



IUCN  
WORLD PARKS CONGRESS  
SYDNEY 2014

# Responding to Climate Change Stream

November 12 - November 19, 2014

Sydney, Australia

**Session & Side Event  
Descriptions and Speakers**



**Friday, November 14**  
**Hall 3A2 (Homeroom)**



# Responding to Climate Change Stream

07:00 — 08:00 Fri, Nov 14

Hall 3A2 (Home Room)

## Session:

### Climate Change Journey Assignments / Discussion

Stream participants taking a “climate change journey” meet to receive and discuss assignments and methods for sharing session outcomes over the next four days.

## Moderator:

Delia Clark, Confluence

# Responding to Climate Change Stream

11:00 — 12:00 Fri, Nov 14

Hall 3A2 (Home Room)

## Session:

### Responding to Climate Change Stream Launch—Stream Plenary

Join us to launch the Responding to Climate Change Stream and set the stage for five days of interactive dialogue to share innovative adaptation tools, engage in new partnerships, and develop key messages that will carry throughout the WPC and beyond.

## Welcome:

Leigh Welling, U.S. National Park Service & Mariana Bellot, Comisión Nacional de Áreas Naturales Protegidas, Mexico

## Moderator:

Jeff Horowitz, Avoided Deforestation Partners

## Speakers:

*Tom Lovejoy*, United Nations Foundation

*Trevor Sandwith*, IUCN

*Luvuyo Mandela*, Tyathumzi Advisory

# Responding to Climate Change Stream

12:00 — 13:30 Fri, Nov 14

Hall 3A2 (Home Room)

## Session:

### Youth Expressions of Climate Change

Local Sydney high schools students share how climate change affects them through multi-media and performances art. Sponsored by 1 Million Women.

## Moderators:

Natalie Isaacs, 1MillionWomen

Bernie Hobbs, Sydney News Inventor Co-host

## Speakers:

*Olivia Cook*, 100,000 Girls

*Tara Hunt*, 1 Million Women

Six students perform a poem, song, video clip, skit, monologue, or visual art.

# Responding to Climate Change Stream

13:30 — 15:00 Fri, Nov 14

Hall 3A2 (Home Room)

## Session:

### Transforming Conservation Objectives under a Changing Climate

Protected areas generally have been created assuming environmental factors and species and habitat ranges will remain consistent with historical trends and variability. In the context of a changing climate, using past conditions as the benchmark for setting conservation goals will be increasingly problematic. This session will focus on how managers and conservationists can develop goals and objectives that look forward to future, rather than past, climate and ecological conditions.

## Moderator:

*Bruce Stein*, National Wildlife Federation

## Speakers:

*Michael Dunlop*, CSIRO

Climate-ready biodiversity objectives

*Phillipa McCormack*, University of Tasmania

Re-thinking conservation objectives for protected areas under climate change: The role of law

*John Robinson*, Wildlife Conservation Society

Tackling the climate change challenge: Promoting adaptation in wild places

*Robert Costanza*, ANU

The value of parks and protected areas in a changing climate

*Carina Wyborn*, WWF International

SPARC: Building capacity to undertake systematic planning for protected areas under climate change

*Lee Hannah*, Conservation International

Protected areas and climate on the edge

# Responding to Climate Change Stream

15:30 — 17:00 Fri, Nov 14

Hall 3A2 (Home Room)

## Session:

### **Adaptation Frameworks: Key Characteristics of Climate Smart Conservation**

As the field of climate change adaptation advances and matures, the array of frameworks for planning and implementing decisions can be confusing for managers. However, most adaptation frameworks have similar elements so that it is possible to identify a generalized set of steps. The session presents several high level decision frameworks currently being used and facilitates discussion of what elements are most common and when different approaches are most useful.

## Moderator:

*James Watson*, Wildlife Conservation Society

## Speakers:

*Bruce Stein*, National Wildlife Federation

Climate-Smart Conservation: A generalized framework for adaptation planning and implementation

*Sarah Boulter*, Griffith University

The natural resource management checklist: Supporting climate adaptation planning and decision-making for regional NRM

*Gilly Llewellyn*, WWF Australia

Climbing the ladder of adaptation engagement: A framework for overcoming adaptation inertia

*John Gross*, Colorado State University

Moving Towards the Future: Frameworks for Effective Climate Adaptation

*Andrew Rhodes*, Comisión Nacional de Áreas Naturales Protegidas, Mexico

Climate Change Adaptation for Protected Areas in Mexico: from Theory to Practice

# Responding to Climate Change Stream

18:00 — 20:30 Fri, Nov 14

Hall 3A2 (Home Room)

## Session:

### **Video Reflections: What Does Climate Change Mean for My Park?**

Speakers and participants share their stories and perspectives about how changes to Earth's climate are affecting where they live and the places they care about. Segments from these interviews may be posted via social media during the Congress or included in the wrap up sessions for the stream. Interviews are by invitation or sign up in the Responding to Climate Change Home Room.

## Moderator:

*Melanie Wood*, U.S. National Park Service

## Videographer:

*Regan Alsup*, Freelance Filmmaker

**Friday, November 14**  
**Southee South**



# Responding to Climate Change Stream

13:30 — 15:00 Fri, Nov 14

Southee South

## Session:

### **Ramping Up Earth's Heat Engine: Earth Systems in a Warming World**

Global warming of Earth's climate doesn't affect all regions or ecosystems in the same way. High latitudes warm faster and to a greater degree than lower latitudes and some ecosystems are more vulnerable than others. Adding heat to the climate system can intensify extreme events, such as fire, storms, and heat waves. The session presents an overview of global and regional climate patterns and a global view of protected areas' vulnerability.

## Moderator:

*Leigh Welling*, U.S. National Park Service

## Speakers:

*Kevin Hennessy*, CSIRO

Climate projections and extreme weather

*Ove Hoegh-Guldberg*, University of Queensland

Climate change impacts on coasts and oceans: challenges for conservation and fishes

*Daniel Fagre*, U.S. Geological Survey

*High elevation climate change impacts in mountain parks: Vulnerabilities and responses*

*Michael Doherty*, CSIRO Ecosystem Sciences

Changing fire regimes and adaptation services: A case study of montane forests in the Australian Alps National Parks

*Patrick Gonzalez*, U.S. National Park Service

Global vulnerabilities of ecosystems to biome shifts due to climate change and habitat loss due to land use change

# Responding to Climate Change Stream

15:30 — 17:00 Fri, Nov 14

Southee South

## Session:

### **Dry Season: Managing Climate Change in Arid and Semi-arid Lands**

Arid and semi-arid lands are among the most vulnerable to climate change. This session will explore impacts and adaptation approaches in regions facing the greatest threat from water scarcity.

## Moderator:

*Patrick Gonzalez*, U.S. National Park Service

## Speakers:

*Patrick Gonzalez*, U.S. National Park Service

Introductory remarks: Climate change impacts and vulnerabilities in arid ecosystems, with examples from Africa and North America

*Marwa Halmy*, Alexandria University

Shall protected areas in arid lands respond to climate change?

*Chris Dickman*, University of Sydney

When booms go bust: Risks to fauna under intensified boom—bust cycles in arid environments

*Reza Salehi*, Sustainable Livelihood Council, Abolhassani Tribal Confederacy

Ghanimat Azhdari, Interpreter

Coping with the effects of climate change and drought through local initiatives and ecological management

*Matt Salmon*, Parks Australia Division, Department of the Environment

Australian desert protected areas

**Friday, November 14**  
**Members Bar**



# Responding to Climate Change Stream

13:30 — 15:00 Fri, Nov 14

Members Bar

## Session:

### **The Role of Parks and Protected Areas in an Era of Change**

Parks and protected areas are vital role in helping people and ecosystems adapt to and mitigate climate change. Healthy, well-managed protected areas provide essential ecological, social, and economic services – such as clean water, carbon storage, genetic reservoirs, disaster mitigation, soil stabilization, recreation, and solace. This session will explore basic concepts for how protected areas provide natural solutions, including greater resilience and reduced vulnerability, to climate change.

