



# INTERNATIONAL CONGRESS FOR CONSERVATION BIOLOGY

CARTAGENA, COLOMBIA • JULY 23-27, 2017



*Insights for sustaining life on Earth*

## **Workshops**

Lunchtime workshops will be held at the Cartagena Convention Center from 13:30-14:30 every day from 24 July - 27 July. Lunchtime workshops are free to attend, but there is an attendee capacity.

### **Drafting Best Practice Guidelines for Engaging Faith Communities in Conservation Projects**

Maximum participants: 20

Location: Cartagena Convention Center

Organizers: Jame Schaefer, Marquette University

Guidelines for the three-year Best Practices Project initiated by the Religion and Conservation Biology Working Group (RCBWG) of the Society for Conservation Biology will be drafted during this workshop. Positive outcomes of practices reported by SCB members in the Best Practices Survey (May 31-September 10, 2016) and by participants during the New Hope for the Oceans forum sponsored by the RCBWG at the International Marine Conservation Congress on July 31, 2016 will serve as initial ideas to consider. Though ideas from other professional conservation organizations that have developed guidelines for their members to follow will also be made available as examples, the focus of this workshop will be on SCB members drafting guidelines they think are most fruitful for SCB members to consider when planning and carrying out conservation research and practice. The drafted guidelines will be revised subsequently and submitted to the SCB Board of Governors by January 2018 for promulgation and promotion through SCB communication channels. Future plans include proposing workshops on the guidelines at regional SCB meetings during the summer of 2018.

### **Conservation in Colombia, from the rural and environmental studies: studies from the past 10 years**

Location: Cartagena Convention Center

Organizers: Maria Echeverry-Galvis, Pontificia Universidad Javeriana; Juan Benavides, Pontificia Universidad Javeriana; Juan Ricardo Gomez, Pontificia Universidad Javeriana; Diana Maya, Pontificia Universidad Javeriana; Pablo Ramos, Pontificia Universidad Javeriana

Conservation, as a tool for development, sustainability and the maintenance of the socioecological interactions, requires a multidisciplinary approach with different scales of temporal and regional analyses. From its start, 20 years ago, the Faculty of Environmental and Rural Studies, has been studying and leading the research on both the ecological aspects and the social conditions in various regions for the country, engaging in resources conservation from the local to the national perspective. With this workshop, we aim to share some of the most recent works developed in Colombia that exemplify different methodological approaches to understand, answer or propose effective conservation actions. We aim, to spark interactions as to how some of the approaches and methodological proposals can be further implemented under current scenarios of conflict between conservation and social conditions in the territories. Overall, by sharing multiple experiences and briefly discussing some of the successes and challenges when taking conservation as a force for development and regulation of resources, we look to new areas in which the country needs further information, analysis





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or collaborative work to undertake actions that lead us to a better resource management, taking into account ground-based knowledge, as well as current theoretical approaches on conservation. We will present four short talks covering gender perspective, ecotourism, ecosystem functioning and others, as a conservation measure.

## **New frontiers in productive land management for conservation in tropical landscapes**

Maximum participants: 35

Location: Cartagena Convention Center

Organizers: Diego Correa Gomez, University of Queensland; Sofia Lopez, University of Queensland

Increased global demands for food and fuel are expected to drive further degradation of native ecosystems, biodiversity losses and alteration of ecosystem functions. The understanding of the interactions between commodity production and conservation of biodiversity is fundamental in order to develop efficient management strategies that maximize socio-economic and environmental benefits. In fact, the conservation of native ecosystems within agricultural landscapes faces several challenges, which include an inadequate resource allowance for biodiversity management, fluctuating governance strategies, and mismatches between opportunity costs between production and conservation of ecosystems and its associated benefits. This session acknowledges both the challenges and the opportunities for the allocation of different commodities in the landscape while maintaining ecosystem diversity and functions. The workshop will bring together research scientists and conservation practitioners that use interdisciplinary strategies to manage heterogeneous landscapes, bringing the opportunity to discuss around different approaches for land-use planning based on a study case in a tropical agroecosystem. We plan to:

Introduce a case study in a tropical landscape where multiple stakeholder objectives coexist (15 min);

Facilitate a discussion for optimal planning solutions at a landscape scale (30 min);

Finalize with a summary of potential strategies to reach an optimal multi-objective solution (15 min).

The workshop will benefit to any stakeholders, academics, conservation practitioners and students interested in conservation science.

## **Implementation of a two-sex, nonlinear, age-structured metapopulation PVA web app**

Location: Cartagena Convention Center

Organizers: Wayne Getz, UC Berkeley

Many conservation biology practitioners would like to carry out Population Viability Analyses (PVA) easily and rapidly, without needing to purchase, set up, or learn to use a software package such as RAMAS or Vortex. In this workshop, we demonstrate the use of a PVA web app that can be accessed on any device (desktop, laptop, pad or smartphone) that





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supports a web browser. This PVA app, which is freely available at <http://www.numerusinc.com/webapps/pva>, allows for the specification of one to ten age classes, one or two sexes, single population or metapopulation configurations with 2 or 3 subpopulations, as well as density-dependent settings for inducing region-specific carrying capacities or male territoriality. Movement among subpopulations can be influenced by age, metapopulation connectivity, and attractiveness of regions based on the relative fitness of the youngest age classes in each region. Simulations can be carried out deterministically or stochastically, with a user-specified combination of demographic and environmental processes. The user enters data either by selecting various options and filling in life history and movement parameter values online, or by importing a CSV file that was saved from a previous session. The app includes default CSV data files for a classroom study on the viability of Isle Royal wolves, as well as an illustrative rhino study. A preprint containing a full description of the app can be downloaded at <http://biorxiv.org/search/Getz>, or a published version of this preprint can be downloaded from the journal *Natural Resource Modeling* (Wiley, 2017). The app itself was constructed using the Nova model building platform (<https://www.novamodeler.com/>), which can be used to modify and extend the model to include an any required number of age-classes and subpopulations, as well as include additional ecological processes impacting the viability of a population of interest.

## **Predation Risk Modeling as a Decision-Making Tool for Reducing Human-Wildlife Conflict**

Location: Cartagena Convention Center

Organizers: Jennifer Miller, University of California Berkeley

A major challenge in wildlife conservation globally is identifying priority human-wildlife conflict sites where mitigation efforts will be most effective. Spatial risk modeling recently emerged as a tool for understanding, predicting and mapping hotspots of human-wildlife conflict, such as livestock depredation, crop raiding and attacks on people. This workshop will present the methods and applications of spatial risk modeling as a decision-making tool for informing the implementation of conflict mitigation techniques.

Spatial risk models developed over the past decade out of the concepts of predator-prey interactions and resource selection functions (RSFs) in order to make predictions about the likelihood of interactions between wildlife (typically large carnivores and herbivores) and humans (or their livestock and agricultural crops). Such models aim to bring a quantitative perspective to help identify the drivers and factors associated with human-wildlife conflict and make inferences about where future conflicts may occur. Spatial risk models produce statistics about which landscape covariates are associated with conflict incidences as well as hotspot maps representing the distribution of risk. Both these products can assist conservation practitioners in deciding where to most effectively implement mitigation methods such as guard animals and reinforced livestock enclosures.

Through examining several case studies of risk modeling projects that impacted on-the-ground conservation in Asia, Africa and Latin America, this workshop will teach participants how to build meaningful risk models, as well as how to apply model results to improve decision-making for conservation at the stakeholder, manager and policy levels. Finally,





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we will explore scope for future research in spatial risk modeling for human-wildlife conflict as well as other conservation topics, such as wildlife trade and disease spread.

