12.45-13.00 | Composition and diversity of arbuscular mycorrhizal fungal communities associated with planted Mediterranean hedgerows.- *García de León, David* 

13.00-13.15 | Designing diverse and functional green areas: a toolkit for decision makers.-*Magro, Sandra* 

13.15-14.30 | Lunch



15.15-16.45 | S15. Management and Policy in Restoration. Chair: Sabine Tischew

15.15-15.30 | Is it a Man's world? Gender bias in Ecosystem Restoration.- Rohrer Rodriguez, Zoe

15.30-15.45 | Identifying Training needs in Ecological Restoration at European scale.- Corrià. Robin

15.45-16.00 | Knowledge needs of restoration practitioners in southeastern Spain.- Cortina-Segarra. Jordi

16.00-16.15 | Management Prioritisation of Czech Natura 2000 Sites.- Ivana, Jongepierova

16.15-16.30 | Fifty Shades of Restoration in Italy: Analysis of Legal Tools and Drivers for Transformative Change.Ciscato. Eleonora

16.30-16.45 | Is the proposed EU Nature Restoration Regulation 'fit for purpose'?.- Decleer, Kris

16.45-17.15 | Coffee

17.15-19.15 | S13. Dryland Restoration. Chair: Fernando T. Maestre Gil

17.15-17.30 | Land Degradation Neutrality, addressing land degradation beyond drylands and restoration.- *Martinez* Valderrama. Jaime

17.30-17.45 | Priority effects in dry grasslands: insights from a field experiment and implications for restoration.- Alonso-Crespo, Inés María

17.45-18.00 | Livestock grazing and ecosystem service delivery in global drylands.- Maestre Gil. Fernando Tomás

18.00-18.15 | Overgrazing reduces the ability of soil microbes to sustain dryland functioning: implications for ecosystem restoration.- Neuenkamp, Lena

18.15-18.30 | Maximizing runoff capture by vegetation by spatial modelling as a tool to enhance dryland restoration.
Maggioli, Lisa

18.30-18.45 | Establishing resourceconserving species-diverse patchy vegetation: a nature-based path forward to restore drylands.- Bautista. Susana

18.45-19.00 | Effect of seed biopriming with biocrust-forming cyanobacteria on radicle growth and germination of semiarid native plants.- Alameda Martín, Aitor

19.00-19.15 | Forest restoration in drylands is conditioned by climatic legacies.- *Guirado, Emilio* 

#### Programme



## A2/D01 room - Aulari II General Lecture Hall II, University of Alicante

9.15-11.15 | S2.1 Forest regrowth after land abandonment in Europe: extent, threats, and opportunities. Chairs: Espelta Morral, Josep Maria & Hampe, Arndt

9.15-9.30 | What can ecosystem change over 30,000 years tell us about future ecological restoration options? Some hints from NE Portugal.- Beja, Pedro (Invited keynote)

9.30-9.45 | Outcomes and drivers of forest recovery.- Cruz-Alonso, Verónica (Invited keynote)

9.45-10.00 | Tree species diversity increase in Catalan forests is associated to forest history, connectivity, and management.Selwyn Alvarez. Miriam

10.00-10.15 | Degree of ecological specialization in vegetation succession in Central European disturbed sites.Ballesteros, Miguel

10.15-10.30 | The role of remnant trees differs among oak species in the colonization of pine plantations.- Lorente Casalini Olivia

10.30-10.45 | Being in or out the climatic niche influences the performance of Pinus plantations in Spain.- Perez Navarro, Maria Angeles

10.45-11.00 | Recovering soil fungal communities in abandoned mined sites; how should we act?.- Alday, Josu G

11.00-11.15 | Plant-animal seed dispersal interactions as key drivers of ecological restoration in a changing world.- Silveira Bueno, Rafael

11.15-11.45 | Coffee

11.45-13.15 | S2.2 Forest regrowth after land abandonment in Europe: extent, threats, and opportunities. Chair: Espelta Morral, Josep Maria & Hampe, Arndt

11.45-12.00 | When nature concludes the forest transition – natural forest regrowth in the eyes of society.- Winkel, Georg (Invited keynote)

12.00-12.15 | Ten golden rules for reforestation – and when natural regeneration has a need for seed.- Hardwick, Kate (Invited keynote)

