Friday, September 27, 2019
Parallel Sessions 7 - 11h00 - 13h00

Hall A

S32 - Unlocking ecological infrastructure investment to scale up ecological restoration with socio-economic benefits

Our session will explore the means and outcomes necessary to enhance investment linked to restoration of ecological infrastructure.

Moderators: Karen Esler and Nadine Methner

11:00 Typologies and outcomes of ecological infrastructure restoration investment models
   Stephanie Midgley

11:20 Livelihoods and ecological infrastructure interventions: What are the benefits for workers involved?
   Sheona Shackleton

11:40 Strengthening the evidence for building resilience in ecosystem-based adaptation in Namaqualand: Ecological infrastructure, livelihoods, and benefits of natural resource management interventions
   Halcyone Muller

12:00 Leveraging institutional scale investment in ecological infrastructure: Challenges and opportunities for South African institutional investors
   Jon Duncan

12:20 Defining ‘green’ for ecological infrastructure bonds
   Lionel Mok

12:40 Discussion

Hall B

S33 - Ecological restoration of mined areas in Asia, Africa and Oceania: Opportunities, approaches and policy (Session 1 of 3)

This symposium focuses on Asian-African-Australian ecological restoration of mined area for academic exchange and experience sharing.

Moderator: Shaoliang Zhang

11:00 Status and challenges of ecological restoration in coal mining areas in China
   Shaoliang Zhang

11:20 Resilience measures for the social-ecological systems of closed mines
   Huping Hou
Friday, September 27, 2019
Parallel Sessions 7 - 11h00 - 13h00

11:40 Soil properties and plant communities of mine dumps following technical reclamation, spontaneous revegetation, and near-natural restoration on the Loess Plateau, China

Jiaxin Mi

12:00 The recovery of forest structure in a semi-arid mine dump: Estimation based on Worldview-2 satellite data

Youngjun Yang

12:20 Evaluation of recreational value to a restored wetland ecosystem based on mobile signaling data

Peichao Dai

12:40 Response of the ecological restoration plant *Neyraudia reynaudiana* for use in alleviation of heavy metal contamination

Fuyao Chen

Hall C

O17 - Dryland restoration
Moderator: Narayana Bhat

11:00 Restoration of degraded dryland ecosystems: A case study of Kuwait

Narayana Bhat

11:20 Creating species-diverse resource-conserving plant patches: A way forward to restore drylands

Susana Bautista

11:40 The functional and restoration ecology of the Succulent Karoo, South Africa

Peter Carrick

12:00 Monitoring dryland restoration outcomes to improve future treatments

Seth Munson

12:20 Challenges in determining the best rehabilitation parameters and criteria for arid areas with specific reference to the southern Kalahari region of South Africa

Chrizette Neethling

12:40 Arid Ecosystems Management Nexus Approach: Toward a Holistic System of Thinking of Managing Arid Ecosystems

Meshal Abdullah

Hall D-1
Friday, September 27, 2019
Parallel Sessions 7 - 11h00 - 13h00

S34 - Long term experience from field practitioners: Restoring ecological functions of degraded and deforested forest landscapes for economic and ecosystems values

Sharing lessons emerging from long term Forest Landscape Restoration projects worldwide.

Moderator: Anita Diederichsen

11:00  Gathering lessons learnt from WWF’s experience worldwide: An overview based on 8 FLR long term field projects  
Daniel Vallauri

11:20  Lessons learnt from 13 years of restoration in a moist tropical forest: The Fandriana – Marolambo Landscape in Madagascar  
Simon Rafanomezantsoa

11:40  Forest Landscape Restoration: Conservation outcomes and lessons from Terai Arc Landscape, Nepal  
Ananta Ram Bhandari

12:00  Ecological restoration as a tool to increase resilience to climate change: Learning with small farmers of the Colombian Andean-Amazon Piedmont  
Silvia Vejarano

12:20  Back to the field! Open lesson learning is required to meet global FLR targets  
Stephanie Mansourian

