Hall A

O11 - Monitoring
Moderator: Ramesh Venkataraman
11:00 Monitoring insect diversity and assemblages to assess restoration progression in an 800-ha restoration plot in South India
Ramesh Venkataraman
11:20 Monitoring of a long-term, large-scale restoration experiment in the thicket biome of the Eastern Cape, South Africa, using remote sensing
Ruan de Wet
11:40 A risk-based framework for completion criteria development
Guy Boggs
12:00 Arthropod assemblages in restored prairie, old field, and monospecific stands of reed
Young D. Choi
12:20 Rehabilitation within the KwaZulu-Natal National Botanical Gardens, South Africa: A review of the Kingfisher Lake habitat enhancement, rehabilitation monitoring indicators, and citizen science
Megan Grewcock
12:40 Discussion

Hall B

S18 - Marine ecosystem restoration in changing oceans
The symposium on marine ecosystem restoration presents an overview of the marine key habitats/species to restore, assesses the outcomes of different solutions for marine restoration across habitats, the effectiveness of restoration actions on the recovery of ecosystem services and the importance of stakeholder perceptions on marine restoration

Moderator: Roberto Danovaro
11:00 MERCES: Marine Ecosystem Restoration In Changing European Seas (H2020 funded project)
Roberto Danovaro
11:20 Marine restoration and MERCES key habitats/species: Approaches, timescales, bottlenecks, and up-scaling
Chris Smith
11:40 Success stories in restoration actions across coastal-marine ecosystems: The potential for synergies
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Parallel Sessions 4  -  11h00 - 13h00

Simonetta Fraschetti
12:00 Principles and key concepts for ecological restoration in the deep-sea

Telmo Morato
12:20 Effects of marine restoration on ecosystem services

Hazel Thornton
12:40 Stakeholder perceptions on marine restoration: Beliefs, preferences and supporting actions

Nadia Papadopoulou

Hall C

S19 - Restoration meltdown: Defining, describing and dealing with secondary invasion

Bringing together ecologists who work on restoration, secondary invasion and invasive species in general to discuss secondary invasion and its management during restoration.

Moderator: Mlungele Nsikani
11:00 Secondary invasion: The bane of weed management – identifying and overcoming the gap

Dean Pearson
11:20 Dynamics and management of invasions, re-invasions, and secondary invasions in Great Salt Lake wetlands

Karin Kettenring
11:40 Secondary invasion after clearing invasive Acacia saligna in the South African fynbos

Mlungele Nsikani
12:00 Anticipating secondary invasions: Cautionary tales for ecosystem restoration

Stephanie Yelenik
12:20 Secondary invasion: The need for a proper river restoration management plan

Sheunesu Ruwanza
12:40 Patience or intervention? Identifying the best strategy for weed control during grassland restoration

Diane Larson

Hall D-1

S20 - Seeds for global restoration, Session 3 of 5: Assessing site conditions, formulating seeding strategies, and getting seeds restoration ready
Thursday, September 26, 2019
Parallel Sessions 4 - 11h00 - 13h00

Progress in restoration planning: Guidelines for site assessment and species selection, informing seeding decisions, and new research to enhance seed for restoration readiness.

Moderators: Simone Pedrini and Adam Cross

11:00 Assessing the potential for seed-based restoration in a highly degraded freshwater marsh

Carrie Reinhardt Adams

11:20 Desert soil seed banks: A refuge for plant diversity and a resource for regeneration

Sarah Barga

11:40 Using patch dynamics to inform ecological restoration of semi-arid and Mediterranean-type fields in Namaqualand, South Africa

Carina Becker

12:00 Seed encrusting with salicylic acid: A novel approach to improve native grass survival

Simone Pedrini

12:20 An efficient method of coating native seeds: Single seed pellets vs multi seeds

Khiraj Bhalsing

12:40 Use of seed enhancement technologies for overcoming abiotic and biotic limitations to native plant establishment

Matthew Madsen

Hall D-2

W3 - Workshop ~ Can we move beyond tradition: Embracing innovation in the new era of restoration

The expected outcomes of this workshop will be compiled into an opinion piece for publication and wider dissemination.