12.15-12.30 | Carbon offsetting through reforestation: how can society enable a great opportunity for sparsely populated areas.- Martínez Sanz, Francisco Manuel

12.30-12.45 | Mixed forest establishment in a degraded area in northern Spain – an experimental approach.- *Uzquiano*, *Sara* 

12.45-13.00 | Long-term shrub encroachment of Mediterranean mountain grasslands in relation to climate and rewilding.- Rincón Madroñero, Marina

13.00-13.15 | Conclusions and perspectives

13.15-14.30 | Lunch

15.15-16.45 | S10. Restoring Agricultural Land and Other Heavily Transformed Landscapes. Chair: Pilar Andrés Pastor

15.15-15.30 | Restoration in the agricultural landscape as key to regenerative agriculture: summary of the EASAC report.-Valkó, Orsolya

15.30-15.45 | Assessing farm biodiversity in orchards to identify good management practices using a global online tool.
Arellano. Eduardo

15.45-16.00 | Using complementary diversity metrics to promote the resilience of agroforestry systems to climate change.Nunes. Alice

16.00-16.15 | Soil c sequestration and p dynamics after restoration of arable croplands into grasslands in humid temperate areas.- *Merino, Agustin* 

16.15-16.30 | Valle Salado Botanic Site: to restore the halophilic vegetation.- Sangalli, Paola

16:30-16.45 | Hydrological management of Castellet basin for taking control of avenues, forest fires, and improve biodiversity.- Sorolla, Gina

16.45-17.15 | Coffee

17.15-18.45 | S17. Forest Restoration. Chair: Alejandro Valdecantos

17.15-17.30 | Deciphering the performance of holm oak saplings to improve restoration success of Mediterranean forests.- Juan-Ovejero, Raquel

17.30-17.45 | Potential impacts of afforestation/deforestation scenarios on regional precipitation recycling in a Mediterranean area in SE Spain.- Moutahir, Hassane

17.45-18.00 | Plant functional diversity affects the macroinvertebrate community in a Hawaiian wet forest restoration.- Sebastián González. Esther

18.00-18.15 | Conservation and Restoration of Mediterranean Taxus baccata woods in southeastern Spain.- Arizpe Ochoa, Daniel

18.15-18.30 | Rehabilitation of cork oak forests through the involvement of the local population from Northwestern Tunisia.STITI, Boutheina

18.30-18.45 | Five years\' experience of Natura2000 oak forest habitat restoration in Hungary.- Aszalós, Réka

#### Programme



## A2/D02 room - Aulari II General Lecture Hall II, University of Alicante

9.15-11.00 | S8. Mine Restoration. Chair: Klara Rehounkova

9.15-9.30 | "La Chanta" quarry: a study case of restoration and reconnecting people with nature.- *Gegúndez Cámara, Pilar* 

9.30-9.45 |Using various artificial soil mixtures to restore dry grasslands in quarries.- Buisson, Elise

9.45-10.00 | Understanding biodiversity threats from mining construction minerals for conservation and restoration.- *Torres, Aurora* 

10.00-10.15 | The effect of tree foliage traits on soil carbon storage depends on soil development.- *Frouz, Jan* 

10.15-10.30 | Monitoring Quercus seedlings' survival and growth beneath nurse shrubs in coal mines reclaimed to grasslands.Martinez-Ruiz, Carolina

10.30-10.45 | Comparison between active and passive restoration in extractive activities.
Montero. Pau

10.45-11.00 | Meso and macro-fauna ecosystem engineers as indicators of restoration success in a rehabilitated mine tailings chronosequence. *Pelaez Sanchez, Sara* 

11.15-11.45 | Coffee

11.45-13.15 | W9. Soil and Water Bioengineering, a Nature based discipline between grey and green Infrastructures. Chair: Sangalli, Paola

11.45-12.00 | Soil and Water Bioengineering (SWB) is and has always been a Nature-Based Solution (NBS): a reasoned comparison of terms and definitions.Sangalli, Paola

12.00-12.15 | Soil Substitutes for Sustainable Land Reclamation of Coal Mining-Affected Areas.- Krzemien, Alicja

12.15-12.30 | Solutions to the flooding of the Estepona river in the urban area of Bakio (Vizkaya) with Soil and Water Bioengineering.- Sangalli, Sergio