12:40  Discussion

Hall D-2

O18 - Novel approaches to planning and prioritization

Moderator: Jen Ford

11:00  Scaling up - practical challenges and solutions  
Jen Ford

11:20  How ecosystem networks reveal resilience  
Amy Shurety

11:40  Is the restoration of thicket in the Albany Thicket Biome with woody species really not feasible?  
Mike Powell

12:00  Native woodland restoration to counteract carbon land emission in Iceland  
Kristín Svavarsdóttir
Friday, September 27, 2019
Parallel Sessions 7 - 11h00 - 13h00

12:20 Avoiding further degradation by supporting locally important functional ecological infrastructure for improved land-based livelihoods
Nicholaus Huchzermeyer

12:40 Collaborative Action Plan to boost adoption of direct seeding as a restoration technique in Brazil
Lara Basso

Meeting Room 02
W11 - Workshop ~ Land…with compensation of an alien kind – the role of Invasive Alien Plant clearing in releasing water, restoring land and securing livelihoods

The Green Business Value Chain Programme, funded by the Department of Environmental Affairs, seeks to catalyse the conversion of biomass from invasive alien trees (alien trees absorb large quantities of water, facilitate land degradation and impact livelihoods), through micro-enterprises associated with biomass value chains, into products that can catalyse land rehabilitation.

Moderator: Garth Barnes

Meeting Room 07
S35 - Case studies of LandCare best practice in the Western Cape, South Africa

The LandCare programme in the Western Cape has 14 best practice case studies displaying resilient communities conserving land and water of which 13 won awards at the National LandCare conference in Bloemfontein.

Moderator: Francis Steyn
11:00 Berg River Restoration Project: A sustainable trail from source to sea
Francis Steyn
11:20 Restoration of ecological infrastructure through collaboration and LandCare partnerships
Rudolf Roscher
11:40 A vibrant Junior LandCare Project in the Western Cape Province
Grant Jepthas
12:00 The Koup, the gold standard in community-based natural resource management in the Western Cape, South Africa
Phyllis Pienaar
Friday, September 27, 2019

Parallel Sessions 7 - 11h00 - 13h00

12:20 Integrated partnerships for securing natural resources in the Western Cape, South Africa
   Jan Smit
12:40 Duivenhoks River – from extinction to sustainability
   Hannes Muller

Meeting Room 08-09

S36 - The 10-year journey of the Atlantic Forest Restoration Pact in Brazil and plans for the future

The symposium will present the tools, knowledge products, governance process and progress made by the Atlantic Forest Restoration Pact to achieve its commitment to the Bonn Challenge to restore 1 million hectares of degraded and deforested lands by 2020 in one of the hottest global biodiversity hotspots.

Moderator: Ludmila Pugliese
11:00 The 10-year journey of the Atlantic Forest Restoration Pact (PACT)
   Severino Pinto
11:20 Tools and Knowledge products to scale up forest restoration
   Pedro Brancalion
11:40 There is hope for achieving ambitious commitments of Atlantic Forest restoration
   Renato Crouzeilles
12:00 Who are the sponsors of the forest? The role of the private and public sector in financing forest and landscape restoration
   Miguel Calmon
12:20 How to get more inclusive restoration programs? Governance process, social engagement, and gender perspective
   Ludmila Pugliese
12:40 Discussion

Meeting Room 10

S37 - The real costs and benefits of peatland restoration

The symposium will address the challenge of conflict-free involvement of stakeholders into peatlands ecological restoration projects based on clear formulation of the targets and incentives on local, national and international level, costs-benefit analysis and methodology for indication of projects restoration success by ecosystem services.