Moderator: Peter Harrison

Meeting Room 02

W4 - Workshop ~ Landscapes for livelihoods: Restoring land, water and community resilience in the Umzimvubu Watershed

A proven, functional and effective collaborative approach to restoration through enhanced governance, underpinning healthy resilient ecosystem functions to build resilience and wellbeing in South African communal rangelands.

Moderator: Nicky Mcleod
Thursday, September 26, 2019
Parallel Sessions 4  -  11h00 - 13h00

Meeting Room 07
S21 - Alpine grassland restoration: From structure to function

This symposium will be an opportunity for exchange and sharing of knowledge, experience and opinion face to face with global peer experts on alpine grassland restoration research, engineering, learning, suggesting and advising from the global platform.

Moderator: Shikui Dong
11:00 Restoration of structure and function of alpine grassland ecosystems worldwide: Challenges, strategies, and insights
Shikui Dong
11:15 Soil seed banks in the alpine grassland ecosystem: Structure and function during vegetation degradation and restoration
Zhanhuan Shang
11:30 Selection of suitable plant species for alpine meadow protection near an open-pit copper mine in Tibet
Shiliang Liu
11:45 Soil organic carbon and nitrogen content of density fractions and the effect of meadow degradation on soil carbon and nitrogen fractions in alpine *Kobresia* meadow
Wenyiing Wang
12:00 The impact of grazing systems on structure and function of alpine grassland for sustainable restoration and management
Xiaoxia Yang
12:15 Plant composition and soil moisture play determining roles in improving ecosystem multifunctionality during restoration processes on the alpine steppes of the Qinghai-Tibetan Plateau
Yudan Xu
12:30 Effects of simulated N deposition on photosynthesis and productivity of key plants from different functional groups of alpine meadows on the Qinghai-Tibetan plateau
Hao Shen

Meeting Room 08-09
W5 - Workshop ~ Harnessing emerging ideas about "priority effects" to improve ecological restoration
Thursday, September 26, 2019
Parallel Sessions 4 - 11h00 - 13h00

This workshop provides an opportunity for participants to share and synthesize knowledge on priority effects and to discuss key gaps in information that need to be addressed to more effectively integrate priority effects into the planning and implementation of ecological restoration projects and programs.

Moderators: Renaud Jaunatre and Cara Nelson

Meeting Room 10
S22 - Shifting the role of science in community-based landscape restoration: From science FOR to science WITH society

This workshop session aims to open up a transdisciplinary discussion for the integration of a gender and equity lens in the policy-making, research and practice of ecosystem restoration and community resilience initiatives. The practical workshop session is preceded by four presentations focused on gender equity case-studies, assessment tools and resources.

Moderator: Jessica Cockburn
11:00 Engaging society and building polycentric governance for integrated land and water management: Insights from a science-led restoration programme

Tally Palmer
11:20 Engaging local citizens in scientific monitoring for catchment restoration: Benefits and recommendations for optimising their involvement

Nosiseko Mtati
11:40 Getting to know the river: Experiences of a citizen technician from the Tsitsa River catchment, Eastern Cape, South Africa

Grace Saunders
12:00 Decolonization and democratization of livelihoods: Restoring human-land relations through co-management of natural resources

Reuben Thifhulufhelwi
12:20 Designing back from practice: Keeping the Olifants River and benefits flowing through systemic, collective action approaches during the worst drought on record

Sharon Pollard
12:40 Bringing research and catchment restoration planning and management into conversation with rural development

Harry Biggs
Thursday, September 26, 2019
Parallel Sessions 4 - 11h00 - 13h00

Meeting Room 11

W6 - Workshop ~ Are you being heard? The power of communication in ecological restoration

Learn how to effectively translate scientific knowledge and ecological restoration project information into compelling communication material for diverse audiences, including international stakeholders and partners, local communities and governments.