12.30-12.45 | Technosols for slope stabilization and ecosystem services maximization: pilot experiences and long-term results.- Carabassa Closa. Vicenc

12.45-13.00 | Functional biodiversity associated to soil bioengineering cribwalls.-*Mota, Bet* 

13.00-13.15 | Using soil and germination models to predict seed germination in geomorphic restoration in mines.- *Tormo, Jaume* 

13.15-14.30 | Lunch

15.15-16.45 | W2. Flagship program in the Mediterranean Region UN Decade on Ecosystem Restoration. Chair: de Dato, Giovanbattista

15.15-15.30 | Assessing the restoration activities in the Mediterranean for the Restoration Flagship Initiatives.- de Dato, Giovanbattista

15.30-15.45 | Forest and Landscape restoration in Lebanon A case study on post fire restoration.- Mohanna. Chadi

15.45-16.00 | Participatory forest restoration in the Talassemtane National Park, North Morocco.- Derak, Mchich

16.00-16.15 | The co-management of forest landscapes: An innovative approach for climate change adaptation and mitigation measures.-Boufaroua. Mohamed

16.15-16.30 | Restoration/Rehabilitation activies in Turkiye and its Carbon Benefits.-Ozdemir, Eray

16.45-17.15 | Coffee

17.15-19.00 | S6. Restoration Planning. Chair: Johannes Kollmann

17.15-17.30 | Contrasting vegetation, soil, and climatic drivers determine plant contribution to soil carbon stocks globally.- *Dacal, Marina* 

17.30-17.45 | Ecosystem multifunctionality in Mediterranean-type ecosystems – a matter of species composition and environmental conditions.- Fiedler, Sebastian

17.45-18.00 | Spatial restoration design: insights from theory.- Gawecka, Klementyna

18.00-18.15 | BirkiVist: Trans-disciplinary research to support scaling-up of woodland restoration.- *Aradottir. Asa Lovisa* 

18.15-18.30 | Forest Restoration Productive Chain: Challenges And Opportunities In The Involvement Of Local Communities.- Ferreira Abrahão, Leandro Luiz

18.30-18.45 | Planning for landscape-scale restoration: which tools do we need?.- Helm, Aveliina

18.45-19.00 | Assessing restoration suitability and regeneration potential for reforestation success in Panamá Canal Area.- Bardino, Giulia

19.00-19.15 | The importance of investing in human resources to achieve large-scale forest restoration goals in south-eastern Brazil.- Barbosa, Karina Cavalheiro

#### Programme



## A2/C04 room - Aulari II General Lecture Hall II, University of Alicante

9.15-11.15 | S11. Response to Risks and Disturbances. Chair: Víctor Santana

9.15-9.30 | The role of invasive species control and assembly on restoration.-Weidlich, Emanuela W. A.

9.30-9.45 | Vegetation degradation promotes the invasion potential of Impatiens glandulifera in an oligotrophic mountain habitat.- *Nikolic, Nina* 

9.45-10.00 | Return of a native Mediterranean ant community after Carpobrotus removal on a small island.- *Blaya*. *Romane* 

10.00-10.15 | How do native species compete against the reproductive success of exotic pines after fires? A restoring approach.
Ovalle, Juan

10.15-10.30 | Post-fire management: restoration tools in semiarid aleppo pine forests (se spain).- *Moya*, *Daniel* 

10.30-10.45 | Multifunctionality of Mediterranean landscapes is increased by the application of different post-fire management actions.- *Moghli, Aymen* 

10.45-11.00 | Climate impacts on radial growth of Quercus suber growing in the Northwest of Tunisia.- Stiti. Boutheina

11.00-11.15 | Root properties relevant for erosion control, and vegetation morphometry using LIDAR in a field experiment.- Virgil Alexandru. Iordache

11.15-11.45 | Coffee

11.45-13.00 | S12.1 Grassland Restoration I. Chair: Flise Buisson

11.45-12.00 | The long-term effect of restoration practices and landscape composition on the success of sand grasslands restoration.- Poalinelli Reis, Bruna

12.00-12.15 | No mid-term detrimental effects of soil disturbance linked to grassland restoration on established ground-dwelling invertebrates.- Slodowicz, Daniel