Moderator: Tatiana Minayeva
Friday, September 27, 2019
Parallel Sessions 7 - 11h00 - 13h00

11:00 The incentives for peatland restoration: From pilots to international conventions
   Tatiana Minayeva
11:15 Partnerships in peatland restoration projects
   Igor Semenov
11:30 Resilience as a background principle of ecosystem restoration projects
   Shane Grundy
11:45 Peatland restoration support from local to national level: Case studies from South Africa
   Piet-Louis Grundling
12:00 When restoration contradicts the traditional land use
   Burenbaatar Ganbaatar
12:15 Paludiculture: A way to restore ecosystem services of peatlands with continued productive use for economic benefits
   Jan Peters
12:30 Engaging vulnerable groups in peatland restoration projects
   Daria Ryazantseva

Meeting Room 11

S38 - Maximising plant establishment potential: New tools and technologies
   Ecologically-guided restoration practices are fundamental to maximising plant establishment potential - this symposium will present new tools and technologies.
   Moderator: Alison Ritchie
11:00 Giving seeds a fighting chance: The use of seed enhancement technologies to overcome barriers to restoration success
   Alison Ritchie
11:20 Restoration-engineering and seed enhancement technologies offer new solutions for use in dryland (mine) rehabilitation
   Todd Erickson
11:40 Can delaying germination reduce winter mortality of fall-sown seeds in cold deserts?
   Owen Baughman
12:00 Protecting direct seeded grasses from herbicide application: Can new extruded pellet formulations be used in restoring natural plant communities?
Friday, September 27, 2019
Parallel Sessions 7 - 11h00 - 13h00

Vanessa Brown
12:20 Application of restoration science to threatened species translocation: Insights from a short-range banded ironstone species

Carole Elliott
12:40 Rodent deterrent seed coating technologies for restoration seeding

Justin Taylor
Friday, September 27, 2019
Parallel Sessions 8 - 14h30 - 16h30

Hall A
S39 - The FEW Nexus & restoration: Achieving food, energy, and water security through ecological restoration in a changing climate

We aim to develop explicit connections between the FEW (food-energy-water) nexus and restoration, advancing the ways that restoration practice, science, and policy facilitate food, energy, and water security and mitigate the impacts of food, energy, and water systems at local, regional, and global scales through invited speaker presentations and robust discussion.

Moderator: Mariah McIntosh
14:30 Restoration as a prominent solution to food-energy-water nexus challenges
Mariah McIntosh
14:50 The economic case for sustaining the marshes of southern Mesopotamia
Azzam Alwash
15:10 Modelling the interlinkages between food-energy-water and agricultural production in northern Ghana
Martin Schultze
15:30 Collective exploration of the impact of restoration in the Baviaanskloof through the lens of the Water, Energy, and Food Nexus
Liezl le Roux and Justin Gird
15:50 Why the UN Decade on Ecosystem Restoration matters for the Food-Energy-Water Nexus
Musonda Mumba
16:10 Discussion

Hall B
S40 - Ecological restoration of mined areas in Asia, Africa and Oceania: Opportunities, approaches and policy (Session 2 of 3)

This symposium focuses on Asian-African-Australian ecological restoration of mined area for academic exchange and experience sharing.

Moderator: Kingsley Dixon
14:30 Introduction
Kingsley Dixon
14:35 Making the most of seeds in mine site restoration
Simone Pedrini
14:55 Ecological restoration on magnetite tailings: Six years of lessons learned
Adam Cross
Friday, September 27, 2019
Parallel Sessions 8 - 14h30 - 16h30

15:15  eDNA Metabarcoding - a new approach to monitoring of restoration
Paul Nevill

15:35  Using monitors to monitor mine site restoration: How does Australia’s largest lizard species respond to mine site restoration?
Sophie Cross

15:55  Testing multiple substrates for terrestrial biodiversity monitoring using environmental DNA metabarcoding
Mieke van der Heyde

16:15  Discussion

Hall C

S41 - Saving threatened species through ecological restoration
Members of the Ecological Restoration Alliance of Botanic Gardens will provide guidance and illustrative examples of how to save threatened species through ecological restoration.
Moderator: Paul Smith

14:30  Species recovery programmes as an important component of ecological restoration: How restoration practitioners can learn from the botanic garden community
Paul Smith

14:50  How to monitor species and population recovery as part of ecological restoration programmes?
Sandrine Godefroid

15:10  Integrated scientific approaches to rare species restoration: Lessons learnt from Western Australia’s Kings Park and Botanic Garden
Carole Elliott