Moderator: Kay Montgomery
Thursday, September 26, 2019
Parallel Sessions 5 - 14h30 - 16h30

Hall A
S23 - Landscape restoration: Theoretical and practical challenges for meeting global targets

This symposium will focus on the applying concepts and principles of landscape ecology to landscape-scale restoration in order to improve outcomes of current initiatives, programs, and projects at local to global scales.

Moderators: Cristian Echeverria and Cara Nelson

14:30 What is to be restored? Contribution from landscape sustainability science to landscape restoration

Cristian Echeverria

14:50 Defining the decision space for ecological restoration at the landscape scale

Cara Nelson

15:10 Co-creating conceptual and working Forest and Landscape Restoration frameworks based on core principles

Pedro Brancalion

15:30 Rewilding as an approach to large landscape restoration: An update on the work of the IUCN CEM Rewilding Task Force

Rene Beyers

15:50 Challenges and opportunities of forest landscape restoration implementation in the context of Latin America (20X20 Initiative) and Africa (AFR100)

Anita Diederichsen

16:10 Discussion

Hall B
S24 - Conceptualising and implementing ecological restoration projects with rewilding by faunal species as one of the key targeted outcomes

A symposium that aims to discuss, through case studies from around the world, various aspects involved in planning and implementing restoration projects aimed at rewilding by flagship faunal species and the potential metrics for monitoring and evaluating such initiatives.

Moderator: Ramesh Venkataraman

14:30 Rewilding with keystones: Using bison and fire to restore North American grasslands

Cristina Eisenberg
Thursday, September 26, 2019
Parallel Sessions 5 - 14h30 - 16h30

14:50 Rebuilding orangutan homes: Community-based, multi-sector, landscape-scale tropical peat swamp forest restoration
Laura Graham

15:10 Ecological impacts of the Eurasian Beaver Reintroduction Programme
Simon Milne

15:30 Restoring degraded forest ecosystems in South India for creating better habitats for wild Asiatic elephants (Elephas maximus): Design parameters, methods, and monitoring
Ramesh Venkataraman

15:50 Pollinator responses to restoring shrub steppe habitat for the Greater Sage-Grouse
David Pilliod

16:10 Applying an adaptive management approach to a wetland rehabilitation project: Using an urban South African wetland as an example
Matthew Janks

Hall C

S25 - Linking fire and ecosystem restoration in Mediterranean climate-region shrublands and forests: A view from five continents

The symposium will highlight efforts to better align shrubland and forest management and restoration practices before, during, and after fire in the world’s five Mediterranean climate regions (MCRs), with the ultimate aim of identifying a common set of best practices for sustaining the resilience of MCR ecosystems in the Anthropocene.

Moderator: Hugh Safford
14:30 Introduction
Hugh Safford

14:35 Land use, ecosystems, and fire in the Mediterranean Basin
Melanie Köbel and Ramón Vallejo

14:53 Connecting fire and ecosystem restoration in California shrublands and forests: New tools and strategies
Nicole Molinari and Marc Meyer

15:11 Landscape change or climatic extremes? Analyzing the main drivers of megafires and the barriers to ecological restoration in the Chilean Mediterranean-climate region
Juan Armesto and Marcela Bustamante
Thursday, September 26, 2019
Parallel Sessions 5 - 14h30 - 16h30

15:29 Alien tree invasions, fire, and restoration in the Cape Floristic Region (CFR)
Patricia Holmes and David Le Maitre

15:47 Interactions between fire and ecological restoration in southwest Australia
Ben Miller and Ebony Cowan

16:05 Discussion

Hall D-1
S26 - Recovery by nature: Ecological restoration through spontaneous succession

This symposium presents both successes and limitations of the passive approach taken in various restoration projects, and attempts to identify the circumstance and strategies that are conducive to spontaneous recovery for successful restoration.