## Moderator:

*Kathy MacKinnon*, IUCN World Commission on Protected Areas

## Speakers:

*Ena E. Mata-Zayas*, Universidad Juarez Autonoma De Tabasco  
The challenge of ecosystem services for climate change

*Bernal Herrera*, CATIE  
Conservation-based evidence: A need for resilient protected areas systems in a changing era

*Radhika Murti*, IUCN  
Protected areas for risk management in a changing climate

*Neil Gilbert*, Antarctica New Zealand  
Establishing protected areas in Antarctica: Why bother?

*Neil Burgess*, United Nations Environment Programme World Conservation Monitoring  
The role of protected areas in integrated planning for REDD+

# Responding to Climate Change Stream

15:30 — 17:00 Fri, Nov 14

Members Bar

## Session:

### **The New Climate Classroom: How to Communicate Effectively to Different Audiences About Climate Change**

Parks around the world are on the front line of climate change and have an opportunity to communicate and empower the public. How can we identify and scale best practice so that the opportunity for parks to reach a massive public audience is not missed? The session will present a world expo of innovative climate education and communication programs and activities.

## Moderator:

*Chris Spence*, Institute at the Golden Gate

Parks—The new climate classroom: Examples of climate communications from around the world

## Speakers:

*Jonathan Jarvis*, U.S. National Park Service

Opening Remarks: Parks' role in informing and empowering the public on climate change

*Tory Read*, OceanWork

Strategic communication tools

*Marissa McBride*, University of Helsinki

Communicating climate change predictions to decision-makers: Strategies for enhancing understanding and uptake

*Robert Mather*, Southeast Asia Group, IUCN

A regional perspective: Innovative public climate communication campaigns in Southeast Asia

*Melanie Wood*, U.S. National Park Service

It takes a village: The role of parks in effectively communicating about climate change

*Scott Denning*, Colorado State University

How you communicate to skeptics

*Ryan Finchum*, Colorado State University

Building a bilingual community of practice

**Saturday, November 15**

**Hall 3A2 (Homeroom)**



# Responding to Climate Change Stream

07:00 — 08:00 Sat, Nov 15

Hall 3A2 (Home Room)

## Session:

### Climate Change Journey Assignments / Discussion

Stream participants taking a “climate change journey” meet to discuss their insights and share examples of innovative solutions from the previous day’s sessions. Outcomes will be synthesized for inclusion in the stream wrap-up.

## Moderator:

Delia Clark, Confluence

# Responding to Climate Change Stream

08:30 — 10:00 Sat, Nov 15

Hall 3A2 (Home Room)

## Session:

### **Blue and green carbon: A new opportunity for protected areas?**

Globally, forest ecosystems account for approximately 50% of the annual exchange of carbon dioxide to the atmosphere. Preliminary studies by the United Nations Environmental Programme (UNEP) and the World Conservation Monitoring Centre (UNEP-WCMC) show that protected areas contain at least 15% of terrestrial carbon. This session will explore the role of protected areas and effective management practices in securing these carbon stores (both green and blue carbon) as a new opportunity for both mitigation and adaptation, to help sustain ecosystems and communities. The session will reflect on current activities, including the way stored carbon can be measured and the challenges involved.

## Moderator:

*Tobias Wittmann*, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)

## Speakers:

*Patrick Gonzalez*, U.S. National Park Service  
Ecosystem carbon to reduce climate change

*Alfredo Simao*, IBAP  
Sustainable conservation of Guinea-Bissau's rich natural capital and globally significant biodiversity:  
The role of blue carbon

*Cecilia Gore-Birch Gault*, Kimberley Land Council  
The North Kimberley fire abatement project

*Mauricio Sanchez Lopez*, CONAP  
Carbon sequestration and biodiversity in protected areas: Four cases of calculation of ecosystem services

*Christopher Dean*, Peak District National Park Authority  
Carbon management in rural communities and protected areas learning from the Peak District National Park and applying an approach globally: A project outline from the Peak District National Park

*Ariadne Gorring*, Kimberley Land Council  
The North Kimberley fire abatement project

# Responding to Climate Change Stream

10:30 — 12:00 Sat, Nov 15

Hall 3A2 (Home Room)

## Session:

### REDD+: Global Lessons Learned

Reducing Emissions from Deforestation and Forest Degradation (REDD) Programme is a collaborative initiative by United Nations to create a financial value for the carbon stored in forests, offering incentives for developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development. This session demonstrates case studies in different places of the world, identifying current and future challenges, and exploring policy recommendations.

**Moderator:** *Andrew Rhodes*, Comisión Nacional de Áreas Naturales Protegidas

## Speakers:

*Peerzada Ishtiyak Ahmad*, Temperate Institute of Sustainable Innovations

Rehabilitation of degraded lands of Pirpanjal Forests of J&K through community based REDD+ mechanism

*Andriamandimbisoa Razafimpahanana*, Wildlife Conservation Society

From project to national level: Scaling up REDD+ in Madagascar

*Carlos Bonilla*, CONAP

*Mecanismo REDD+: Proyecto GuateCarbon, Zona de Usos Múltiples de la Reserva de Biosfera Maya, Guatemala, Guatemala*

*Cyril Paclissier*, World Wide Fund for Nature

Raising recognition of the role of protected areas in carbon sequestration and storage within the national REDD+ process in the Democratic Republic of the Congo

*Elke Mannigel*, OroVerde—Tropical Forest Foundation

Exchanging experiences on how to integrate biodiversity conservation and local community participation into projects to reduce emissions from deforestation and forest degradation (REDD)

*Rudy Valdivia*, Servicio Nacional De Áreas Naturales Protegidas

*Retos de la implementación de proyectos de Reducción de la emisión de gases de efecto invernadero por deforestación o degradación de bosques en Áreas naturales protegidas.*

*Patricia Fernandez-Davila*, CIMA-Cordillera Azul

*Alianzas para la conservación y mitigación del Cambio Climático: Proyecto REDD+ en el Parque Nacional Cordillera Azul, Peru*

*Luis Espinel*, Conservation International

*REDD+ como una herramienta para el financiamiento de las Áreas Naturales Protegidas en el Peru*

*Jonathan Barnard*, RSPB-Birdlife International

Sierra Leone's 1st REDD project, Gola Rainforest National Park

*Hana Sakata*, University of Technology—Sydney

Exploring the potential of community based ecotourism in the REDD Forest Climate Change Initiative

# Responding to Climate Change Stream

12:00 — 13:30 Sat, Nov 15

Hall 3A2 (Home Room)

## Session:

### Tools Marketplace for Responding to Climate Change

The establishment of protected areas and protected area systems does not guarantee that their objectives are achieved. To fulfill their purpose, protected areas must be managed effectively, requiring appropriate institutional and governance arrangements and competent professionals providing a range of skills and tools at site and system levels, including for the marine and freshwater environments. The global analysis of management effectiveness assessments yields the insight that a large proportion of designated protected areas are inadequately managed, and have poor or none tools and methodologies for measuring and assessing vulnerability, resilience and carbon stocks. In that sense, the need of methodologies, tools and guidance is fundamental. Thus, this session will be an exceptional opportunity to engage and share a variety of tools and methods to respond to climate change, adaptation or mitigation.