15:30  Targeted action to restore populations of threatened plant species in the Cape Floristic Region
Victoria Wilman

15:50  Securing a future for the world’s threatened trees through species recovery and ecological restoration programmes
Kirsty Shaw

16:10  Discussion
Friday, September 27, 2019
Parallel Sessions 8 - 14h30 - 16h30

Hall D-1

S42 - Sustaining catchment services through restoration and maintenance of ecological infrastructure: Global lessons from the uMngeni Catchment, South Africa

This research symposium highlights some of the valuable research output and capacity building that has taken place within the context of restoration and maintenance of ecological infrastructure as part of the 5-year Centre for Water Resources Research project funded by the Water Research Commission.

Moderator: Graham Jewitt

14:30 Multi-sector partnership and collaborative water governance in the uMngeni Catchment
Nontutuzelo Gola

14:50 Catchment connectivity: A society-water-space trialectic
Cathy Sutherland

15:10 Benefits and costs of investing in ecological infrastructure for water security: Lessons from the uMngeni Catchment, South Africa
Michelle Browne

15:30 Optimising water and financial flows to guide investment in catchment protection and restoration
Graham Jewitt

15:50 Transdisciplinarity and social learning through socio-ecological research in the uMngeni Catchment, KwaZulu-Natal, South Africa
Sabine Stuart-Hill

16:10 Restored ecological infrastructure supports livelihood: Research provides the evidence
Bonani Madikizela

Hall D-2

S43 - Soils, seedlings, and societies: Addressing limiting factors to increase post-planting growth and survival

This symposium introduces the Target Plant Concept as a framework for planning, evaluating, and trouble-shooting restoration projects carried out with nursery-grown seedlings. To be successful, such projects need to consider seedling quality, as well as environmental, logistical, and social conditions that may limit seedling performance.

Moderator: Rebecca Sheridan
Friday, September 27, 2019
Parallel Sessions 8 - 14h30 - 16h30

14:30  The critical importance of nurseries for meeting ecosystem restoration goals
       Diane Haase

14:50  Why nurseries are successful and why nurseries fail
       Kasten Dumroese

15:10  Maximizing seedling outplanting success with organic soil amendments
       Deborah Page-Dumroese

15:30  Selecting and growing seedlings for desert ecosystems
       Karma Bouazza

15:50  Overcoming limiting factors to seedling establishment: Physiological, morphological, spatial, and temporal tactics
       Jeremiah R. Pinto

16:10  Discussion

Meeting Room 02

W12 - Workshop ~ Greening the seas? Sharing our successes and challenges in marine and coastal restoration

This highly interactive and participatory workshop will enable practitioners of marine and coastal restoration to share success stories, engage with traditional knowledge restoration frameworks, describe challenges and work together on solutions.

Moderators: Anuradha Rao and Richelle Kahui-McConnell

Meeting Room 07

O19 - Mediterranean ecosystems
Moderator: Carla Pinto-Cruz

14:30  Drought affects transitions between dominant plant species in California annual grasslands
       Evan Batzer

14:50  A good start but slow dynamics: Hopes and disappointment of a Mediterranean steppe grassland restoration experiment
       Renaud Jaunatre

15:10  Conditioning native plants to increase stress tolerance and improve restoration success
       Justin Valliere
Friday, September 27, 2019
Parallel Sessions 8 - 14h30 - 16h30

15:30 Restoration of Mediterranean temporary ponds in Portugal: Challenges and opportunities
Carla Pinto-Cruz

15:50 What is preventing oak forest regeneration in human-modified landscapes? Evidence from a multi-site experiment in Central Mexico
David Douterlungne

16:10 Comparing two contrasted methods to sand dune restoration after Eucalyptus clearing
Aviv Avisar

Meeting Room 08-09
S44 - Restoration for whom, by whom?

In this session, we critically interrogate both the inclusivity and the sustainability of the restoration agenda and of restoration practices as these unfold across multiple places and scales.