## **Bridging the gap between science and practice for conservation in the Spanish speaking world**

Location: Cartagena Convention Center

Organizers: Eduardo Gallo-Cajiao, University of Queensland; Duan Biggs, University of Queensland

Communication, as the strategies and tools to disseminate information, is central to conservation practice. Within the conservation community, there has been increased recognition of the imperative need to bridge the gap between the scientific community and the public sphere, including managers, decision makers, and the general public. In this context, publication outlets specifically tailored to target those audiences can help fill this gap. In the English speaking world, progress has already been made in this front, with well-established magazines circulating now, such as “Anthropocene” published by the University of Washington since 2000 under various names. However, despite there being over 500 million native Spanish-speakers in regions of the world harbouring globally important biodiversity under multiple threats, no magazine to date is available for this purpose. Through this workshop, we aim to present and discuss a plan to establish a “popular” conservation magazine in Spanish, targeting the Neotropical region. Since 2015 Decision Point, the “popular” conservation magazine published by the Environmental Decisions Group at the University of Queensland (Australia), has been produced in Spanish once a year. Through this process we have engaged a large audience across the Spanish speaking world, and more importantly, have identified not just the need for it, but also appetite amongst scholars and practitioners. Hence, we are inviting key stakeholders (i. e., NGOs, government agencies, and research institutions) from Latin America to discuss and explore ways forward to further expand this publication to create a widely-read, popular interest, conservation publication for Spanish speakers into the future. It is expected that this workshop will lay the foundations to create an inter-institutional effort to help bridge the gap between conservation science and conservation practice in one of the most important regions of the world for biodiversity.

## **A manifesto for predictive conservation**

Location: Cartagena Convention Center

Organizers: Matthew Selinske, RMIT University; Sarah Bekessy, RMIT University; Mark Burgman, The University of Melbourne; Francesca Mancini, University of Aberdeen; Sean Maxwell, The University of Queensland; E.J. Milner-Gulland, University of Oxford; Anca Serban, University of Cambridge; Henry Travers, Oxford University; James Watson, Wildlife Conservation Society / University of Queensland

To successfully address the current rate of biodiversity loss it is essential to anticipate the challenges of a rapidly changing world and use predictions to shape the design of conservation interventions. In recent years, interdisciplinary predictive approaches have been tested by conservation scientists, but these approaches are yet to be applied systematically to frame conservation problems or inform management decisions. In the context of climate change and





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rapid economic development in biodiversity rich countries, predictive approaches can identify emerging threats and quantify risks. Increased attention is being given to evidence-based approaches, but management decisions are still often based on subjective judgments or perceived best practice, leaving them open to bias and vulnerable to failure. Predictive approaches allow practitioners to estimate the effectiveness of conservation interventions prior to implementation while accounting for local context and minimising the risk of policy failures.

In this workshop, we will review predictive methods, showcase how these novel approaches can be used by researchers and practitioners, and discuss methods used by other disciplines that may have applications in conservation. An expert panel, leading figures in conservation science, will discuss the potential of predictive approaches, followed by a 30-minute general discussion with the audience and panel members. The workshop is organised and chaired by early-career researchers.

## **Innovative Tools and Approaches for Ecosystem Risk Assessment in Latin America**

Maximum participants: 25

Location: Cartagena Convention Center

Organizers: José Ferrer Paris, Ivic; Irene Zager, Provita

This workshop will foster an open discussion between conservation practitioners, researchers, natural resource managers, and policy makers from Latin America on how to facilitate and improve the exchange of data and information regarding Ecosystem Risk Assessments in the framework of the IUCN Red List of Ecosystems (RLE).

Local knowledge is fundamental for assessing many spatial and functional drivers of ecosystem collapse, but human resources and research capabilities (e.g., access to latest technology, reliable internet connection, etc) is often a limiting factor in Latin American countries. Common concepts and approaches, and a technology transfer mechanism would allow national initiatives to access a common set of protocols, tools and software to develop comparable assessments across borders.

The workshop will be lead by a moderator, and will provide a limited time for speed presentations from some participants introducing the IUCN RLE categories and criteria, an overview of national RLE experiences completed in Latin America so far, and insights into available tools. The main discussion will focus on the challenges and opportunities of multilateral collaboration between national groups, the need and practical applicability of common tools, and how they can inform and support decision making for ecosystem conservation and sustainable resource management. We expect to conclude with a clear perspective on the essential steps for facilitating the advancement of integrative national and regional initiatives.

Programmed speed presentations:

The IUCN Red List of Ecosystems Categories and Criteria;

Bon in a Box: available tools for ecosystem assessments;





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Leveraging in-situ and remote biodiversity observations towards developing the Red List of Ecosystems in Latin America.

## **Data rich but insight poor? How to use data science to empower management and conservation**

Maximum participants: 50

Location: Cartagena Convention Center

Organizers: Fernando Cagua, University of Canterbury; Nancy Bunbury, Seychelles Islands Foundation; Tim Robinson, University of Wyoming

Data Science, "the responsible use of data for decision making", has been embraced by companies in many fields for optimizing their processes and improving management. The similarities with good practices in conservation are striking because successful management of natural resources invariably involves making data-driven decisions in complex shifting social and ecological settings.

To support this decision making, environmental management agencies often establish monitoring programs that provide information about the status and trends of the resources of interest. While monitoring and management frameworks outlining how data can be used for decision making are well established, cases of data being collected—but not used—occur too frequently. Regrettably, small or underfunded organizations are more likely to be in this "data rich but insight poor" situation. Managers are often acutely aware of this disconnect but are unable to address its root because data management, manipulation, and analysis, are often more complex and expensive than anticipated.

In this workshop, we will show how relatively simple data science and business intelligence tools can be used to bridge this gap and create an efficient data workflow. With the right systems in place, automated reports and user-friendly interactive web apps can provide real-time statistical summaries and visualizations, not only of the raw data but also, of how it relates to the actual resource(s) being managed and associated conservation values. Managers and scientific staff can have a direct and immediate overview that allows to quickly identify areas requiring improvement or more in-depth analysis.

We will outline both the general principles and the technical aspects of efficient data management and demonstrate, using examples, how NGOs, citizen groups, and virtually any data-dependent agency can benefit from a data science perspective. Make sure your laptop or smartphone are charged.

## **Adoption of EbA in the face of climate change: Improve livelihoods around Worobong Forest Reserve**

Location: Cartagena Convention Center

Organizers: Conrad Kyei-mensah, University of Ghana; Rosina Kyerematen, University of Ghana / Legon

Interest Area: Climate change adaptation and mitigation, forest conservation research





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Justification: Forest ecosystem services are key to the lives of forest-dependent communities such that extreme activities within the forest reserve will not only expose the people, but also compromise forest ecosystem health. Climate change is also expected to exacerbate it. Ecosystem-based adaptation (EbA) is recommended by UNEP as an approach which uses biodiversity or ecosystem as part of the overall adaptation strategy to reduce vulnerability of the people and ecosystem to the impact of climate change.

Learning Objectives:

Determine the various forest ecosystem services of the WSFR;

Identify the drivers of forest ecosystem services loss (human and climate change);

Suggest EbA strategies that ensures sustainability of the ecosystem services and livelihoods of the people.