## Moderator:

*Chris Spence*, Institute at the Golden Gate

## Speakers:

*Alexander Belokurov*, WWF International

Natural solutions: New methodology for protected area climate change adaptation

*Pierre L. Ibisch*, Centre For Economics and Ecosystem Management

The MARISCO method: Adaptive management of vulnerability and risk at conservation sites allows for ecosystem-based adaptation to climate change

*Anne Hammill*, International Institute for Sustainable Development (IISD)

Tools and practical guidance for cc adaptation and disaster risk reduction in protected areas

*Andrew Rhodes*, Comisión Nacional de Áreas Naturales Protegidas, Mexico

Methodology for a fast assessment of vulnerability to climate change in protected natural areas

*Xochitl Cantellano*, GIZ

Assessment toll of community-level social vulnerability to climate change in protected areas

*Esperanza Angula Pimental*, Comisión Nacional de Áreas Naturales Protegidas, Mexico

Assessment toll of community-level social vulnerability to climate change in protected areas

*Natalia Zamudio*, International Institute for Sustainable Development (IISD)

Tools and practical guidance for cc adaptation and disaster risk reduction in protected areas

# Responding to Climate Change Stream

13:30 — 15:00 Sat, Nov 15

Hall 3A2 (Home Room)

## Session:

### Part I: Adaptation Measures from Around the World

Climate change is affecting people's livelihoods in more ways than one, and is having a significant effect on biodiversity. Climate change is expected to cause species to migrate to areas with more favorable temperature and precipitation. There is a high probability that competing, sometimes invasive species, more adapted to a new climate, will move in. Such movements could leave some protected areas with a different habitat and species than they were initially designed to protect. In many cases, the negative effects of climate change on protected areas will be caused by humans, such as overconsumption, pollution or encroaching urbanization. Therefore, in order for Protected Areas to continue to meet the conservation objectives for which they were created, their resilience will need to be strengthened so that they can adapt to climate change. This and the following session are a world expo/ inspirational discussion of measures in different aspects that are being taken to adapt to climate change.

## Moderator:

*Robert Moseley*, The Nature Conservancy

## Speakers:

*James Watson*, Wildlife Conservation Society

Tackling the cc challenge: Examples of adaptation activities across the conservation world

*Yelly Diawara*, ONG Nature Mauritanie

Adaptation des colonies d'oiseaux aux changements climatiques en Mauritanie

*Andrew Dunstan*, Queensland Department of Environment and Heritage Protection

*Green turtle rookery failure and cc: The impacts and adaptive management response at Raine Island*

*Geoffrey Smith*, Blue Mountains City Council

Save Our Swamps program

*Claudia Rodriguez*, Dartmouth College and Texas A&M University

Farmers' climate adaptation contributes to deforestation of forest conservation in Calakmul and Maya Biosphere Reserves in Mexico and Guatemala

*Alexander Drozdov*, Russian Academy of Sciences, Moscow

*Ecosystem adaptation to climate change and land use change in biosphere reserves of forest-steppe and steppe-desert ecotones in Russia*

# Responding to Climate Change Stream

15:30 — 17:00 Sat, Nov 15

Hall 3A2 (Home Room)

## Session:

### Part II: Adaptation Measures from Around the World

This is Part II of the world expo/ inspirational discussion of measures in different aspects that are being taken to adapt to climate change.

## Moderator:

*Sandra Valenzuela*, World Wildlife Fund

*Oscar Guevara*, World Wildlife Fund

## Speakers:

*Robert Moseley*, The Nature Conservancy

Conservation of urban biodiversity under climate change: Climate-Smart Management for natural areas and open spaces in metropolitan Chicago (USA)

*Sylvia Wicander*, UNEP-WCMC

Development of a Sustainable Livelihood Action Plan for West African Coastal Protected Areas in the context of climate change

*Healy Hamilton*, NatureServe

*Observed trends in climate space in Greater Yellowstone Ecosystem: Implications for landscape resilience*

*Stephania Mattea*, University of Waikato

The LIFE+ TRUST project in North-Eastern Italy: A successful, multi-layer model of adaptation to climate change for groundwater resources and natural habitats

*Alejandro Duran*, Comisión Nacional de Áreas Naturales Protegidas, Mexico

Programa de adaptacion al cambio climatico en la Region Central de la Sierra Madre Oriental

# Responding to Climate Change Stream

19:00 — 21:00 Sat, Nov 15

Hall 3A2 (Home Room)

## Session:

### **Video Reflections: What Does Climate Change Mean for My Park?**

Speakers and participants share their stories and perspectives about how changes to Earth's climate are affecting where they live and the places they care about. Segments from these interviews may be posted via social media during the Congress or included in the wrap up sessions for the stream. Interviews are by invitation or sign up in the Responding to Climate Change Home Room.

## **Moderator:**

*Melanie Wood*, U.S. National Park Service

## **Videographer:**

*Regan Alsup*, Freelance Filmmaker



**Saturday, November 15**

**Southee South**



# Responding to Climate Change Stream

08:30 — 10:00 Sat, Nov 15

Southee South

## Session:

### **A Polar Journey: The Effectiveness of Protected Areas in the High North and the Deep South—Part I**

The Arctic is changing fast due to climate change and globalization. Protecting the unique biodiversity in this region is critical for polar species, indigenous people and others that live in the North, and for understanding future change. The goal of this session is to demonstrate an array of options for advancing conservation and protected areas that may be implemented by the Arctic Council during the U.S. chairmanship (2015-2017) and beyond.

## Moderator:

*Aurelie Spadone*, IUCN

## Speakers:

*Neil Gilbert*, Antarctica New Zealand

Evolution of and effectiveness of protected areas in the deep south

*Steven Chown*, Monash University

The Antarctic conservation strategy for the 21st Century

*Christopher Debicki*, Nunavut and Greenland Projects Director, Oceans North Canada

Engaging with Arctic Indigenous Peoples for Good

*Alexander Shestakov*, WWF Global Arctic Programme

The changing Arctic: Towards the resilient network of conservation areas

*Jan Ekebom*, Senior Marine Advisor, Finland

Panel Participant

# Responding to Climate Change Stream

10:30 — 12:00 Sat, Nov 15

Southee South

## Session:

### **A Polar Journey: The Effectiveness of Protected Areas in the High North and the Deep South—Part 2**

The coldest, driest, and windiest place on earth is still host to unique flora and fauna. The goal of this session is to outline a roadmap for advancing protected area network in the southern ocean and on the continent and discuss the opportunities and challenges for integration into a larger conservation strategy.

## Moderators:

*Alexander Shestakov*, WWF Global Arctic Programme

*Neil Gilbert*, Antarctica New Zealand

## Speakers:

*Lauren Wenzel*, National Marine Protected Areas Center, NOAA  
Arctic Council PAME work on framework for marine protected areas

*Clive Desire-Tesar*, WWF Global Arctic Programme  
The Last Ice Area

*Joergen Hollesen*, National Museum of Denmark  
Arctic cultural heritage and climate change—the Preservation of a permafrozen site in a warm future

*Steven Chown*, Monash University  
Antarctica's protected areas are inadequate, unrepresentative, and at risk

*Lyn Goldsworthy*, Antarctic and Southern Ocean Coalition  
Marine Protected Areas in the southern ocean under convention for the conservation of Antarctic marine living resources: Progress and impediments

# Responding to Climate Change Stream

13:30 — 15:00 Sat, Nov 15

Southee South

## Session:

### **Brave New World: Innovative Approaches for Adapting and Transforming Marine Protected Areas in a Changing Climate**

This session will showcase new tools, recent experiences and challenging ideas from marine protected areas that can support the innovations required in management of protected areas everywhere. The session will conclude with a discussion. The discussion will draw from the presentations to answer the question: What will it take for marine protected area management to survive the brave new world?