Moderator: Marlene Elias
14:30 Stakeholders in Forest Landscape Restoration
Stephanie Mansourian

14:45 A conceptual framework for exploring social and institutional dimensions of landscape restoration: The case of four market-based approaches in Kenya
Juliet Kariuki

15:00 Using a political ecology lens to examine forest restoration, water insecurity, and climate change in rural Bolivia
Meagan Rathjen

15:15 Equity and social inclusion in land restoration interventions in Ghana: Considering the 'by whom', 'for whom', and 'how'
Matt Kandel and Thomas Addoah

15:30 How livelihood vulnerability influences participation in forest governance at the community level: A case study from Liberia
Sheila Onzere

15:45 The politics of landscape restoration: Lessons from Vietnam
Pamela McElwee

16:00 Discussion
Deepa Joshi
Meeting Room 10

**O20 - Aquatic systems**

Moderator: Wandile Nomquphu

14:30 Restoring abandoned salt pans as waterbird habitat

**Johan Wasserman**

14:50 Hand weeding after direct seeding overcomes competition from high weed loads in riparian zones

**Fiona Ede**

15:10 How the characteristics of non-perennial pans in semi-arid conditions can inform their ‘re-creation’ using the substrate from intact pans

**Fiona Eggers**

15:30 Assessing ecological outcomes of wetland restoration under resource constraints in South Africa

**Farai Tererai**

15:50 Creek restoration to support riparian habitat and extended flow

**Larry Vickerman**

16:10 Vegetative purification of Oman oil field byproduct water: A case study of the world’s largest constructed wetland and its beneficial ecological offsets

**David Hancock**

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Meeting Room 11

**S45 - Monitoring 30 years of large-scale tropical forest restoration: Results, advances, challenges, and opportunities of a multi-sector activity**

Recent advances allowed to monitor and identify drivers of tropical forest recovery and forest persistence in the last decades, and to quantify the outcomes for landscape composition. Based on these findings we are able to better discuss challenges and opportunities for successfully implementing large-scale forest restoration.

Moderator: Rafael B. Chaves

14:30 Challenges for large-scale restoration of tropical forests

**Pedro Brancalion**

14:50 Large-scale restoration in the Atlantic Forest: current status and perspectives

**Renato Crouzeilles**
Friday, September 27, 2019
Parallel Sessions 8  -  14h30 - 16h30

15:10  Geospatial tools and public policy: The
decade of integration opportunities in the
context of restoration commitments
  Rafael B. Chaves

15:30  Mapbiomas: Methodology to produce 30
years of annual maps for forest dynamics
  Marcos Rosa

15:50  How much is back and what are the
consequences for habitat availability?
  Leandro Tambosi

16:10  Age and persistence of secondary Atlantic
Forests in Brazil
  Edson Santiami
Friday, September 27, 2019
Parallel Sessions 9 - 17h00 - 18h20

Hall A
O21 - Fire
Moderator: Raelene Crandall
17:00  Fire drives abandoned pastures to a savanna-like state in the Brazilian Atlantic Forest: Implications for ecological restoration
   Jerônimo Sansevero
17:20  Fire, drought, and invasion of nonnative species interact to influence ecosystem resilience
   Raelene Crandall
17:40  Pine savanna plant community patterns after fifteen years of biennial fires in different seasons
   Jennifer Fill
18:00  An investigation into the fire regimes of the upper Tsitsa River catchment
   Gareth Snyman

Hall B
O22 - Trophic cascades and rewilding
Moderator: Emily Gonzales
17:00  Restoring trophic cascades and the need for baselines and monitoring
   Rene Beyers
17:20  Mapping the rewilding potential
   Néstor Fernández
17:40  Developing a conceptual framework for restoring ecological function through rewilding: The Guam case study
   Hugo Thierry
18:00  Ecological restoration through the management of hyperabundant wildlife: A 10-year review of predation, partnerships, and policies
   Emily Gonzales

Hall C
O23 - Invasive species - approaches
Moderator: Beverley Clarkson
17:00  Preventing plant invasions by using botanic gardens and arboreta as sentinels
**Friday, September 27, 2019**