Overview: This workshop will offer attendees the opportunity to examine some of the ecosystem services from the tropical forest reserve of Ghana, their significance to the people, the extent of abuse and impact of climate change. It will also lead to the exploration of pertinent strategies for overcoming these challenges.

Abstract Details: Extreme human activities coupled with climate change will render forest ecosystem and communities dependent on it vulnerable. Ecosystem-based adaptation (EbA) as an adaptation option is considered appropriate in sustaining the forest ecosystem and livelihoods. This workshop will use a case study of the Worobong South Forest Reserve in Ghana to explain the ecosystem services of the forest, abuse, and role of climate change as well as the appropriate strategies to address the challenges.

Format: The workshop will be mainly by presentation with minimal interactive moments.

## **Informing Conservation Agendas Through Global Conversations Introducing the Ecovillage Playing Cards**

Maximum participants: 40

Location: Cartagena Convention Center

Organizers: Margarita Zethelius, Alliances for Abundance / CASA Colombia / GEN; Jennifer McRuer, Student

The Global Ecovillage Network celebrates and honours the wisdom, inspiration and guidance that indigenous and traditional communities around the world have to offer for the design of self-sustaining, resilient human settlements. Many traditional and indigenous communities have asserted that their communities be officially recognised as ecovillages. Motivation is driven by a desire to consciously design their own pathways into the future.

We will share examples of such communities from around the world, where biocultural heritage is valued and woven into the four dimensions of sustainability with which ecovillage transition programs engage (i.e., social, culture, ecology and economy). Together, we will experience the Ecovillage Playing Cards: a visual and playful means to design innovative approaches for sustainability, conservation, climate adaptation and mitigation.





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The educational value of this workshop has critical implications for conservation science approaches and directions that aim to value and learn from diverse knowledge and worldviews in ways that support alternatives to development rooted in biocultural conservation.

Presentation: 15 min;

Experience with the Ecovillage Playing Cards: 30 min;

Discussion and insight: 15 min.

## **Early Career Interdisciplinary research and practice experience exchange: Looking to the future**

Location: Cartagena Convention Center

Organizers: Federico Davila, The Australian National University; Rebecca Jarvis, Institute for Applied Ecology New Zealand, Auckland University of Technology; Claudia Múnera-Roldán, Australian National University, Fenner School of Environment and Society

This workshop will bring together diverse knowledge and experiences from early career social scientists working in conservation and sustainable development. The aim of the workshop is to identify and discuss common mistakes, challenges, and opportunities in conducting rigorous social science research, and identify new pathways to better integrate conservation concerns into policy and development programs. We will not only explore how we can make conservation more effective, but also how integrated research and practice can help us achieve a more equitable and sustainable world.

This workshop targeted at early-career researchers and practitioners from any region. We will facilitate the discussion on how conservation and development issues can be better integrated. We will also allow for experiences on conducting interdisciplinary conservation research to be exchanged, with the aim of looking at future ways for bridging biodiversity conservation, social development, politics, and environmental change. Workshop organisers will provide their experiences as interdisciplinary early career researchers working in human ecology and socio-ecological systems, in the context of food security and marine conservation. Workshop participants will be encouraged to discuss different knowledge systems, critically examine emerging methods, discover opportunities for future collaboration, and identify research priorities that can better contribute to conservation and development challenges. Together, we will identify future strategies to develop truly interdisciplinary research and practice that will help achieve our global conservation targets and sustainable development goals.

## **Making ecological methods work for threatened and rare species**

Location: Cartagena Convention Center







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Organizers: Christian Devenish, Manchester Metropolitan University; Oscar Laverde, Pontificia Universidad Javeriana; Alex Lees, Manchester Metropolitan University; Huw Lloyd, Manchester Metropolitan University; Stuart Marsden, Manchester Metropolitan University; Renzo Piana, CORBIDI

Rare and threatened species represent a major challenge for quantitative conservation biologists searching for data to feed into conservation management plans and priority setting exercises. Initiatives, such as the IUCN Red List rely heavily on species' abundance and distribution data, and management strategies require detailed knowledge of species-specific natural histories and responses to local and global environmental changes. However, field data are usually costly and logistically difficult to collect. Challenges inherent in collecting data on threatened and rare species include designing statistically robust sampling strategies that permit sufficient records to be obtained; overcoming detection bias; and dealing with demanding physical, political and social conditions. Analysis of data on threatened species must also overcome issues such as inadequate baseline data when comparing the biodiversity values of different landscapes or detecting temporal change in abundance. New technology, novel techniques and interdisciplinary approaches may provide ways to overcome current shortfalls in data availability and knowledge of the ecology of rare species. For example, efforts in the field can be maximised by using automated recording techniques (e.g. microphone arrays, satellite tracking), and formal ecological surveys can be complemented with data from citizen science initiatives, remote sensing and social science methods.

This workshop will discuss challenges facing field ecologists working with threatened and rare species, with a view to providing solutions. Specifically, the workshop will ask the following questions:

**Bottlenecks:** What is holding back research in threatened and rare species in each of the priority areas below? Rather than a generic lack of funds, this question is aimed at establishing methodological shortcomings.

**Solutions:** How can we overcome these bottlenecks?

## **Transboundary conservation in Latin America and the Caribbean: from segmentation to synergy**

Location: Cartagena Convention Center

Organizers: Olivier Chassot Labastrou, Society for Conservation Biology; Anthony Giordano, Texas Tech University; Rurik List, Universidad Autonoma Metropolitana; Tsitsi McPherson, SCB-LACA; Nigel Noriega, Sustainable Innovation Initiatives; Karla Pelz Serrano, Universidad Autónoma Metropolitana Lerma; Sandra Pompa Mansilla, Fuego Verde S.C., Eduardo Ponce Guevara, Instituto de Ecología; Ana Porzecanski, American Museum of Natural History; Valeria Towns, UNAM

Evidence of changes in the historical patterns of species distribution and phenology is increasing. Expansion of the human environment through urbanization and its associated infrastructure and other anthropogenic factors such as biogeochemical contamination and armed conflict have further compromised diversity and ecosystem resilience. The result has been an increase in population isolation that can reduce the capacity of species to adapt to subsequent





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environmental change. With such drastic and widespread changes, the coordination of conservation efforts across political boundaries is critical to increase the resilience of species and ecosystems. Throughout Latin America and the Caribbean, there is a need to devise coordinated, socially-resilient, network-based approaches to stem or reverse the loss of biodiversity across connected ecosystems. The main objective of the workshop is to share experiences about collaboration across borders and at regional levels in Latin America and the Caribbean, in order to develop more effective approaches to common conservation challenges. Two outcomes of the workshop will be:

- the design of solutions for connectivity conservation across borders in the Caribbean, Central America, Amazon basin, Guyana Shield and Southern cone;
- and the development of collaborative experiences for researchers working on ecosystem and landscape scale conservation in Latin America and the Caribbean.

## **Millennial Conservation: How Today's Youth Will Shape Tomorrow's Conservation**

Location: Cartagena Convention Center

Organizers: Leo Douglas, Columbia University; Kelvin Alie, International Fund for Animal Welfare; Tracy Bain, International Fund for Animal Welfare; Nancy Barr, International Fund for Animal Welfare

The international conservation community acknowledges the importance of engaging a diverse constituency for improved conservation outcomes. We are working to harness the opportunities and benefits of facilitating the inclusion of a broader diversity of millennial-aged youth in conservation research, practice, advocacy, and management. Further inclusion of youth of diverse backgrounds offers unique opportunities to bridge cultural barriers, harness non-traditional ways of communication and meaning-making, mobilize new creativity for positive conservation outcomes, and advance conservation's knowledge-base. This workshop will look at the challenges and opportunities facing millennial conservationists and the unique strategies that appeal to them or that they are utilizing to shape the future of conservation. This workshop invites key findings presentations in the following areas:

The contribution of youth to effective conservation advocacy and policy in different socio-ecological settings;

The role and responses of youth in conservation behavior change programs and strategies, including work that unpacks assumptions and ethics of these issues;

Opportunities for better use of emerging technologies to engage youth in conservation;

How youth conceive and address conservation challenges in their generation and in different regions of the world.