## Moderator:

*Alistair Hobday, CSIRO*

## Speakers:

*Jesse Hastings, National University of Singapore*

Rethinking the blue planet: New approaches to social-ecological resilience for marine protected areas in a climate-changing world

*Jacqueline Thomas, WWF Coral Triangle Programme*

Marine protected areas and networks to improve resilience to climate change—Lessons from the Coral Triangle

*Roger Beeden, Great Barrier Reef Marine Protected Area*

*Unified Field Theory: dynamic assessments of coral reef health enable resilience-based management of the Great Barrier Reef*

*Nathan Bennett, University of British Columbia*

Increasing Social Adaptive Capacity and Ecological Resilience through Community-Based Scenario Planning

# Responding to Climate Change Stream

15:30 — 17:00 Sat, Nov 15

Southee South

## Session:

### **Building Resilience and Adaptation in Marine Ecosystems—Case Studies**

This session will focus on Marine Protected Areas (especially large MPAs) and regional MPA networks as solutions for marine conservation and adaptation to climate change.

## Moderator:

*Roger Beeden*, Great Barrier Reef Marine Protected Area

## Speakers:

*Neeraj Khera*, GIZ India

Challenges of an MPA within a sprawling mega city

*Harisoa Rakotondrazafy*, WWF Madagascar and West Indian Programme Office

Pioneering climate change adapted MPA management in Madagascar as a blue solution

*Marthen Welly*, Coral Triangle Center

Nusa Penida: Establishing an MPA learning site in Indonesia

*Thamasak Yeemin*, Ramkhamhaeng University

Managing coral reefs in the face of global climate change: A case study in the Andaman Sea

*Reynaldo Estrada Estrada*, Centro Nacional de Áreas Protegidas

Trabajo a ser presentado al Congreso Mundial de Parques Sidney 2014 en la corriente 'Responder al Cambio Climático'

*Emily Darling*, University of North Carolina

A strategic network of MPAs in the face of climate change

**Saturday, November 15**

**Members Bar**



# Responding to Climate Change Stream

08:30 — 10:00 Sat, Nov 15

Members Bar

## Session:

### Perceptions and Expectations for Protected Areas under Climate Change

Public attitudes to climate change and adaptation span a range of perspectives. A survey of conservation scientists, parks managers and policy makers tied with the "Global Warming's Six Americas" study show public perceptions of climate change are not simply grouped into "believers" and "skeptics". What does this mean for how protected areas engage in climate change dialogue with communities and visitors? This research is presented followed by facilitated discussions around what climate change means for relevance of parks globally.

## Moderator:

*Craig James, CSIRO*

## Speakers:

*Alistair Hobday, CSIRO*

Perceptions and expectations for protected areas under climate change: A global survey of conservation scientists, parks managers and policy makers

*Melanie Wood, U.S. National Park Service*

Know your audience: How a close look at U.S. public opinion creates opportunities to build awareness and inspire stewardship

*Juliane Zeidler, IUCN Commission on Education and Communication*

Applying a "people lens" to addressing climate change and protected areas—injecting a little conservation psychology

*Zoe Leviston, CSIRO*

The social and psychological functions of people's responses to climate change: Lessons and directions for policies and practices of management of protected areas

# Responding to Climate Change Stream

10:30 — 12:00 Sat, Nov 15

Members Bar

## Session:

### Assessing Resource and Cultural Vulnerability to Climate Change

Climate change is serious threat to all resources on earth and understanding the vulnerability of species, ecosystems, ecological processes and people to the different forms of climate change within and beyond parks is a challenging exercise. The science on vulnerability assessment is burgeoning but this reflects the emerging nature of the discipline and the fact we are only now starting to really ascertain what vulnerability means to different 'resources' and cultural values. In this session, six very different approaches to assessing vulnerability of natural and cultural resources are presented and within each talk, different methodologies are outlined in the best ways to understand elements of exposure, sensitivity, adaptive capacity, and in the case of cultural resources, valuation of significance. Weaknesses, strengths and challenges in each of the approaches are provided by the speakers with a view of identifying the next steps needed for advancing each methodology forward.

## Moderator:

*James Watson*, Wildlife Conservation Society

## Speakers:

*Denise Hernandez*, Escuela Venezonala De Planificacion

Analysis of the vulnerability of protected areas to climate change in Venezuela: An index as a contribution to the management plans

*Gerard Rambeloarisoa*, World Wildlife Fund Madagascar

From science to decision: Applying cutting-edge tools for Madagascar

*Josh Cinner*, James Cook University

Evaluating social and ecological vulnerability of coral reef fisheries to climate change

*Wendy Foden*, IUCN

IUCN SSC guidance on selecting and using approaches for assessing vulnerability of species to cc

*Stacy Jupiter*, Wildlife Conservation Society

A new framework for monitoring changes in social-ecological vulnerability of tropical coastal communities

# Responding to Climate Change Stream

13:30 — 15:00 Sat, Nov 15

Members Bar

## Session:

### **Fast and Furious: Transforming Cultural Resource Management and Archaeology in a Rapidly Changing Climate**

Cultural resources in protected areas are under threat from climate change as never before. Sea level rise, coastal erosion, increased flooding, heavy rains, and more frequent large wildfires are damaging archeological resources, historic buildings and cultural landscapes throughout the worldwide. Some sites face the risk of severe damage or even eventual loss. Others are just now seeing the first signs of damage, or are experiencing disruptions to access, services and cultural values that are likely to become worse, more frequent, or both. The impacts that are already being recorded should sound an alarm bell for all of us. As the impacts of climate change continue, we must understand the threats and make hard choices now at all levels of management, from individual sites, through national policies, up to the international scale, to reduce vulnerability, prepare for change and minimize risk.

## Moderator:

*Adam Markham*, Union of Concerned Scientists

## Speakers:

*Anastasia Steffen*, Valles Caldera Trust & University of Mexico

*Landscape fire in the Western US: Threats to America's past in a time of changing futures*

*Tom Dawson*, University of St. Andrews

*Citizen Science by the sea: Applying the concept of public value to coastal heritage threatened by cc*

*Marcy Rockman*, U.S. National Park Service

*A national strategic plan for cultural heritage and climate change*

*Peter Brimblecomb*, City University of Hong Kong

*Climate threats to historic cultural heritage in the built environment*

*Emma Ligtermoet*, Australian National University

*Customary resource use in protected areas; Aboriginal responses to environmental change and drivers of adaptive capacity in floodplain country of Kakadu National Park, Northern Territory of Australia*

# Responding to Climate Change Stream

15:30 — 17:00 Sat, Nov 15

Members Bar

## Session:

### **Social Resilience and Social Cohesion: Communities Coping with Climate Change**

This session will explore connections between protected areas and adjacent communities that can create and promote sustainable practices such as relating traditional ecological practices and knowledge to agriculture and conservation. How do recreation and eco-tourism sectors interact with protected areas to address challenges and opportunities related to climate change?