Moderator: Young D. Choi

14:30 Trajectories of old field succession and prairie restoration in the US Midwest: Cases for passive and active restoration
Young D. Choi

14:50 The potential for passive restoration in alien plant-invaded ecosystems in the Cape Floristic Region (CFR)
Patricia Holmes

15:10 Landscape and abiotic factors driving spontaneous succession: A meta-analysis at a country scale
Klara Rehounkova

15:30 Assisting natural regeneration in agricultural landscapes
Jose M. Rey-Benayas

15:50 Feasibility and limitations of passive restoration
Chang-Seok Lee

16:10 Worldwide patterns of spontaneous succession and implications for ecological restoration
Karel Prach

Hall D-2
S27 - Seeds for global restoration, Session 4 of 5: Seeding strategies for improving biodiversity and ecosystem services

Innovative methods for establishing native communities improve biodiversity, ecosystem services, and increase resistance to invasive species.
Thursday, September 26, 2019
Parallel Sessions 5 - 14h30 - 16h30

Moderator: Karin Kettinring

14:30  Seeds and stewards of the future: A U.S. collaboration
      Peggy Olwell

14:50  Improving biodiversity in highly intensive farmland: Effects of agri-environment schemes using native seed mixtures on plant diversity, birds, and butterflies
      Sabine Tischew

15:10  Improving biodiversity and related ecosystem services by sowing high-diversity seed mixtures of native plants in vineyards
      Anita Kirmer

15:30  Re-establishment of Protea repens after clearing invasive Acacia saligna: Consequences of soil legacy effects and a native nitrophilic weedy species
      Mlungele Nsikani

15:50  Seeding dates and seeding rates for grassland restoration in the semi-arid steppe of northern China
      Yuping Rong

16:10  DroneSeed: Using UAVs to conduct surveys, herbicide applications, and aerial seed deployment in forests and rangelands
      Grant Canary and Matthew Aghai

Meeting Room 07

S28 - Towards a praxis of systems thinking, learning, and collective action for resilient and equitable restoration: Synthesis and examples from two southern African catchments

This symposium aims to provide a synthesis of recent experiences and learnings in trans-disciplinary approaches and methodologies in supporting more resilient and equitable land and water restoration and linked community livelihood development processes with examples of their use in two catchment based programmes in southern Africa.

Moderator: Jan Graf

14:30  Systems thinking within restoration for resilience: Collectively understanding and managing relationships between land- and water-restoration and human livelihoods
      Sharon Pollard
Thursday, September 26, 2019
Parallel Sessions 5 - 14h30 - 16h30

14:50 Integrated restoration planning: From science-led to science-management-society led planning in the Tsitsa catchment
Bennie van der Waal

15:10 Creating collective socio-ecological learning spaces for transformative learning and custodianship building in natural resource management practices
Reuben Thifhulufhelwi

15:30 Restoration and historicity: Practicing the long view with practitioners and communities to lay the groundwork for transformation within restoration
Jan Graf

15:50 Monitoring, evaluation, reflection, and learning: Transforming M&E into reflexive learning and adaptive management within restoration
Karen Kotschy

16:10 Developing a holistic thread of thought on restoration of land, water and society: A synthesis and experience from southern Africa
Harry Biggs

Meeting Room 08-09
W8 - Workshop ~ The Global Arid Zone Project: Pooling knowledge and data gathering for global progress in arid and semi-arid restoration

This workshop will offer an overview of the Global Arid Zone Project to-date, host a forum for discussing future directions of the global restoration database, and finish with a workshop finalizing the global experimental design.