12.15-12.30 | Restoration of dry and sandy habitats in Brandenburg, Germany by LIFE projects.- *Ruffer, Janine* 

12.30-12.45 | Dry Grassland Restoration
Activities in the Dinara back to LIFE project –
experiences and challenge.- Skunca. Luka

12.45-13.00 | Application of regeneration potential trajectories to prioritize ecological restoration interventions in the Hungarian sand regions. - Csákvári. Edina

13.15-14.30 | Lunch

15.15-16.45 | S12.2 Grassland Restoration II. Chair: Melinda Halassy

15.15-15.30 | Costs and benefits of grassland reconstruction in an industrial area.- Halassy, Melinda

15.30-15.45 | Spontaneous grassland recovery in an open alkali landscape - restoration of a former military area.- Deák, Balázs

15.45-16.00 | Reintroduction of mowing on steep slopes increases species diversity of a grassland after abandonment.- Yamada, Susumu

16.00-16.15 | Recovery of plant-bumblebee interactions in restored semi-natural grasslands.- Reitalu, Triin

16.15-16.30 | Plant establishment during the restoration of species rich grasslands.-Mudrák, Ondrej

16.30-16.45 | Long-term assessment of restored species-rich grassland in Germany.-*Kirmer, Anita* 

16.45-17.15 | Coffee

17.15-19.15 | W10. The LIFE programme: Practical examples of EU funding supporting Nature Restoration. Chair: Ana Nava; Sylvia Barova

LIFE success stories on ecological restoration - LIFE N2K revisited.- Broumova, Radka

LIFE success stories on ecological restoration - LIFE TECMINE.- Olmo, Beatriz

LIFE success stories on ecological restoration - LIFE to Alvars.- Helm, Aveliina

#### Programme

## A2/C03 room - Aulari II General Lecture Hall II, University of Alicante

9.15-10.15 | E1. Commonland. Landscape Restoration as a means of delivering the EU Green Deal: Recommendations.

Victoria Gutiérrez; Amanda del Rio; Yurena Lorenzo; Jordi Cortina.

10.30-11.00 | E5. Land Life: examples and challenges in nature restoration through Voluntary Carbon Markets. *Francisco Purroy* 

11.15-11.45 | Coffee

11.45-12.15 | E6. Ecoembes. "Los Sistemas Colectivos de Responsabilidad Ampliada del Productor (SCRAP) y las experiencias de restauración ecológica". *Esperanza Alvarez Garcia* 

12.15-12.45 | E7. CEMBUREAU's vision for biodiversity in and around quarries over the coming decades. *Alexandra Silva* 

13.15-14.30 | Lunch





### Thursday, 8th September 2022

#### Programme



#### Mid conference field tours

**09.00-18.30 | #1 Restoration of a highly transformed semiarid landscape. –** Meeting point: University of Alicante Campus, Sant Vicent del Raspeig

09-00-17.00| #2. Promoting resilience through restoration actions in Mediterranean fireprone areas. – Meeting point: University of Alicante Campus, Sant Vicent del Raspeig

**08.30-17.15** | **#4.** Coastal restoration. – Meeting point: University of Alicante Campus, Sant Vicent del Raspeig

**09.00-16.00 | #5. Restoration of Mediterranean rivers and flood management. –** Meeting point: University of Alicante Campus, Sant Vicent del Raspeig

09.00-18.00 | #6. Wetland restoration for birds
 Birdwatching - Meeting point: University of
 Alicante Campus, Sant Vicent del Raspeig

10.30-17.30 | #7. The restoration of coastal shores and marine habitats-Snorkeling. – Meeting point: Alicante port: Kontiki boats dock, Alicante

09.00-18.00 | #8. Restoration of metalliferous mining sites in the Cartagena-La Unión mining district. - Meeting point: University of Alicante Campus, Sant Vicent del Raspeig

**08.00-18.00 | #9. Quarry restoration. –** Meeting point: University of Alicante Campus, Sant Vicent del Raspeig

08.00-18.30 | #10. The environmental crisis of the Mar Menor coastal lagoon: The great challenge of ecological restoration in the coming decades. – Meeting point: University of Alicante Campus, Sant Vicent del Raspeig