## Moderator:

*Sandra De Urioste-Stone*, University of Maine

## Speakers:

*Badar Ghauri*, Institute of Space Technology

Promise and challenges of community engagement with protected areas in Pakistan

*Karine Nuulimba*, Integrated Rural Development and Nature Conservation (IRDNC)

The contribution of Local Community Conserved Areas in Namibia to ecosystem-based climate change adaptation and community-based adaptation

*Ameer Abdulla*, IUCN

*Operationalizing resilience based management: Developing a network of MMAs, MPAs, and LMMAs in the Maldives to enhance coral reef resilience*

*Melanie Heath*, BirdLife International

Building climate resilient parks and people: A community-led approach for ecosystem-based adaptation

**Monday, November 17**  
**Hall 3A2 (Homeroom)**



# Responding to Climate Change Stream

07:00 — 08:00 Mon, Nov 17

Hall 3A2 (Home

## Session:

### Climate Change Journey Assignments / Discussion

Stream participants taking a “climate change journey” meet to discuss their insights and share examples of innovative solutions from the previous day’s sessions. Outcomes will be synthesized for inclusion in the stream wrap-up.

## Moderator:

Delia Clark, Confluence

# Responding to Climate Change Stream

08:30 — 10:00 Mon, Nov 17

Hall 3A2 (Home Room)

## Session:

### Restoring Natural Systems to Provide Resilience to Climate Change

This session aims to share case studies and examples of ecological restoration around the world. Lessons learned allow application of efficient methods, techniques, and tools of restoration in new places as a strategy to increase resilience and reduce vulnerability to climate change.

## Moderator:

*Fernando Camacho*, Comisión Nacional de Áreas Naturales Protegidas, Mexico

*Karen Keenleyside*, Parks Canada

## Speakers:

*Erustus Kanga*, Kenya Wildlife Service

Natural solution for coping with adverse effects of climate change in six national parks in Kenya

*Nghi Nguyen Viet*, Daloc Community Vased Mangroves Reforestation and Management

Community based mangroves reforestation and management in Daloc Commune, Hauloc District, Thanh Hoa Province, Vietnam

*Rajendra Khanal*, International Union for Conservation of Nature, Nepal Country Office

*A performance-based ecosystem restoration as a procedural approach for climate change adaptation in Panchase Protected Forest*

*Carolina Jarro*, Parques Nacionales Naturales de Colombia

*Aportando a la adaptacion y mitigacion del cambio climatico en Colombia desde la restauracion de ecosistemas en Areas protegidas de Parques Nacionales*

*Chu Van Cuong*, The University of Queensland

Restoration of wetland values in Kien Giang Biosphere Reserve: Lesson learnt from an improved water management practice in U Minh Thuong National Park and Mangrove Forest Restoration

*Carlos, Sifuentes Lugo*, Comisión Nacional de Áreas Naturales Protegidas, Mexico

*Ecosystem restoration in protected areas in the northeast and eastern Sierra Madre region, Mexico, as an adaptation strategy for climate change*

*Joyce Loza*, Ezemvelo KZN Wildlife

*Playing with water and climate for resilience in Southern African Transfrontier Conservation Areas*

# Responding to Climate Change Stream

10:30 — 12:00 Mon, Nov 17

Hall 3A2 (Home Room)

## Session:

### World Heritage, Large Landscapes and Climate Change

This session will examine the important role of World Heritage Sites, with a focus on large landscapes, in a rapidly changing global climate. This workshop will have four parts: (1) The impacts of climate change on World Heritage sites using Wildlife Conservation Society's human footprint analysis; (2) The need for connectivity and large World Heritage sites to buffer against the impacts of climate change, using examples of World Heritage sites that are particularly vulnerable to climate change impacts; (3) Policy and legal options that can enable a World Heritage and large landscape approach, including existing mechanisms included in the World Heritage Operational Guidelines and proposals for new policy options; and (4) Marine and terrestrial examples of large landscapes where this approach could be implemented. Examples will likely include Yellowstone to Yukon and the Eastern Pacific Tropical Seascape.

## Moderators:

*Cyril Kormos*, The WILD Foundation

*James Watson*, Wildlife Conservation Society and School of Geography, University of Queensland

## Speakers:

*Cyril Kormos*, The WILD Foundation

The need for a wilderness approach under the World Heritage Convention

*James Watson*, Wildlife Conservation Society and School of Geography, University of Queensland

An integrated assessment of human footprint and climate analysis (past, present and future) on Natural World Heritage Sites

*Brendan Mackey*, Griffith Climate Change Response Program, Griffith University

*The green shield: How a wilderness approach can help protect natural world heritage from climate change and other pressures*

*Ben Boer*, IUCN World Commission on Environmental Law / Wuhan University

Policy options to facilitate a wilderness approach under the World Heritage Convention

*Valerie Courtois*, Aboriginal Lands Initiative, International Boreal Conservation Campaign

The role of indigenous people in the management of large landscapes, and the role of large landscapes in indigenous cultural adaptation to ecological change

*Henry Huntington*, Arctic Science Director for The Pew Charitable Trusts

*The role of traditional indigenous knowledge in managing adaptation to climate change in protected areas*

# Responding to Climate Change Stream

12:00 — 13:30 Mon, Nov 17

Hall 3A2 (Home Room)

## Session:

### **Resilience Tools for Climate Change Adaptation in and Around Protected Areas**

This side event provides an opportunity for protected area managers to share experiences, learn from each other, and brainstorm approaches to promote resilience to the effects of climate change. Each protected area and associated stakeholders is unique, thus solutions will need to be developed in context. In this side event social-ecological resilience will be explored with the assistance of climate change, resilience and restoration specialists. Discussions will be facilitated around four sets of questions: (1) Affects. How are climate variables affecting your protected area? Is the biodiversity changing? Is delivery of ecosystem services being altered? (2) Alternative futures. Do you envision a dramatic shift in the ecosystem? What would be required to adapt to an altered state or novel ecosystem? (3) Technical assistance. Do you envision the need for technical assistance? What kind would you want? How would you obtain the assistance? (3) Taking action. How are decisions made? Are local stakeholders involved in decision-making processes?

## Moderator:

*Stephen Edwards*, IUCN Commission on Ecosystem Management  
Resilience tools for climate change adaptation in and around protected areas

## Speakers:

*Darwin Horning*, University of British Columbia Okanagan

*Liette Vasseur*, UNESCO Chair in Community Sustainability

*Bernal Herrera*, CATIE

# Responding to Climate Change Stream

13:30 — 15:00 Mon, Nov 17

Hall 3A2 (Home Room)

## Session:

### **Guidelines for Sustainability and Ecosystem-based Climate Change Adaptation in the Coastal Zone**

Coastal zones worldwide are highly vulnerable to the impacts of climate change, therefore the population and the ecosystems services from which they depend, as well as other goods and assets located in these areas, are highly exposed to loss and damage. Most of these impacts can be addressed through natural solutions and others might be irreversible. Addressing climate change adaptation and disaster risk reduction in an integrated manner, is particularly relevant in these areas of the world in order to prevent possible damages and guaranteeing that adaptation actions will not increase vulnerability on a long-term basis. During this session, case studies on climate change adaptation actions from different areas of the world will be presented, and lessons learned including new challenges at both, project management and policy level will be addressed, as well as recommendations on policy actions.