We will further facilitate audience participation through a panel discussion that will explore the themes presented and look at how non-profit organizations, multi-lateral environmental agreements, governments, academia and others can further engage youth in their conservation planning, decision making, and project execution. Results from the workshop will inform youth-targeted programs by conservation organizations, including the International Fund for Animal Welfare





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(IFAW), the Conservation Leadership in the Caribbean (CLiC) Fellowship Program, and the Division of International Conservation - USFWS.

Note that lunch will be provided at no extra cost.

## **What editors and reviewers are (not) expecting to find in your submission**

Maximum participants: 50

Location: Cartagena Convention Center

Organizers: Moreno Di Marco, The University of Queensland; Mark Burgman, The University of Melbourne

## DESCRIPTION

Publications are the mean through which research findings and ideas are disseminated to the broad scientific community. Publications are one of the products that scientists in most fields are expected to deliver during and/or after their PhD project. Conservation Science is no exception: publications are one of the things your next employer will look for while screening your CV!

Preparing the submission of a paper can be a stress-demanding exercise, and getting the paper accepted can take anywhere between 2 months and 2 years. Despite some cumbersome efforts, young authors sometimes fail to adequately present potentially good papers; as a result, they end up getting their work rejected with negative reviews (or before being sent for review). This generates even more stress of course. The purpose of this workshop is to uncover some of the most common mistakes that make editors and reviewers unhappy, these include both the omission of important information and the inclusion of undesired content.

A roundtable of conservation scientists, directly involved in editorial and peer review activities, will provide their personal perspectives on the topic. The roundtable panel will include representatives of the entire decision chain: Reviewer - Editor - Editor in Chief. An open discussion session will follow, where workshop facilitators will encourage participants to interact with the speakers through Q/A, and to share their view and personal experiences.

## TARGET AUDIENCE

This workshop is targeted to students and early career researchers, especially those without an extensive publication experience. However, scientists with more extensive experience have also found this workshop useful in a previous edition. The ideal group size is around 50 participants, but more can be accommodated.

## STRUCTURE

After an initial round of interventions, 5 min from each panelist, a 30-40min session of open discussion will follow, with Q/A between participants and panelists.





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## Using Conservation Evidence to inform practical decision making

Maximum participants: 50

Location: Cartagena Convention Center

Organizers: Claire Wordley, University of Cambridge

### Justification

Conservation actions are not always informed by the best possible evidence, meaning sub-optimal management choices may be made. This is due to a variety of reasons, including paywalls in scientific journals, lack of time for managers to find and read scientific papers, and a preference in some quarters for relying on personal experience. The Conservation Evidence project ([www.conservationevidence.com](http://www.conservationevidence.com)) aims to make it easier for managers to make evidence-informed decisions by collating concise, clear summaries of scientific evidence on management options in one place. In this workshop we aim to explore how Conservation Evidence can be used to support decision making.

### Purpose

The overall goal is to increase the awareness of the resources provided by Conservation Evidence, demonstrate that using scientific evidence does not need to come at the expense of local knowledge, and to explore how Conservation Evidence can be used to support decision making. This workshop is aimed more at practitioners working to make conservation decisions in management or policy than at academics.

### Format

10 minutes: Introduction to the need for evidence and the Conservation Evidence project

10 minutes: Discussion on how decisions are made

5 minutes: Formalising decision making: Introducing the Conservation Evidence model for a decision making process using multiple criteria and integrating evidence

25 minutes: Worked example in groups – in groups of 2-4, participants work through a simple version of the Conservation Evidence decision making model to solve a conservation problem

10 minutes: Discussion of the pros and cons of this decision making model, and of integrating evidence with other criteria such as cost and ease of implementation

Participants are encouraged to bring their laptop.

## Defining a Conservation Planning Toolkit





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Maximum participants: 50

Location: Cartagena Convention Center

Organizers: Patrick Crist, Natureserve

Conservation planning is an incredibly complex endeavor especially now with the imperative to incorporate climate change and human well-being. Most organizations rely on a small group of experts and one or two software tools to conduct this work which is often not reproducible or extensible. This session will introduce an initiative to map a core set of existing tools to a conservation planning work flow that would comprise a conservation planning toolkit. This session will lay out the workflow to be supported by the toolkit and a straw man selection of tools for discussion, identification of additional or alternative tools, and needs for guidance and training to support application of the toolkit by a broader group of practitioners. This workshop will support efforts to develop a core toolkit applicable globally by incorporating insights from SCB members.

## **The Road Ahead: wildlife connectivity around linear infrastructure**

Maximum participants: 40

Location: Cartagena Convention Center

Organizers: Evi Paemelaere, Panthera

Objective: Promoting knowledge of effective mitigation strategies for road impacts on wildlife.

Justification: Landscape and population connectivity are central themes in wildlife management; genetic fragmentation accelerates extinction rates. Roads are among the largest threats to wildlife globally through both direct and indirect impacts. By 2050, more than 20 million kilometers are expected to be added to the existing road network in developing countries, where many of these roads will lead into previously inaccessible areas. We cannot ignore the socio-economic importance of this human connectivity factor. At the same time, wildlife connectivity is just as important to maintain healthy living environments. This workshop offers training in understanding potential impacts and solutions for species with different 'road behaviors'. Participants will be able to better identify requirements for practical solutions to consider prior to road construction or during road upgrades for better wildlife population connectivity.

Organizational structure: Brief presentations by Panthera and the United States Forest Service combined with two interactive exercises for participants:

Chart for characterization of species of interest in terms of behavior in response to roads and the resulting requirements for crossing structures;

Evaluation of strengths and weaknesses of potential under- and overpasses based on photographs.





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## **Tools for Fostering Inclusive Conservation Science Communication**

Maximum participants: 50

Location: Cartagena Convention Center

Organizers: Cynthia Malone, Center for Biodiversity and Conservation, American Museum of Natural History; Rae Wynn-Grant, Center for Biodiversity and Conservation/American Museum of Natural History

How and where we communicate our science, from research journals to social media, can have strong implications for diversity, equity, and inclusivity in conservation science. In this workshop, we will delve into these implications and learn tools for framing and disseminating conservation research in ways that foster inclusivity. We will work from a community framework that encourages participants to deeply consider diverse constituencies within their institutions, field sites, and wherever else their research has meaning and impact. This conservation community framework will make visible those who exist at the periphery of scientific research and, not incidentally, tend to occupy more marginalized positions in society. Moving forward with an expansive and nuanced understanding of their audience, participants will have the opportunity to explore how their own identities and relationships to power and privilege can shape implicit biases that show up when communicating science. This activity will inform both participant-wide and individually tailored strategies for effective and inclusive communication. We will conclude with a discussion of how these strategies can be taken a step further to cultivate active allyship with groups historically under-represented in conservation science. Throughout the workshop, participants will be encouraged to leverage the global nature of ICCB to learn collaboratively from each other at the intersection of varied geographical and socio-political contexts.