Moderator: Nancy Shackelford

Meeting Room 10
O12 - Tropical forests
Moderator: Vera Lex Engel

14:30 The role of restoration plantings in the landscape structure and functionality of a tropical forest
Débora Rother
Thursday, September 26, 2019
Parallel Sessions 5 - 14h30 - 16h30

14:45 Using secondary forest studies to develop species selection guidelines for active forest restoration
Michiel Van Breugel

15:00 Multiple feedbacks can create resilient degraded states and stall restoration
Stephanie Yelenik

15:15 All roads lead to Rome: Convergence in the woody community assembly of different tropical forest restoration systems after 20 years
Vera Lex Engel

15:30 Fast-tracking tropical forest restoration: Testing scalable approaches to re-establish forest structure, function, and
Hilary Brumberg

15:45 Opportunities and challenges for the gain of scale on restoration activities in the Brazilian Atlantic Forest
Daniel Venturi

16:00 Restoring degraded tropical forests through watershed management: A case study from Lokkere Reserve Forest
Anand Krishnamurthy

Meeting Room 11
S29 - Managing alien invasive species to restore aquatic ecosystems in South Africa
See how managing alien invasive plants and fishes has resulted in ecosystem recovery South Africa.
Moderator: Olaf Weyl

14:30 Managing alien invasive species to restore aquatic ecosystems in South Africa
Olaf Weyl

14:50 Riparian restoration in fynbos catchments
Karen Esler

15:10 Invasive alien aquatic plant management: Ecosystem recovery and restoration
Samuel Motitsoe

15:30 An evaluation of methods for alien fish removals in headwater streams: Lessons from South Africa
Jeremy Shelton

15:50 Native fish recovery following the eradication of alien smallmouth bass from the Rondegat River
Casey Broom
Thursday, September 26, 2019
Parallel Sessions 5 - 14h30 - 16h30
16:10 Discussion
Thursday, September 26, 2019
Parallel Sessions 6 - 17h00 - 18h20

Hall A
Ignite Session 2: Ecological dimensions of restoration
Moderator: TBD
17:00 Managing dynamic freshwater ecosystems with the competing demands of built environments and biodiversity: An assessment of the rehabilitation of the Dawidskraal wetlands, South Africa
Elizabeth Day
17:06 Using disturbance as a conservation tool in Mediterranean temporary ponds
Anabela D.F. Belo
17:12 Ridge to reef ecosystem restoration and sustainable management of the Jacotet River in Mauritius
Vere Ross-Gillespie
17:18 Associations between hydrology, tree growth characteristics, and regeneration in a temperate swamp forest
Sarah Fischer
17:24 Intraspecific trait variation of species commonly used in southwestern United States aridland restoration at early developmental stages
Magda Garbowski
17:30 Evidence for contrasting functional groups of lianas in restored and reference tropical forests
Vera Lex Engel
17:36 Evaluation of four seed mixes to improve botanical biodiversity in a solar field
Matt Taylor
17:42 Restoration of Mediterranean aquatic ecosystems
Fabio Attore
17:42 Discussion

Hall B
O13 - Drastic disturbances - approaches
Moderator: Peter Beckett
17:00 Effective strategies for the restoration of drastically disturbed sites
David Polster
17:20 Natural regeneration as restoration strategy to restore functional soils and ecosystems in post-mining sites
Jan Frouz
Thursday, September 26, 2019
Parallel Sessions 6 - 17h00 - 18h20

17:40 A pathway to integrated objective-based monitoring at mines to ensure net positive biodiversity outcomes
Chrizette Neethling

18:00 Sudbury, Ontario, Canada: 40+ years of healing and creating novel functional ecosystems on a smelter-impacted landscape
Peter Beckett

Hall C

S30 - Formation, degradation, and recovery of wetlands in drylands: Do our restoration strategies address key drivers of change?
Four synthesis talks and a panel Q&A discussion on the application of knowledge of the fundamental drivers of ecosystem formation, degradation, and recovery, in the restoration of wetlands in drylands.

Moderator: Michael Grenfell
17:00 Disciplinary perspectives on timescales of ecosystem formation, degradation, and recovery in wetlands in drylands: What is the natural reference state?
Michael Grenfell

17:20 What existing wetland classification systems do not tell us: Implications for restoring wetlands in drylands and a proposal for a genetic geomorphic classification system
Suzanne Grenfell

17:40 Identifying ecological threshold breaches in wetlands: Development of a framework to improve wetland prioritisation and restoration in South Africa
Damian Walters

18:00 Rethinking wetland restoration by considering natural dynamics: Evidence from the Krom River unchannelled valley-bottom wetland, Eastern Cape
Fred Ellery

Hall D-1

O14 - Aquatic systems - economic dimensions
Moderator: John Dini
17:00 Predicting the existence and performance of U.S. water quality trading programs
Thursday, September 26, 2019
Parallel Sessions 6 - 17h00 - 18h20

Todd BenDor
17:20 Examining the cost effectiveness of stream and coastal restoration in the Chesapeake Bay, U.S.A.