## **Moderator:**

*Milika Sobey, IUCN*

## **Speakers:**

*Milika Sobey, IUCN*

Pacific Mangroves Initiative

*Liette Vasseur, Department of Biological Sciences, Brock University, Canada*

Coastal ecosystem adaptation in Kouchiboungac National Park of Canada

*Shane Orchard, WCPA and CEM*

*Sand dunes restoration for protection against coastal hazards in Christchurch, NZ*

*Robert Mather, Southeast Asia Group, IUCN*

Building coastal resilience to climate change impacts in Southeast Asia

*Mark Ford, U.S. National Park Service*

Hurricane Katrina, the role of US National Parks on the northern Gulf of Mexico and post storm wetland restoration

*Robert Young, Western Carolina University*

*The battle over coastal parks: As sea level rises and coastal economies are threatened, coastal parks will often be caught in the middle*

# Responding to Climate Change Stream

15:30 — 17:00 Mon, Nov 17

Hall 3A2 (Home Room)

## Session:

### Planning and Management of Protected Areas in the Face of Climate Change

In spite of the rapid increase in our understanding of how protected areas should be planned and managed, climate change is having a significant effect on biodiversity, thus the new challenge is to start incorporating this threat into national protected areas systems. Countries have started working on strategies to adapt and mitigate climate change effects at the national, regional and local level. This session will present some of the lessons learned for planning and management strategies that are being undertaken around the world to mainstream climate change into national protected areas networks.

## Moderator:

*Elise Belle*, United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC)

*Neil Burgess*, UNEP-WCMC

## Speakers:

*Vinod Mathur*, Wildlife Institute of India

Participatory climate change adaptation plans for Natural World Heritage Sites in India

*Elise Belle*, UNEP-WCMC

PARCC, Protected Areas Resilient to Climate Change in West Africa

*Tarsicio Granizo*, WWF

Construcción de resiliencia en el bioma Amazónico: Las Áreas Protegidas (AP) como parte integral de la adaptación al cambio climático

*Maria Cristina Casavecchia*, UICN\_Sur

Lecciones aprendidas en adaptación y mitigación al cambio climático en Áreas protegidas amazónicas

*Sandra Valenzuela*, WWF

Climate Smart conservation

*Oscar Guevara*, WWF

Climate Smart conservation

*Martin Cadena*, CONANP

# Responding to Climate Change Stream

18:00 — 20:00 Mon, Nov 17

Hall 3A2 (Home Room)

## Session:

### Inspiring Leadership in a Changing Climate

Climate change amplifies existing patterns of social inequality, especially among often-marginalized groups, particularly women, in developing countries. So what gives us hope? Building the leadership capacity of women, youth, and indigenous peoples offers opportunities to enhance the efficiency and effectiveness of climate change policy and actions. Innovative and equitable approaches to climate change response are already underway in many communities through including the particular knowledge and diverse perspectives of local people and communities. This evening session will offer stories of hope from leaders in climate change mitigation and adaptation who are providing socially inclusive and equitable results at various levels and will provide networking opportunities for building the capacity of women, youth, and indigenous people to play leadership roles at local, regional, national, and global levels. Reception to follow.

## Welcome:

*Leigh Welling*, U.S. National Park Service

*Margaux Granat*, IUCN Gender Office

## Moderator:

*Delia Clark*, Confluence

## Speakers:

*Natalie Isaacs*, Founder, 1 Million Women, Australia

*Alcinda Abreu*, Minister of Environment, Mozambique

*Julia Marton-Lefèvre*, Director General, IUCN

*Vivienne Solis Rivera*, CoopeSoliDar R.L Founder, Costa Rica

*Cecile Ndjebet*, REFACOF Founder, Camaroon

*Luvuyo Mandela*, Tyathumzi Advisory



**Monday, November 17**

**Southee South**



# Responding to Climate Change Stream

08:30 — 10:00 Mon, Nov 17

Southee South

## Session:

### **Watertowers of the World: Climate Change in Mountain Ecosystems**

Climate change affects mountain ecosystems through reduced habitat for high elevation species, changes in frequency of extreme events and disturbance (e.g. fire and avalanches), melting glaciers and reduced snowpack, altered stream flow, and higher stream temperatures. Additionally, mountain ecosystems are critically important to downstream delivery of fresh water to ecological and human systems. This session will discuss how to meet demands of nature as well as communities in mountain systems.

## Moderator:

*Daniel Fagre*, U.S. Geological Survey

## Speakers:

*Paul Sinclair*, Australian Conservation Foundation

Connected by nature: Protecting and re-creating the adaptation and other services of nature from the mountain top to the city park

*Richard Hauer*, Montana Institute On Ecosystems

Gravel-bed rivers as centers of biodiversity and biocomplexity in mountain systems

*Sony Varal*, IUCN

Climate change impacts and coping practices of indigenous mountain communities of Nepal

*Marcos Cerra*, UICN-Sur

*Comunidades de los Paramos andinos: Lecciones aprendidas en un ecosistema prioritario para la adaptacion frente al cambio climatico*

*Daniel Fagre*, U.S. Geological Survey

The Western Mountain Initiative: Elucidating different impacts of climate change to mountain national parks of the USA

# Responding to Climate Change Stream

10:30 — 12:00 Mon, Nov 17

Southee South

## Session:

### Freshwater Systems and Climate Change

This session will discuss the important role that freshwater ecosystems have in future planning for adaptation to climate change. Best opportunities for thinking ahead for effectively conserving freshwater ecosystems under scenarios of changing climate will be investigated. The objective is to provide recommendations for improving the conditions of freshwater habitats under climate change; and on how to integrate freshwater protected areas into climate adaptive management plans for resource use and water security.

## Moderator:

*Ian Harrison*, Conservation International

## Speakers:

*Matthew Colloff*, CSIRO Ecosystem Sciences

How will the responses of freshwater ecosystems to climate change affect human adaptation?

*Jamie Pittock*, Australian National University

Incorporating climate change adaptation into catchment management: Report summary and recommendations

*Max Finlayson*, Charles Sturt University

Climate change adaptation lessons for freshwater protected areas

*Angela Andrade*, Conservation International—Colombia

Freshwater vulnerability assessment: Considering hydrology, land use and biodiversity across landscapes and the role of protected areas in addressing vulnerability

*Roel Posthoorn*, Natuurmonumenten

Building with nature: Case studies highlighting The Netherlands Climate Buffer Program

*Jörg Freyhof*, GEO BON

Panel member

*Fernando Camacho Rico*, Comisión Nacional de Áreas Naturales Protegidas, Mexico

Panel member

# Responding to Climate Change Stream

13:30 — 15:00 Mon, Nov 17

Southee South

## Session:

### Part 2: Connectivity Initiatives Analyzed Through the Lens of Climate Change

This is the second of three sessions on connectivity. It follows a Stream 1 session that lays out fundamentals on connectivity. It raises conceptual issues around adaptive vs. maladaptive results for increased connectivity under climate change; shows examples and case studies underway.

## Moderator:

*Graeme Worboys*, Australian National University

*Carina Wyborn*, WWF International

## Speakers:

*Lesley Hughes*, Macquarie University  
Connectivity conservation

*Spike Millington*, East Asian-Australasian Flyway Partnership  
East-Asian—Australasian Flyway, South Korea

*Barry Traill*, PEW  
From the Kimberly to Cape York: Large landscape conservation in a largely intact system

*Ary Hoffmann*, University of Melbourne  
Genetics of connectivity

*Elvira Poloczanska*, CSIRO  
Movement trajectories

*Keith Bradby*, Gondwana Link & *Rob Dunn*, Greening Australia  
Governing and managing

# Responding to Climate Change Stream

15:30 — 17:00 Mon, Nov 17

Southee South

## Session:

### Part 3: Connectivity and Climate Change

This is the third in a series of three sessions on connectivity co-organized with Stream 1 'Reaching Conservation Goals'. This session focuses on examples of connectivity being implemented and how they are addressing climate change.