**09.00-17.30 | #11. Experimental restoration of semiarid degraded lands. –** Meeting point: University of Alicante Campus, Sant Vicent del Raspeig

**09.00-17.30** | **#12.** Conservation and restoration of Mediterranean landscapes. – Meeting point: University of Alicante Campus, Sant Vicent del Raspeig

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20.30 - 24.30 | Gala dinner at Hotel Melià Alicante

### Friday, 9th September

#### Programme

Main Hall Aulari II - General Lecture Hall II, University of Alicante 08.30 | Registration and delivery of documentation

## Sala d'actes Aulari II -Auditorium General Lecture Hall II, University of Alicante

8.30-9.15 | Plenary 5. Past, present and future directions in marine restoration. *Linares, Cristina- Chair: Cristina Gambi* 

9.15-11.15 | S9. Large-scale rewilding across Europe – Can we overcome challenges to achieve a historic opportunity? *Chair: Avkroyd. Toby* 

9.15-9.20 | Introduction to the session, *Toby Aykroyd Director Wild Europe Foundation* 

9.20-9.40 |Underlying principles for a strategy – drawing solutions from past challenges. Ladislav Miko, Lead Environmental Advisor to the 2022 EU Presidency and EU representative at COP15 in Montreal, former Head of Natural Environment at the European Commission. Wild Europe Trustee

9.40-9.50 | Large scale natural process restoration – planning for the benefits & challenges - Kris Decleer, Board Member, Society for Ecological Restoration, Senior Researcher INBO

9.50-10.00 | A supporting framework for successful rewilding strategy (video) - Erika Stanciu, Chair of World Council for Protected Areas (WCPA) Europe, former Secretary of State for Forests in Romanian government, Chair of Wild Europe

10.00 – 10.10 | EU & wider European restoration strategy insights from a global perspective - Cara Nelson, Chair of the Ecosystem Thematic Group for IUCN CEM

10.10 – 10.20 Funding the strategy, the need for extensive reforms- *Toby Aykroyd, Director of Wild Europe Foundation* 

10-20-11.15 Open Session: building a successful restoration strategy, the session will hear opinions from the audience.- Led by Ladislav Miko, with Toby Aykroyd moderating, Kris Decleer and Cara Nelson.

11.15-11.45 | Coffee

11.45-12.00 | Introduction to the WWF-SER Standards for the Certification of Forest Ecosystem Restoration Projects (Forest Programme Coordinator, WWF Spain)

12.00-12.15 | Restoration of the fire degraded area of Las Peñuelas and practical considerations in the application of the WWF-SER Standards for the Certification of Forest Ecosystem Restoration Projects.- Miguel Ángel Maneiro Márquez (Regional Governmental Representative, Junta de Andalucía)

12.15-12.30 | Restoration plan of public forests affected by the forest fire in "Las Peñuelas", in 2017: western sector of the Doñana

Natural Park, Coto Mazagón and Ordenados de Moguer.- Juan Gorostidi (Technical project auditor. SER-E)

12.30-12.45 | Evolution and Future of the WWF-SER Standards for the Certification of Forest Ecosystem Restoration Projects.-George Gann (International Policy Lead. SER)

12.45-13.00 | Professional Roundtable: 3-4 international subject matter experts in European forestry restoration projects and use of standards.

13.15-14.30 | Lunch

14.30-15.15 | Plenary 6.
Closing plenary. Ecological
Connectivity in the Spotlight of
the Restoration Agenda. Andrea
Meza, Amy Fraenkel and Barron J.
Orr - Chair: Susana Bautista

15:15-16.00 | E10. UNCCD: Ecological connectivity: an essential component of ecosystem restoration. Barron J. Orr, Vittoria Semplici

16.00-17.30 | SERE Membership Meeting

17.30-18.00 | Coffee

18.00-18.45 | Closure





## A2/D01 room - Aulari II General Lecture Hall II, University of Alicante

9.15-11.30 | S4. Restoration in the Mediterranean Sea: are we ready for scaling up? Chair: Bianchelli, Silvia

9.15-9.30 | The challenge of marine ecosystems' restoration in a changing ocean.- *Gambi*. *Cristina* 

9.30-9.45 | Setting restoration targets under climate changes: the case study of Mediterranean macroalgal forests.-Fabbrizzi. Erika