Parallel Sessions 9 - 17h00 - 18h20

**Kurt Dreisilker**
17:20 Restoration as biocontrol: Mass-ratio or diversity-Invasion theory as guiding principle?

**Kelly Lyons**
17:40 Reversing biodiversity decline in forest remnants: A restoration experiment using biocontrol beetles and manual clearance

**Beverley Clarkson**
18:00 Connecting experts in biological and meteorological sciences to advance knowledge of pest management for restoration in a changing climate

**Stephen Young**

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**Hall D-1**

*S46 - Showcasing the importance of restoring fragmented habitats within an urban environment and sustaining the ecological resilience of high biodiversity hotspots within the Cape Town Metropole*

- Restoring fragmented habitats within an urban environment through connectivity: highlighting ecological restoration, urban wetlands, species conservation, alternative veld management tools - restoring the ecological resilience of high biodiversity hotspots within the Fynbos biome.

Moderator: Anthony Roberts
17:00 Cape Flats Dune Strandveld: An endemic vegetation type in need of a helping hand

**Louise Baldwin**
17:20 Survival of urban wetlands in Cape Town through wetland restoration

**Andrea von Gunten**
17:40 Strandveld restoration within a complex mosaic in the absence of large herbivory

**Zurelda Monique le Roux**
18:00 Restoring fragmented habitats using eland as a veld management tool

**Petro Botha**

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**Hall D-2**

*S47 - Seeds for global restoration, Session 5 of 5: Developing seed supplies and seeding strategies for Brazil’s forests and savannas*

-Seed networks and direct seeding strategies for Brazilian ecosystems upscale native seed supplies and enhance restoration success.

Moderators: Nancy Shaw and Sarah Barga
Friday, September 27, 2019
Parallel Sessions 9 - 17h00 - 18h20

17:00  Seed networks for upscaling native seed supply in Brazil
Danilo Urzedo
17:20  Forest seed potential for direct seeding in tropical regions
Fatima Piña-Rodrigues
17:40  Thirteen years of direct seeding for forest restoration in the Brazilian Amazon, Cerrado, and Atlantic biomes
Eduardo Campos Filho
18:00  Tropical savanna restoration by direct seeding: Steps forward
André Coutinho

Meeting Room 08-09
O24 - Coastal reefs
Moderator: Simon Branigan
17:00  Native oyster restoration in Europe: Background, progress, and best practice
Bernadette Pogoda
17:20  Coastal reef restoration in temperate waters: Counteracting fish habitat loss with the construction of artificial stone reefs
Tim J.G. Wilms
17:40  New global guidelines for shellfish reef restoration
Simon Branigan
18:00  Integrative restoration protocols for temperate mesophotic reefs: The case of the Mediterranean coralligenous habitats
Silvija Kipson

Meeting Room 10
O25 - Urban areas
Moderator: Ffion Atkins
17:00  A water sensitive Cape Town: Wetland restoration at a city scale?
Ffion Atkins
17:20  The capacity of urban restored forests to support native birds: Ecological or social restoration?
Elizabeth Elliot Noe
17:40  Restoration and stepping-stone corridor building in Cape Town: A school-node based, collaborative approach
Friday, September 27, 2019
Parallel Sessions 9 - 17h00 - 18h20

Frances Taylor
18:00 Southern African cities in a changing climate: Investigating the transformative adaptation potential of the Sihlanzimvelo stream management programme
Lulu van Rooyen

Meeting Room 11
S48 - Transdisciplinary approaches in tropical forests restoration: Rethinking local communities participation and the physical attributes of the landscape (Session 2 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
17:00 The operational dimension of ecological restoration: How to move from conceptual planning to the practice of planting trees with farmers and communities?
Felipe Marauê Marques Tieppo
17:20 Emergency recovery from the Fundão Dam failure: Preparation for ecosystem restoration
Leonardo Ferreira da Silva
17:40 Socioeconomic and environmental suitability of rural properties: A strategic engagement for community and forest recovery
Lucas de Oliveira Scarascia
18:00 Environmental recovery as a possibility of coping with social vulnerability in the Doce River Basin, Brazil
José Ambrósio Ferreira Neto