Joshua Running
17:40 Restoring wetlands on a limited budget: The evolution of engineered interventions

Fareed Nagdi
18:00 Methods for estimating the total economic values of accelerating restoration: Results for Washington's Elwha River after dam removal

John Loomis

Hall D-2
O15 - Restoration for skills development and social change
Moderator: Kate Rowntree
17:00 Restoring habitat and hope: The Sagebrush in Prisons Project
Thomas Kaye
17:20 Supporting ‘green-preneurs’ for landscape restoration
Kate Rowntree
17:40 Building systemic praxis towards integrating sustainable livelihoods with ecosystem restoration in a South African ecological infrastructure flagship project
Jai Clifford-Holmes
18:00 The implications of a "project" mindset on ecological restoration at community level: Mpophomeni township as a case study
Faye Brownell

Meeting Room 07
S31 - Transdisciplinary approaches in tropical forests restoration: Rethinking local communities participation and the physical attributes of the landscape (Session 1 of 2)

Recognizing the difficulties and complexities to gain scale in forest restoration, in a context that involves multiple social actors, high environmental diversity and distinct levels of degradation, this symposium will discuss criteria that involve political, social, institutional, ecological and technological dimensions for mapping and prioritizing forest restoration areas.

Moderator: José Ambrósio Ferreira Neto
Thursday, September 26, 2019
Parallel Sessions 6 - 17h00 - 18h20

17:00 Participative governance in the social and environmental recovery process: The case of Renova Foundation in the Rio Doce Basin, Brazil
José Carlos Carvalho

17:20 The multidimensionality of the Environmental Vulnerability Index in the process of recovery of the Rio Doce Basin, Brazil
Demetrius David da Silva

17:40 Applying machine learning in the mapping of land use and land cover in focusing priority areas for environmental recovery of the Rio Doce basin
Elpidio Fernandes Filho

18:00 Mapping vocation for forest restoration and multifunctional landscapes in Rio Doce Basin, Brazil: Vocation for Restoration Index (VRI)
Sónia Carvalho Ribeiro

Meeting Room 08-09
W9 - Workshop ~ Cultural landscapes: A concept explicitly applied in Europe in ecological restoration – How is it implemented elsewhere?

Human traditional activities have shaped landscapes - resulting in cultural landscapes - not only in Europe but also in many other regions including for example the Amazon and the Andes; hence, we aim to bring the cultural landscape concept, widely applied in Europe, into focus to ecological restoration elsewhere.

Moderator: Tiago Toma

Meeting Room 10
W10 - Workshop ~ Getting published in Restoration Ecology: A workshop for students and early career professionals

How to effectively publish in Restoration Ecology: what are the main challenges, from making global generalizations with local and regional results to the language barrier, and how to effectively overcome these.

Moderator: Valter Amaral

Meeting Room 11
O16 - Water security in southern Africa
Thursday, September 26, 2019
Parallel Sessions 6  -  17h00 - 18h20

Moderator: Brilliant Petja

17:00  Long-term water security begins at the source: A case study of the Greater Cape Town Water Fund

Louise Stafford

17:20  The impact of the removal of invasive alien plants on water resources system yield: Helping Cape Town to avoid Day Zero

James Cullis

17:40  The effects of land degradation on sustainability of the Lesotho Highland Water Development Project: The need for land restoration

Malipholo Hae

18:00  Improved estimates of streamflow losses to Invasive Alien Plants in the Cape Floristic Region

Glenn Moncrieff