9.45-10.00 |Following the roadmap for Mediterranean Macroalgal forests restoration: a case study from the Adriatic Sea.- Bianchelli. Silvia

10.00-10.15 | AFRIMED and algal forest restoration in the Mediterranean: stakeholder beliefs on feasibility, acceptance and barriers.-

10.15-10.30 | The LIFE SEPOSSO proposal for the planning, implementation, and monitoring of Posidonia oceanica transplantations.-*La Porta, Barbara* 

10.30-10.45 | Exploring the timescales needed to recover the functioning of Mediterranean coralligenous assemblages through active restoration.- Zentner Murlans. Yanis

10.45-11.00 | Quantifying the ecosystem service benefits of Mediterranean Cystoseira macroalgal forests.- *Critchley, Megan* 

11.00-11.15 | Towards the restoration of macroalgal forests in the mediterranean sea: major challenges and wins.- *Chiantore, Mariachiara* 

11.15-11.30 | Posidonia oceanica transplantation: insights and lessons from Italy.- *Bacci, Tiziano* 

11.15-11.45 | Coffee

11.45-13.15 | S14. Hydrological Restoration. Chair: Patricia Rodríguez

11.45-12.00 | Estimating the value of newly restored riparian and tidal marsh areas to recreational hunters.- *Matzek, Virginia* 

12.00-12.15 | Global assessment of the biological condition of rivers via fish and macroinvertebrate assemblages.-Feio. Maria João

12.15-12.30 | River-human connections and affinity for nature of local populations to regulated rivers.-*Aguiar, Francisca C.* 

12.30-12.45 | River regulation induces functional alterations in the aquatic communities.- *Feio, Maria João* 

### Friday, 9th September

#### Programme

## A2/D02 room - Aulari II General Lecture Hall II, University of Alicante

9.15-11.05 | W7. Addressing the climate emergency through citizen-driven forest restoration projects. Chair: Moore, Chrystal; Sabate, Santiago

9.15-9.25 | The 4 Returns Approach to Landscape Restoration: opportunities & Description of the Company of the

9.25-9.35 | Building environmental awareness and addressing climate change through forest restoration in a fire-prone landscape (Northeastern Spain).- *Duguy Pedra, Beatriz* 

9.35-9.45 | Restor. A Science Based Platform to Enable and Accelerate the Restoration of Earth's Ecosystems.- *Max, Simeon* 

9.45-9.55 | Species selection for sustainable tree planting under a rapidly changing climate.-Allasia Grau, Samuel

9.55-10.05 | How to support educators from different countries with teaching sustainability, and evaluate the programme's success.-Gregori Montaner, Aroa

10.05-10.15 | Empowering individuals and organisations to lead climate action through tree planting: Terra Leaders.- *Gregori Montaner, Aroa* 

10.15-10.25 | Engage citizens to take positive climate action by developing tools for measuring their climate impact.- *Moore, Chrystal* 

10.25-10.35 | Engaging citizens to gather useful data regarding tree plantings.- de Santana, Tiago

10.35-10.45 | Estimation of live carbon storage in a continental-scale plantation.- *Sauras-Yera, Teresa* 

10.45-10.55 | SUPERB - Systemic solutions for upscaling of urgent ecosystem restoration for forest-related biodiversity and ecosystem services.- *Alberdi, Iciar* 

10.55-11.05 | LIFE TECMINE Project. Innovative Techniques for Landscape Recovery after Clay Mining under Mediterranean Conditions.-Morcillo, Luna

11.15-11.45 | Coffee

#### 11.45-13.00 | S16. Society and Restoration.

11.45-12.00 | The potential socioeconomic impact of the forest restoration chain in a basin of high social vulnerability in South-eastern Brazil.- Tieppo, Felipe Maraue Marques

12.00-12.15 | Implications of social preferences in restoration planning based on cost-effectiveness.- *Silva, Elysa* 

12.15-12.30 | What influences public attitudes toward river restorations?.- Junker-Koehler, Berit

12.30-12.45 | Theatre to promote public awareness for the rehabilitation of urban streams.- *Montenegro, Mário* 

12.45-13.00 | Management towards multiple ecological and socio-economic functions in rainforest transformation systems: An agent-based modelling approach.- Fiedler, Sebastian