## **Youth Advocates and Indigenous Knowledge: Addressing Critical Conservation Challenges**

Maximum participants: 30

Location: Cartagena Convention Center

Organizers: Michael Chizhov, Volunteer Program - Grand Canyon Trust; Daisy Purdy, Applied Indigenous Studies, Northern Arizona University

Justification: In the face of global political changes, applying key results of conservation biology will become ever more important and difficult necessitating progressive and holistic methods. Youth advocacy and Indigenous knowledge offer unique insights and strategies for supporting and enhancing current scientific approaches. Intergenerational and diverse perspectives are imperative.

Synopsis: Workshop facilitators will combine their experience working at a conservation NGO and a public university to provide an interactive session focusing on critical conservation challenges in the Southwestern United States. Participants will have the opportunity to collectively identify common global issues relevant to their work and will explore examples of successful models applicable in various contexts. Attendees will discuss their individual areas of





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expertise in small working groups with facilitators helping to identify ways in which intergenerational and Indigenous thinking can be integrated into their work.

Goal: Highlight global conservation issues that are of concern to diverse participants and identify comprehensive ways to incorporate youth advocacy and Indigenous perspectives into that work.

## **The role and value of cetaceans to ecosystem functioning**

Location: Cartagena Convention Center

Organizers: Barbara Galletti Vernazzani, Centro de Conservacion Cetacea

The workshop “Role of cetaceans to ecosystem functioning: defining conservation policies in the 21st century” is aimed to enhance discussion on this emerging topic and discuss approaches to integrate it in decision making processes related to the conservation and management of these species at national, regional and international level.

Increasing scientific evidence shows that cetacean species, and in particular large whales, enhance marine productivity by fertilizing ocean waters with iron-rich feces and other micronutrients. They also represent an important repository for carbon and their carcasses contribute to biodiversity in the ocean floor. However the conservation and management of whales continues to be decided under the restricted vision of “just a marine resource” and these scientific findings are still being ignored in the decision making processes of almost every forum and organization related to the conservation and management of these species.

The workshop will have four 10-min presentations by recognized experts in the fields of whales and marine productivity, whales as carbon sinkers and providers of wildlife habitat, ecological economics and whale diplomacy in the 21st century. The presentations will be followed by a 20 minutes round table to exchange views and collect input on ways forward to integrate this emerging issue in the conservation of cetaceans. At least 50 people is expected to attend. Technical requirements include computer to load presentations, projector and sound system, including cordless microphone.

## **Got Capacity? Evaluating capacity development activities to show impact**

Organizers: Andrea Santy, WWF

Local participation in natural resource management is critical to the long term conservation of biodiversity. And in today’s changing world, it is more crucial than ever that conservationists gain the skills and knowledge they need to address environmental challenges in their home countries. Capacity development (CD) activities are a common activity in most projects yet there is no agreed upon indicators to measure the impact of CD on conservation. Therefore, CD is often seen as having no direct impact. However, those committed to CD know that the benefits and impacts are generally understated. The impact on conservation is clear and by measuring its effectiveness, we hope that this session





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will provide a new framework for understanding and measuring these impacts and lead to more effective training and capacity building programs.

Currently, most capacity development efforts are evaluated in terms of inputs, reaction, and immediate outputs; there are few examples where behavior change and impacts are measured. As a result, and despite a growing range of tools, mechanisms, and criteria for capacity development evaluation, it is difficult to evaluate fully the impact that capacity development strategies and interventions have had on conservation. Hence, there is a critical need to develop more rigorous, measurable, and impact-focused systems for evaluation of capacity development that are flexible, given the wide range of capacity development venues. This workshop aims to share methods to evaluate CD that will help participants begin to build a case for why their capacity building programs are essential to the long term success for conservation projects worldwide. The session seeks to engage each participant and create an open and collaborative environment to share successes, challenges, best practices, and exchange ideas.

## **Sharing Lessons from Impact Evaluation of Commodities Certification schemes in Southern Chile**

Organizers: Irina Montenegro, WWF Chile; Priscila Molina, WWF Chile

Chile is the world's second largest producer of farmed salmon and one of the largest producers of pulp and wood chips for paper manufacturing worldwide. Unfortunately to maintain the market demand of these commodities, unsustainable environmental and social practices from industry sector have become on main threats to the biodiversity and neighboring communities to forestry plantations and salmon concessions in Southern Chile. As a contribution to mitigate ecological footprint derived from salmon and pulp & wood production, WWF Chile adopted two strategies in 2011 aimed at promoting sustainable practices from on ASC (Aquaculture Stewardship Council) and FSC (Forest Stewardship Council) certifications. After 5 years of implementation, WWF Chile started a project to evaluate social and environmental impacts of ASC / FSC certification adoption in Southern Chile.

This interactive session will introduce you to key lessons learned from the first two years of WWF experience on impact evaluation. It will include an overview of basic concepts on certification schemes and a deeper dive into more complex topics about enabling conditions to develop robust monitoring and impact evaluation at strategic level, all grounded in updated thinking based on real-world application. The workshop will cover theoretical concepts and group discussion with examples about main challenges and opportunities to design social and environmental methods for impact evaluation at landscape scale. The workshop will have a capacity of maximum 25 people and we will encourage you to bring your experience, critical thinking and creativity to propose solutions to this thematic.

Workshop format will require a weamer for presentations in ppt, flipcharts and office material for no more than 5 work groups (i.e. cards, marker pens).

## **How to report on the costs of conservation interventions for better conservation decisions**

Maximum participants: 40







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Organizers: Gwen Iacona, University of Queensland; Bonnie Mappin, University of Queensland

Goal: Conservation decisions require good data on the costs of conservation interventions. This workshop will train participants in standardized reporting practices that will allow published management intervention cost information to be interpretable and transferable.

Justification: Quantifying the cost of management interventions is critical for incorporating cost effectiveness into conservation decisions, but haphazard and inconsistent reporting has hindered the utility of most cost data. We created standard approaches for cost reporting to enhance the ability to identify cost effective conservation intervention by including details that allow for transparent interpretation and transfer of the data. We are calling for these standards to be adopted by the major conservation organizations, conservation science institutions and journals so that cost measures are comparable between studies and can contribute to a corpus of data that can be used to support conservation decisions.

Organizational structure: This workshop is targeted at researchers and practitioners who are involved in projects that include measuring or describing the costs of conservation management actions. We will start the session with a brief overview of why standardized conservation cost reporting is important and then describe the reporting standards and worksheet that we will be using. Participants will then be guided through hands on reporting of example data sets using the standards, and will be encouraged to practice reporting on their own studies

Technical requirements: This workshop will require a computer with projector access for the overview and demonstration parts, and then participants will either use their own laptops or paper forms for practice reporting. A venue with chairs around tables would best suit the hands-on format of this workshop.

## **Training Conservation Leaders: Lessons for Academic Professional Education in Adaptive Management**

Organizers: Armando Valdes-Velasquez, Foundations of Success; Ashleigh Baker, Foundations of Success; Adriana Bravo, American Museum of Natural History, Center for Biodiversity & Conservation; Catherine Christen, SCBI; Arlyne Johnson, Foundations of Success; Ana Porzecanski, American Museum Natural History; Vinaya Swaminathan, Foundations of Success

Conservation projects are implemented in an ever-changing and complex context. To address these challenges, practitioners must apply various approaches and innovations, systematically evaluate their effectiveness, and apply learning to future interventions. How can we better prepare conservation practitioners to design, monitor, and evaluate conservation projects – do good adaptive management (AM) – to effectively address interdisciplinary and complex conservation problems? One solution is delivering academic training via applied conservation programs to generate cadres of conservationists trained in AM skills.