## Moderator:

*Craig James*, CSIRO

## Speakers:

*Brendan Mackey*, Griffith University  
Connectivity conservation

*Uwe Riecken*, Federal Agency for Nature Conservation (BFN)  
The European Green Belt

*Olivier Chassot*, Centro Científico Tropical  
The Mesoamerican Corridor

*Ghana Gurung*, WWF Nepal  
The Terai Arc of Nepal

*Nicholas Macgregor*, Natural England  
Designing and creating connected landscapes under climate change: conservation and research in England

*April Reside*, James Cook University  
Connectivity and refugia

*Mariana Bellot*, Comisión Nacional de Áreas Naturales Protegidas, Mexico  
Mexican Mountain Gradient

*Iadine Chades*, CSIRO  
*Making optimal decisions to manage connectivity in protected area networks under an uncertain future climate*

**Monday, November 17**

**Members Bar**



# Responding to Climate Change Stream

08:30 — 10:00 Mon, Nov 17

Members Bar

## Session:

### **Cultural Expressions for Maintaining Identity and Heritage in the Face of Climate Change**

For many people and cultures around the world, their heritage, customs and traditional practices are defined and governed by the landforms, biophysical resources, and natural forces and cycles of the places they inhabit. Climate change impacts on the natural environment disrupt this relationship and threaten the continuity of cultural identity and heritage. Traditional practices, as well as contemporary expressions, of story-telling, poetry, chant, and other forms can assist individuals, families and communities in remembering and conveying knowledge and traditions across generations. A panel of experts will offer experiences and insights on the value and application of cultural expression as a form of adaptation to climate change.

## **Moderator:**

*Stanton Enomoto*, U.S. National Park Service

## **Speakers:**

*Robert Moseley*, The Nature Conservancy  
Tibet & Chicago

*Reza Salehi*, Sustainable Livelihood Council, Abolhassani Tribal Confederacy  
Iran

*Keoni Kuoha*, Native Hawaiian Cultural Working Group, Papahānaumokuākea  
Papahānaumokuākea Marine NM

*Stanton Enomoto*, U.S. National Park Service

Supporting community-based adaptation Kaupulehu, Hawai'i using traditional and local ecological knowledge

# Responding to Climate Change Stream

10:30 — 12:00 Mon, Nov 17

Members Bar

## Session:

### Scenario Planning Approaches for Managing Uncertainty in a Changing Climate

Scenario planning is increasingly being used to explore uncertainties around climate change and help communities and managers understand response options. The session will present key inspirational speakers and hands-on approaches and activities for using scenario planning to assess risk, facilitate change, and foster community-based adaptation.

## Moderator:

*Jeff Mow*, U.S. National Park Service

## Speakers:

*Barbara Heinzen*, Barbets Duet

Techniques for building scenarios through participatory processes

*Nathan Bennett*, University of British Columbia

Approaches for scenario planning in the context of climate change

*Leigh Welling*, U.S. National Park Service

Applying climate change scenarios to decision making in the NPS

# Responding to Climate Change Stream

13:30 — 15:00 Mon, Nov 17

Members Bar

## Session:

### Climate Stories of Cultural World Heritage

This session will integrate the deep time stories of human experience with climatic variability represented in cultural World Heritage Sites. For example, what do we know about the social situations that created Lascaux and Altamira cave art sites during the last Ice Age? Or about the interactions between human groups and drought that lead to the abandonment of Mesa Verde and Chaco Canyon in the US, and in the Mayan lowlands? Ultimately, the session will explore how the stories embodied in cultural world heritage can both inform and inspire our understanding of human interactions with climatic variability and planning for future adaptation to climate change.

## Moderator:

*Marcy Rockman*, U.S. National Park Service

Introduction: Global distribution of human-climate adaptation stories through World Heritage sites

## Speakers:

*Susan McIntyre-Tamwoy*, Archaeological & Heritage Management Solutions

ICOMOS and climate change and cultural heritage on the world stage

*Ian Lilley*, The University of Queensland

The deep time story of human evolution and adaptation to arid environments from Australian WH sites

*Keoni Kuoha*, Native Hawaiian Cultural Working Group, Papahānaumokuākea

*Human adaptation to island environments, Papahānaumokuākea World Heritage Site and nearby islands*

*Tim Badman*, IUCN

The importance of stories, origins, and understanding ourselves

*Nicola Stern*, LaTrobe University

The long story of human adaptation at Willandra Lakes World Heritage, Australia

# Responding to Climate Change Stream

15:30 — 17:00 Mon, Nov 17

Members Bar

## Session:

### Climate Markets & Protected Areas: Ecological Economies or Business As Usual?

This session will bring together practitioners of the Reducing Emissions for Deforestation and Degradation (REDD) programmes with business people and environmental organizations that trade in carbon markets. The discussion will explore whether we are learning to create the structures of an economic model that includes environmental capital or whether, in fact, these efforts are just new packaging for international aid and philanthropy that allow business as usual to continue. Most protected areas are financed through government grants or private philanthropies. However, there is a growing interest in changing the rules that govern economic behavior so that markets support environmental quality and those who earn their living on the land as producers or stewards. Climate markets are an early and critical experiment moving in this direction. This session will explore what has been the result of these efforts so far. All panelists will be addressing the same two questions: 1) How did the climate markets work in your place? 2) What have been the results so far?

## Moderator:

*Barbara Heinzen*, Barbets Duet

## Speakers:

*Wayne Wescott*, Greenfleet

New funding models for parks: The case of carbon rights

*Luis Espinel*, Conservation International

Climate markets and the Alto Mayo Protected Forest

*Patricia Fernandez-Davila*, CIMA-Cordillera Azul

Alianzas para la conservacion y mitigacion del cambio climatico: proyecto REDD+ en el Parque Nacional Cordillera Azul, Peru

*Martin Wilder*, Baker and McKenzie's Global Environmental Markets

Legal mechanisms underpinning International Carbon Markets

*Catherine Bremner*, Low Carbon Solutions in Project & Export Finance at ANZ

Evolution of corporate use of voluntary markets

**Tuesday, November 18**  
**Hall 3A2 (Homeroom)**



# Responding to Climate Change Stream

07:00 — 08:00 Tues, Nov 18

Hall 3A2 (Home)

## Session:

### Climate Change Journey Assignments / Discussion

Stream participants taking a “climate change journey” meet to discuss their insights and share examples of innovative solutions from the previous day’s sessions. Outcomes will be synthesized for inclusion in the stream wrap-up.

## Moderator:

Delia Clark, Confluence

# Responding to Climate Change Stream

08:30 — 10:00 Tue, Nov 18

Hall 3A2 (Home Room)

## Session:

### **Envisioning the Future Under Climate Change: What Gives You Hope?**

Participants will have the opportunity throughout the Congress to write messages of hope and inspiration about the future of protected areas in the context of climate change and to place these messages on The Wall of Hope in the Responding to Climate Change Home Room. During this facilitated session, participants will explore the messages and arrange them to envision how they can take positive action for the future.

## Moderator:

*Scott Denning*, Colorado State University

## Speaker:

*Regan Alsup*, Freelance Filmmaker

*Andrew Rhodes*, Comisión Nacional de Áreas Naturales Protegidas, Mexico

# Responding to Climate Change Stream

10:30 — 12:00 Tue, Nov 18

Hall 3A2 (Home Room)

## **Session:**

### **Taking the Climate Change Journey: Reflections on Learning, Hope, and Action**

This facilitated session will solicit the insights and impressions of participants in all sessions of the Responding to Climate Change Stream, engage participants in the development of messages of hope and action for climate change, and contribute to the completion of artwork which graphically represents the high-level topics, key messages, and legacy goals of the Stream.