### A2/C04 room - Aulari II General Lecture Hall II, University of Alicante

9.15-11.15 | S7. Restoration in Wetlands. *Chair: Sébastien Gallet* 

9.15-9.30 | Wetlands, a key ecosystem to tackle climate change.- *Aguirre, Ernesto* 

9.30-9.45 | Restoration of formerly extracted raised bogs – vegetation succession and recovery of other trophic groups.- *Prach*, *Karel* 

9.45-10.00 | Peatlands under pressure? Hidden side-effects of aeolian dust dispersal in Iceland.- *Möckel. Susanne Claudia* 

10.00-10.15 | Restoring mediterranean wetlands in corsica: methodology, field results and challenges.- *Emmanouilidou, Pantelina* 

10.15-10.30 | Restoring mediterranean wetlands part II: methodology, field results and future challenges.- *Emmanouilidou*, *Pantelina* 

10.30-10.45 | A network for wetland restoration in Brittany (France).- *Armel, Dausse* 

10.45-11.00 | Characteristics of vegetation of formerly dyked marshes. Analysis of composition and spatial organization in comparison to reference sites.- *Salgueiro-Simon, Manuel* 

11.15-11.45 | Coffee

11.45-13.15 | S3. Ecological integration and restoration of solar parks. *Chair: Armin, Bischoff* 

11.45-12.00 | A decision support tool to improve solar park management for ecosystem services.- *Armstrong, Alona* 

12.00-12.15 | Photovoltaic power station: an opportunity to restore semi-naturel European grassland.- Quentin. Lambert

12.15-12.30 | Ecosystem responses to solar park development in the UK.- *Carvalho Gomes da Silva, Fabio* 

12.30-12.45 | Solar park construction - evaluation of ecological impact, compensation and restoration strategies.-*Armin, Bischoff* 

12.45-13.00 | Study of ecosystem services generated in an experimental design combining green roofs and photovoltaic panels.- *Belin, Marie* 

13.00-13.15 | Assessing the impact of solar parks on vegetation, microclimate and soil properties.- *Obriejetan, Michael* 

### Friday, 9th September

#### Programme

# A2/C03 room - Aulari II General Lecture Hall II, University of Alicante

9.15.10.15 | E3. Sylvestris: Carbon offsetting through reforestation. How can society enable a great opportunity for sparsely populated areas. Francisco Manuel Martínez Sanz

10.30-11.00 | E8. SER: International Principles and Standards for the Ecological Restoration and Recovery of Mine Sites. *George Gann* 











1

Welcome

2

-Organizing Committee

3

Scientific Committee

4

Programme detail

5

Presentations & workshops Abstracts

6

-Posters

7

Posters Abstracts

8

Sponsors

9

-Participants List



# Vegetation degradation promotes the invasion potential of *Impatiens glandulifera* in an oligotrophic mountain habitat

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#### ABSTRACT

An annual plant Himalayan balsam (Impatiens glandulifera Royle) is globally widespread and one of the Europe's well-investigated top invaders. Yet, there is very limited knowledge on the effects of environment on the invasion potential of this species. We focused on two questions: does this species indeed not invade the southern areas of the continent; and, does the environment affect some of its key invasibility traits. In an isolated model valley (Sharr mountain, Western Balkans), we jointly analyzed the soil (21 parameter), the life history traits of the invader (height, stem diameter, aboveground dw), and the resident vegetation (species composition and abundances, Ellenberg indicator values), and supplemented it by the local knowledge (semi-structured interviews). Uncontrolled discharge of fecal wastewaters directly into the local dense hydrological network fostered mass infestation of an atypical, nutrient poor habitat. The phenotypic plasticity of the measured invasion-related traits was very high in the surveyed early invasion (30-50% invader cover) stages. Different microhabitat conditions consistently correlated with its growth performance. The largest individuals were restricted to the deforested riparian habitats with extreme soil nutrient enrichment (primarily by P and K) and low-competitive, species-poor resident vegetation. We showed that ecological context can modify invasion-related traits, what could affect further invasion process. Finally, this species is likely underreported in the wider region; public attitude and loss of traditional ecological knowledge are further management risks.

**Keywords**: Himalayan balsam, invasive alien species, soil nutrient enrichment, phenotypic plasticity; Western Balkans.