This workshop will provide both an opportunity to learn about different approaches to teaching and training in AM, and to share your own questions, strategies, and resources. Workshop leaders will briefly demonstrate an activity to model an adaptive management situation, and share their experiences in developing academic trainings and using a diversity of





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materials via speed presentations. Participants will then work in groups to discuss these experiences and lessons, and contribute their questions and resources. All resources will be added in real-time to a shared virtual folder for instant compilation and access.

## **Starting and Supporting Local Chapters within SCB**

Organizers: Rebecca Mccaffery, United States Geological Survey; Andrew Gregory, Bowling Green State University

Local SCB chapters provide an important grassroots role in the global society. They engage in local conservation action, education programs, and policy efforts. Local chapters can be student-based organizations tied to a university, or broader networks of student and professional conservation biologists and practitioners from academia, government, and NGO sectors. In this workshop, we will provide assistance to members interested in starting a new SCB chapter, and support to existing chapters wanting to connect to other chapters and to the chapters' committee. For people wanting to start a new chapter, global SCB chapter committee members will explain the process of how to establish a local SCB chapter and the advantages doing so. They will provide hands-on assistance as well as the materials necessary to establish a chapter. For chapters that are already established, this workshop will provide the opportunity for support and networking with chapter committee leadership and other chapter leaders. By the end of the workshop, participants will be on their way to starting a new chapter, and existing chapter leaders will have questions answered and new connections forged with other chapters.

## **A global perspective of local and regional-scale aquatic ecosystem conservation and management**

Organizers: Jorge Celi, Universidad Regional Amazónica IKIAM; Priyadarsanan Dharma Rajan, Ashoka Trust for Research in Ecology and the Environment (ATREE); Stephanie Januchowski-Hartley, Paul Sabatier University; Sukhmani Mantel, Rhodes University; Helen Barber-James, Albany Museum

Approaches to aquatic ecosystem conservation and management vary regionally and globally. The question is, should we define specific mechanisms that fit different needs of people and ecosystems in different regions of the world, or apply similar policies and management to address common problems? The goal of this workshop is to compare and contrast steps or approaches followed in several regions of the world, assess what works and what does not, and discuss common challenges and ways to overcome them. We will begin with four short talks (total 20 min long) that will draw on local to regional-scale examples to compare different frameworks and approaches commonly used in freshwater conservation policy and management across the globe. This will be followed by a 30 min long active discussion where we will categorize other experiences along a continuum of approaches and factors, and finalized with concluding remarks (10 min long) about knowledge gaps and best practices for aquatic conservation for different circumstances. We expect between 30 and 60 participants, and will need a whiteboard and a PowerPoint projector.

Funding: Organizers are seeking partial funding to support symposium participants. In addition to this, all participants proposing talks in our symposium have funding opportunities and will have it secured for the conference.





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## **Civic Engagement in Conservation Biology**

Maximum participants: 24

Organizers: Jacqueline Grant, Southern Utah University; Kimberly Terrell, Memphis Zoo

Civic engagement is the use of knowledge, skills, and values, to develop motivation to make a positive difference in communities through political and non-political processes. The goal of this workshop is to teach participants how to integrate civic engagement into their conservation practice regardless of the venue in which they work. Because conservation science must inform local, national, and international efforts, conservation scientists must be able to engage themselves and their communities in civic life.

Participants will be introduced to what is meant by “civic engagement” in a 15 minute introduction in which we will review the Association of American Colleges & Universities (AAC&U) learning outcomes and rubrics associated with Civic Engagement. Participants will learn about civic engagement through two examples, one that focuses on the undergraduate conservation biology classroom (15 minutes), and one that focuses on a local zoo (15 minutes). The session will conclude with a 15 minute discussion on how to integrate civic engagement into the practice of volunteers from the audience. The organizational structure is a 60 minute long workshop with two leaders and up to 24 participants. The workshop will occur during lunch break and requires access to a projector and computer. If possible, the presence of six easels with poster pads of paper and markers would enhance the interactive components of the workshop.

We have no preferred date and there is no cost to participants for this lunchtime workshop.

## **Integrating sanctuaries into national conservation strategies for the conservation of wild apes**

Organizers: Michel HALBWAX / International Center for Medical Research (CIRMF)

Goal: Move sanctuary and conservation scientists toward a shared perspective on the best practices for the use of sanctuaries in conservation of wild species and work toward a major grant-application to implement such integration.

Justification:

Conservation biologists and sanctuary scientists often have different mandates and different perspectives on the role of sanctuaries. These two groups likely could benefit from an open dialogue regarding the best way forward to integrate sanctuaries more explicitly into national and international conservation strategies of wild apes, and other species. The purpose of the workshop is to facilitate a two-step coordinated effort: first to apply for a planning grant which, when funded, will then be used to develop a large-grant proposal for launching a major initiative joining sanctuary and conservation scientists in a process to adjust the formal link between sanctuaries and the conservation of wild populations.





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Format:

Ideally this workshop would follow immediately after the proposed symposium entitled: “Thinking outside the sanctuary: Effective and appropriate use of potentially controversial tools to conserve wild ape populations”

- A brief introduction by the facilitator
- A time-limited brainstorm by participants of the steps needed to make forward

## **Protected area downgrading, downsizing, and degazettement (PADDD): science and policy implications**

Organizers: Michael Mascia / Conservation International; Carly Cook / Monash University; Rachel Golden Kroner / George Mason University; Shalynn Pack / Round River Conservation Studies; Siyu Qin / Conservation International

Though conservation policy assumes that national parks and other protected areas are permanent fixtures on the landscape, research reveals widespread protected area downgrading, downsizing, and degazettement (PADDD). PADDD is driven by industrial-scale resource extraction and development, as well as local land pressures and land claims, with links to accelerated forest loss, fragmentation, and carbon emissions. Despite its potential to jeopardize local, national, and international conservation progress, scientific understanding of and policy responses to PADDD are limited. To catalyze policy-relevant PADDD research and science-based policies, we propose a participatory workshop to assess the current state of PADDD research and policy and articulate a vision for the future. This workshop will empower participants with the latest PADDD research (to foster evidence-based conservation efforts) while charting the future of a critical area of conservation science and policy. It will fill a key gap within the conservation sector by articulating a collective agenda for the future of PADDD research and policy. The workshop will build capacity among several dozen participants and identify specific priorities for PADDD research and policy engagement. These catalytic outputs will foster awareness and understanding of PADDD; greater investment in PADDD research and policy responses; and the emergence of evidence-based policies governing PADDD (e.g. within the Convention on Biological Diversity). To achieve these outputs and outcomes, this workshop will include a presentation and focus groups. The presentation will ensure that participants are aware of the latest research on PADDD while focus groups will enable participants to identify critical areas for future research and policy guidelines. Together with interested participants, session organizers will then develop this agenda for PADDD research and policy into a manuscript and guidance for the conservation sector.