## **Facilitator:**

*Howard Levitt*, U.S. National Park Service

# Responding to Climate Change Stream

12:15 — 13:15 Tue, Nov 18

Hall 3A2 (Home Room)

## Session:

### Responding to Climate Change Stream Wrap-up —Stream Plenary

Climate change presents significant challenges to protected areas, requiring a broad suite of management actions ranging from the inherent “natural solutions” protected areas possess to abate the effects of climate change, to the development of entirely novel adaptation actions that move us beyond current practices to transform our thinking, goals and practices in a fundamentally altered world. It also emphasizes the critical role of education and effective communication in a future in which more people will contend for fewer resources and the relevance of protected areas must become more visible to the human communities that live in or depend on them. This session provides highlights, reflections, and lessons learned from the stream and captures the key messages for delivery to the Congress plenaries and legacy outcomes.

## Welcome:

*Mariana Bellot, Comisión Nacional de Áreas Naturales Protegidas, Mexico*

## Moderator:

*Jonathan Jarvis, US National Park Service*

## Speakers:

*Lesley Hughes, Macquarie University*

*Julia Miranda, Parques Naturales de Colombia*

*Cecile Ndjebet, REFACOF*

# Responding to Climate Change Stream

19:00 — 21:00 Tue, Nov 18

Hall 3A2 (Home Room)

## Session:

### Next Steps for Delivering Best Practices Guidelines for Climate Change

This is a follow on session from the launch of “Managing Protected Areas in the Face of Climate Change: Guidance for Protected Areas Managers and Planners” on November 15. Building from the ideas generated and lessons learned presented throughout the stream sessions, the guidelines will be revised and delivered post-Congress.

## Moderators:

*John Gross*, Colorado State University

*Leigh Welling*, U.S. National Park Service

## Speakers:

*Stephen Woodley*, IUCN

*James Watson*, Wildlife Conservation Society

*Bruce Stein*, National Wildlife Federation

*Jacobo Pilar*, Stream Journeyer

*Alejandra Calzada*, Stream Journeyer



**Tuesday, November 18**

**Southee South**



# Responding to Climate Change Stream

08:30 — 10:00 Tue, Nov 18

Southee South

## Session:

### **Marine Protected Areas: Their Potential and Their Limits in Addressing Climate Change**

Coastal ecosystems provide a range of ecosystem services that are essential for both climate change mitigation and adaptation. The coastal ecosystems of mangroves, seagrasses and saltmarshes sequester and store carbon contributing to global climate change mitigation. When these systems are lost or degraded, globally significant quantities of CO<sub>2</sub> are released. Coastal ecosystems also support ecosystem-based climate change adaptation. They protect cities and communities from storms and sea level rise, prevent shoreline erosion, regulate of coastal water quality, and maintain food security for many coastal communities around the world. Developing and implementing coastal policy and management that supports conservation and restoration of these ecosystems is therefore a fundamental component of addressing changing climate along coasts globally. In this session we consider the potential, and limits, of marine protected areas (MPAs) as a tool for securing climate-related ecosystem services. To develop a broad and bold vision for coastal management in the face of climate change, we will integrate experiences and knowledge from governments, communities, the private sector, and leading research and policy partnerships. Drawing on a diverse selection of case studies, the four panelists will communicate important success stories, challenges and innovations from around the world, followed by discussion.

## **Moderator:**

*Emily Pidgeon*, Conservation International

## **Speakers:**

*Ben Milligan*, University College London

Governance tools and challenges: Benefits and limits of MPAs as a response to climate change

*Enrique Nunez*, Conservation International

Regional perspective: Challenges and lessons learned from small MPAs in the Philippines

*Tukabu Teroroko*, Phoenix Islands Protected Area

Regional perspective: Challenges and lessons learned from large MPAs in the Pacific

# Responding to Climate Change Stream

10:30 — 12:00 Tue, Nov 18

Southee South

## Session:

### Transformational Change: Knowledge, Values and Rules

This session will wrap up the theme from the Responding to Climate Change Stream relating to building the management capacity for managing uncertainty and change. Topics include reflections on futures thinking, adaptation pathways, setting new conservation goals, and other tools and approaches.

## Moderator:

*John Gross*, Colorado State University

## Speakers:

*Bob Debus*

Connectivity conservation and protected areas law as tools for climate change mitigation and adaptation

*Kristen Williams*, CSIRO Ecosystem Sciences

Using community level ecological models to inform climate adaptation planning for biodiversity

*Russ Wise*, CSIRO

A values-rules-knowledge perspective for informing protected area decision pathways under climate change

*Craig James*, CSIRO

Do we know what scale of adaptation is required where and when?

*Anne-Maree Dowd*, CSIRO

From incremental to transformational adaptation: Learning from agriculture

**Tuesday, November 18**

**Members Bar**



# Responding to Climate Change Stream

08:30 — 10:00 Tue, Nov 18

Members Bar

## Session:

### **Climate Change Policy: How Natural Solutions Can Influence Local to Global Climate Change Dialogues**

The global debate on climate change is experiencing one of the most important times in its history: In 2013 the Intergovernmental Panel on Climate Change (IPCC) delivered the results of the 5th Assessment Report (AR5), which included a number of aspects that require urgent action to achieve the goals of emission reduction and adaptation to address effectively the impacts of climate change. During COP 21 which will be held in Paris, 2015, an agreement will be signed to commit the actions of all countries worldwide, in order to tackle the impacts of climate change in an effective manner. Global dialogues and agreements should encourage transformations in economic, social, technological and political decisions and actions in order to develop climate resilient pathways required to avoid the most severe repercussions. Nature based solutions are effective ways to respond to climate change impacts, and should be considered in the comprehensive agreement and development pathways, contributing in limiting the warming to 2°C and build resilience to both communities and ecosystems. During this session, a panel discussion on opportunities and challenges of NBS will be addressed, with special emphasis on policy messages for UNFCCC, CBD negotiations and other relevant International Fora.

## Moderator:

*Angela Andrade*, Conservation International—Colombia and IUCN CEM

## Speakers:

*Brendan Mackey*, Griffith Climate Change Response Program

Ecosystem based policies for forests and land use in terms of both, mitigation and adaptation

*Nilufer Oral*, Istanbul Bilgi University

Ocean issues in climate change negotiations

*Ali Raza Rizvi*, Global Ecosystem Management Programme, IUCN

Informing Global Policy through evidence from the field challenges and opportunities

*Pedro Gamboa*, National Protected Areas Service

*REDD+ in protected areas: A mechanism for economic sustainability. Bosque de Protección de Alto Mayo, Perú*

*Melanie Heath*, BirdLife International

Climate change impacts on IBA Networks results and implications for adaptation responses

# Responding to Climate Change Stream

10:30 — 12:00 Tue, Nov 18

Members Bar

## Session:

### **Promise of Protected Areas as Natural Solutions**

This session will wrap up key elements and ideas that were presented during the Congress and advance next steps toward integrating natural solutions and climate change thinking into existing systems of governance, financing, and decision making for protected areas management.

## Moderator:

*Mariana Bellot*, Comisión Nacional de Áreas Naturales Protegidas, Mexico

## Speakers:

*Jonathan Jarvis*, U.S. National Park Service

Opening Remarks

*Paul Donatiu*, National Parks Association of Queensland

Adapting National Park acquisitions to a changing climate in Queensland

*Betsan Martin*, ECO

Could the smallest countries on earth (SIDS) be Pivotal to climate agreements and to a new social compact?

*Enrique Ortiz*, Tropical Americas Program, Blue Moon Fund

Breaking the Climate Impasse: Securing Climate Finance and Comprehensive Forest Protection