## **Discover, Map, and Collaborate: Applying Spatial Data to Conservation Challenges Using Online Tools**

Organizers: Tosha Comendant / Conservation Biology Institute; Gladwin Joseph / Conservation Biology Institute; James Strittholt / Conservation Biology Institute

In this workshop, participants will have the opportunity to explore Data Basin (now available in Spanish); an open-access, online mapping and collaboration platform built to support conservation planning, prioritization, and resource





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management decisions. Data Basin provides access to well-documented spatial data and provides user-friendly tools for visualizing, analyzing, and co-producing knowledge. Using an interactive format, the workshop will provide a basic overview of how to download/upload data, create maps, join or start groups, and share expertise on specific topics or regions. We will use case studies to demonstrate how Data Basin can be used to break down barriers to collaboration and negotiation for scientists, conservation practitioners, decision-makers, and stakeholders affiliated with governments, universities, non-profits, tribes, corporations, and the public. By the end of the workshop, participants will know how to explore existing spatial data, create maps and drawings, and access tutorials. Workshop participants will gain access to a social network of 16,500+ users and 20,000+ biological, physical, and socioeconomic datasets at multiple scales. Data Basin limits the time and resources often required to find and acquire data, modify file formats, and/or purchase and learn proprietary software. Unlike conventional mapping tools, Data Basin was designed to offer integration and collaboration tools for a non-GIS trained audience. Since it launched in 2010, Data Basin has helped move mapping and conservation science products out of the exclusive domain of technical experts. Data Basin was built with the strong conviction that we can expand our individual and collective capacity to develop sustainable solutions by empowering conservation practitioners, decision-makers, and stakeholders through better access to spatial data, non-technical tools, and collaborative networks.

## **Telling conservation stories through art-science collaborations**

Organizers: John Fanshawe / Birdlife International / Cambridge Conservation Initiative; Luciana Leite / Oregon State University

Conservation biology has radically increased scientific understanding of the natural world and the impacts modern society has on species and ecosystems globally. Despite these advances, communicating the conservation crisis to the public is still a critical challenge. In recent years, the environmental movement has lost public support, and issues such as climate change and the endangered species act have become politicized, polarized and partisan. In the new, so-called post-truth society, researchers, and practitioners are waking up to the sober reality that facts and figures alone are not enough to change the unsustainable behavior of many individuals and societies.

Collaborating with artists and their creative thinking is a crucial new frontier for conservation. From Bosch to Banksy, artists have questioned the status quo, and opened up new ways of looking at nature. In all cultures, art has helped us understand where we come from, who we are, and where we are going. Many argue culture is nature, certainly culture is rooted in nature and, in our globalized society, pictures, films, theater, and music, can have the impact of a thousand words in a thousand languages. Art can galvanize new audiences and drive effective conservation campaigns, both locally and globally.

In this workshop, we will explore how art is driving social change. An introduction to the topic will be offered. Afterwards, presenters and participants will elaborate together on how we can facilitate genuine interdisciplinary practice, enabling scientists and artists to learn from one another, and shape new approaches that engage people's hearts as well as their minds. No technical skills are needed to participate in this workshop. We envisage between 15





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and 30 participants, but no one will be turned away. We believe that only by creating passionate and positive coalitions of the like-minded, we can create imaginative, and sustainable conservation outcomes.

## **Partnerships for Conservation: Governments, private sector, donors, communities, academia and NGOs**

Organizers: Marion Adeney / Gordon and Betty Moore Foundation; Santiago Arguello / SAGARPA; Gabriel Bustos / Cerrejon; Leah Gerber / Dept Biology, Az State Univ.; Jon Paul Rodriguez / Instituto Venezolano de Investigaciones Cientificas; Raul Roys / Cerrejon; Daniela Raik / Conservation International;

The challenges facing humanity today are complex and evolving rapidly. Our changing climate is causing extreme weather and devastation. Rising sea levels are forcing human migration as communities abandon their ancestral homes. Water and food shortages are triggering conflict across the world's mega cities. Our planet will be populated by 9.7 billion by 2050 but the current 7 billion have already taxed its capacity to provide for us.

To advance conservation and nature-based solutions that achieve impact at scale requires a broad range of actions: grassroots action; policy development and enforcement; market signals that incentivize sustainable production and consumption; rigorous, actionable research; advocacy; and financing. Partnerships among local organizations, governments, businesses, academia, NGOs and donors are essential to bringing multi-disciplinary and inter-sectoral perspectives and actions together.

This 60-minute session will consist of a panel discussion among representatives of various sectors describing the importance of partnerships and the complementary roles that each actor plays in pursuing insights for sustaining life on earth. Questions and remarks will focus on the impacts such partnerships have, the challenges faced in cultivating these types of collaborations, and examples of success.

Participants:

- Moderator: Daniela Raik, Ph.D., Senior Vice President and Managing Director, The Betty and Gordon Moore Center for Science, Conservation International
- Government: Santiago Arguello, National Coordinator for Coffee and Cacao, SAGARPA (Secretaria de Agricultura, Ganaderia, Desarrollo Rural, Pesca Y Alimentacion), Mexico
- Private sector: Gabriel Bustos, Cerrejon, Colombia
- Community: Raul Roy, Community Association, Colombia
- Academia: Leah Gerber, Ph.D., Executive Director, Center for Biodiversity Outcomes, Arizona State University
- NGO: Jon Paul Rodriguez, Chair, SSC, IUCN
- Donor: Marion Adeney, Moore Foundation





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## **Adding value to conservation policy: Work of SCB's regional sections at the science-policy interface, and how to become involved**

Organizers: Stefan Kreft / Eberswalde University for Sustainable Development; Sarah Reed / Wildlife Conservation Society/Colorado State University;

In our interactive networking session, we want to explore how SCB members and ICCB attendees can become involved in policy-related work by the regional sections of SCB.

The Society for Conservation Biology (SCB) is a global professional society seeking to advance the science and practice of conserving biological diversity. A major focus of SCB's strategic plan is to "increase application of science to management and policy." Effectively bridging the gap between conservation science research and implementation requires reaching out not only to fellow scientists, but also to decision-makers. It is therefore more and more important for scientists to take an active role in ensuring that their knowledge is incorporated effectively into policy. Several groups within SCB are already valued partners at the science-policy interface, including the SCB North America and Europe Policy Committees as well as the Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES) Subcommittee. In recent years, other SCB sections have followed these examples, becoming increasingly innovative and effective policy advocates. This workshop will report results of a strategic analysis of SCB's engagement in conservation policy, highlighting the Society's strengths and organizational niche, the preferred scope and scale of policy engagement, and possible future role for SCB and its members in conservation policy. In addition, representatives of various SCB groups will share their experiences with engagement in diverse policy initiatives around the world. The workshop will conclude with an interactive networking session for SCB members and ICCB attendees to learn more about how to get involved in future policy issues, with a focus on work of SCB's regional sections.

## **Human-centred approaches to invasive lionfish control**

Organizers: Jennifer Chapman / Blue Ventures; Marc Fruitema / Blue Ventures; Steve Rocliffe / Blue Ventures

Across the Caribbean, the invasion of red lionfish (*Pterois volitans*) poses a pervasive threat to marine ecosystems and coastal fishing communities. With high fecundity, a lack of predators and a generalist diet, lionfish have spread so rapidly and widely across the region that eradication is unlikely to be possible. Most of the control strategies that have so far been employed have depended on recreational divers or conservation organisations. However, funding constraints make consistent year-round control challenging. Effective control may therefore best be achieved in the long-term by designing self-financing programs that support consistent high-volume removal. Market-based strategies that incentivise lionfish removal present opportunities for fisheries diversification, alternative livelihoods development, and growth in sustainable tourism in affected communities. However, since this can create economic dependency on lionfish, and because invasive species management is a field wrought with unintended outcomes, there is a risk that local communities may be negatively affected by such strategies. Taking a coupled human and natural systems approach to lionfish management, this session will bring together a diverse array of speakers to discuss sustainable approaches to





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lionfish control that maximise benefits to coastal communities, as well as to explore transferable lessons learned that can inform control efforts across the Caribbean region.

## Talks

- An integrated approach to lionfish management in Belize
- Understanding the socio-cultural context of the lionfish invasion
- Lessons learned from operating a lionfish seafood business
- Lionfish jewellery as a quadruple bottom line business
- A fisher's perspective of emergent lionfish fisheries
- The role of SCUBA divers in lionfish management

## **Thinking Outside the Sanctuary: Effective Use of Controversial Tools to Conserve Wild Apes**

Organizers: Jena Hickey / International Gorilla Conservation Programme

Title: Thinking Outside the Sanctuary: Effective Use of Controversial Tools to Conserve Wild Apes

Goal: This workshop aims to create a safe space for an exchange of ideas on the pros and cons of potentially controversial tools – including and beyond sanctuaries – that are used to achieve conservation of wild apes. Conservation and sanctuary scientists will strive to move toward a shared perspective on the best practices for implementing such tools and under what set of conditions these tools are warranted.

Justification: Conservation and sanctuary scientists likely could benefit from a dialogue regarding the positives and negatives of various approaches aimed at conserving wild populations. While best practice guidelines exist for some of these tools, there is still a need to better harmonize the approaches of animal-welfare and wildlife-conservation practitioners. The more we acknowledge and address the various viewpoints regarding the role of novel approaches in conservation, the more we hope to attenuate the controversy and increase the utility of each tool.

Ideally the subject workshop would be scheduled the day before the accepted workshop entitled: "Towards a framework for integrating sanctuaries into national and international conservation strategies for the conservation of wild apes and other species."

Format:

Introduction followed by a round table for participants (scientists with direct experience will be in attendance) to share their perspectives on the following topics:

- Reintroductions/translocations







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- In situ veterinary care of wild apes
- Vaccinations
- Use of telemetry
- Roles of sanctuaries in conserving wild populations
- Tasks identified and assigned to identify action items and research projects

Number of participants expected: 30

Technical requirements: projector, adaptor for laptops to projector, screen for slides, tables, chairs, and if possible, flipcharts with pens (or facilitator can bring these last items).

## **Improving Cross-disciplinary Communication: An Introduction to the Toolbox Dialogue Method**

Organizers: Marisa Rinkus / Michigan State University; Michael O'Rourke / Michigan State University

Conservation biologists regularly work with researchers from other disciplines as well as community members and other stakeholders. The potential for misunderstanding is rife, and the consequences of misunderstanding can be great. The Toolbox Dialogue Initiative, US NSF sponsored project, is an established way of enabling heterogeneous groups to avoid debilitating misunderstandings. This method uses a dialogue-based approach to enhance communication and collaboration in cross-disciplinary science teams. Grounded in philosophical analysis, the workshop enables cross-disciplinary collaborators to engage in a structured dialogue where they share their research and practice worldviews.

An evidence-based approach, the Toolbox dialogue method has both proximal and distal effects. Proximally, structured dialogue about research assumptions enhances self-awareness and mutual understanding, strengthening the collective epistemic foundation needed for effective collaborative research. Distally, these cognitive effects can increase team cohesion and communication effectiveness by enabling collaborators to avoid both unreasonable agreement and unreasonable disagreement.

During this workshop, we will introduce participants to the Toolbox dialogue method and give attendees an opportunity to participate in Toolbox dialogue sessions. These sessions will be structured by a brief Toolbox instrument, which is a survey tool containing Likert items that highlight fundamental differences in research orientation. The workshop will close with a discussion among participants about the experience, focusing on the potential to inflect decision-making on issues relevant to conservation. So designed, this workshop can accommodate up to 60 people.

## **The Art of Learning: Integrating Dance in Science Education**

Organizers: Jame McCray / Dance Exchange/ University of Florida





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To sustain life on earth we need to improve understanding about ecological systems, promote discourse, and actionable science. But how do you engage with those who don't consider themselves scientists? Movement-based approaches can open the learner to diverse perspectives, and build connections between previous life experiences and the acquisition of new knowledge. The Dance Exchange, founded by MacArthur genius award winner Liz Lerman, has developed tools to encourage students to think creatively about science. During this workshop, Dance Exchange facilitators will lead participants in group exercises and discuss how to adapt tools for various class sizes and settings. Participants will leave with the knowledge and skills needed to use these movement exercises both in formal academic settings as well as in non-formal settings.

Maximum number of participants: 25

## **What do equity, inclusion, and diversity mean for an international organization like SCB?**

Organizers: Martha Groom / University of Washington; Cynthia Malone / American Museum of Natural History; Ricardo Rocha / University of Lisbon; Eleanor Sterling / Center for Biodiversity and Conservation, Am Mus Nat History; Rae Wynn-Grant / Center for Biodiversity and Conservation/American Museum of Natural History

Members of the Society for Conservation Biology Equity, Diversity, and Inclusion committee (EID) invite participants to explore the question, What do equity, inclusion, and diversity mean for an international organization like SCB? in a round table setting. Committee leaders would briefly share goals and progress to date for this recently formed committee and review our vision on how we hope to move forward. We would then invite an open dialogue on recurrent opportunities and challenges regarding understanding equity and inclusion in diverse contexts across the globe. As one example, we anticipate fostering a discussion on the role of environmental societies in publicly addressing societal inequities and on how different political contexts may modify those roles. We also anticipate discussing how more inclusive practices improve the effectiveness of conservation actions. We would focus towards the end of the discussion on the EID committee's role in this global context and on tangible next steps for the committee to address identified challenges.

## **Faith-based conservation 2.0: Exploring new directions in theory, policy and practice**

Organizers: Dekila Chungyalpa / YETI, Yale University; Fabrizio Frascaroli / University of Zurich

1.1 Goal: to further dialogue and collaboration between faiths and conservation by: (1) outlining a theoretical framework for defining and communicating faith-based conservation; (2) recognizing implications and opportunities for policy; and (3) setting an agenda for future research and action.





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1.2 Rationale: interest in the relation between spiritual traditions and ecology has increased steadily for three decades and received new momentum in recent years. Environmental initiatives led by religious institutions or based on partnerships with conservationists have grown accordingly. However, these developments have not been complemented by similar progress at the level of research, policy and theory. Consequently, we have yet to agree upon common nomenclature that bundles such initiatives. 'Faith-based conservation' is frequently used as a general label: if we are to further define it, we need to clarify its parameters, measures of success, and how it overlaps with or differs from other approaches (e.g., community-based and biocultural conservation, indigenous rights and knowledge). Such a gap is not merely theoretical, as it can result in missed opportunities for analysis, collaboration and policy. This session will explore these and similar critical issues. As such, it will help develop the long-term strategies and conceptual underpinnings that are necessary for a new wave of faith-based conservation and all of its potentials to fully come true.

2.1 Format: (a) brief introduction to the topic and outlining of the key questions; (b) breaking up and discussion in three subgroups (one for each thematic area: theory, policy, future agenda); and (c) reports from group work and final discussion.

2.2 Expected number of participants: 4 moderators + up to 25 participants.

2.3 Technical requirements: internet, beamer, 4 portable writing boards.

