Symposia

12 Engaging Members of Faith Communities in Conservation Research and Practice

Organized by Jame Schaefer / Marquette University/THEOLOGY

- Striving to Develop Guidelines for Engaging Faith Communities in Conservation Projects
- Interacting with traditional institutions on native sacred plants case study in Nigeria
- Learning to conduct ecological restoration together non-profit tribal collaboration in Illinois
- Pentecostals as conservation allies in the Tropical Andes of Peru
- Variation in North American Religiously Motivated Conservation Activism
- Religious and Conservation Collaboration Yields Success at Holy Wisdom Monastery

Abstract: Based on the Best Practices Survey conducted from May 31 to September 10 by the Religion and Conservation Biology Working Group of the Society for Conservation Biology, this symposium features six presentations by Survey respondents who share their constructive engagements with leaders and members of faith communities to achieve the goals of conservation projects. Each presenter describes the project with focus on the following: (1) Its nature that required and/or benefitted from relating to faith communities; (2) knowledge of the faith of the community before beginning the project, when it was completed, and sources used to learn about them; (3) how members of the faith communities were engaged in the project; (4) the outcome of the project goals and unexpected benefits; and, (5) key factors that led to successful engagement with members of the faith communities. Shared during this symposium are projects in regional sections of the SCB: Africa--gaining information about sacred forests from reluctant indigenous Nigerians; Asia--recovering populations of mammals in collaboration with Buddhists and indigenous communities in Thailand; Latin America/Caribbean--exploring the receptivity of the creation care principle among Christian Pentecostals in the Andes of Peru; North America--working with members of the Ho Chunk Nation in northwestern Illinois

to develop a management plan for scattered effigy and burial mounds; and, Oceana--striving to manage a community-based Tree Kangaroo conservation program with indigenous people in Papua New Guinea. An overview of the Best Practices Project precedes the presentations. Culminating the symposium is a description of and an invitation to participate in the subsequent workshop during which best practice guidelines will be drafted.

29 Information systems to bridge the gap between data collection and policy making

Organized by Grégoire Dubois / Joint Research Centre of the European Commission

- Assessing the Cost of Global Biodiversity and Conservation Knowledge
- Communication of National and Subnational Indicators for decision makers
- A Digital Observatory for Protected Areas DOPA to support decision and policy making
- Map of Life - Data Models and Tools in Support of National Biodiversity Monitoring and Policy
- Assessing alien and invasive parrot impacts in Europe using a transparent evidence-mapping framework
- Panel Discussion

Abstract: A number of large biodiversity information systems have been developed to improve the access and sharing of biodiversity data. Ideally, these data should contribute directly to decision and policy making to support biodiversity conservation. While we have been strengthening our capacity to mobilize and use biodiversity data, much remains to be done to effectively translate these data into an information that can be directly used by policymakers and decision-makers. It is the objective of this session to address this issue by discussing and showcasing the process of transforming the biodiversity data into an information that can trigger a response from the policy makers.

30 Wildlife Crime Bridging the Gap Between Conservation Science and Criminology Part II

Organized by Matthew Holden / University of Queensland

- Innovation a necessity to save the African elephant from illegal ivory trade
- Novel approaches to understand and influence incentives for illegal resource use in protected areas
- Evaluating poaching interventions in the Congo Basin through the Situational Crime Prevention lens
- Wildlife guardianship Willingness to intervene in the face of wildlife crime
- Urban bushmeat trafficking Trafficking from the rural to urban context in the Republic of the Congo
- Rhino Horn Perspectives in Traditional Chinese Medicine

Abstract: The increasingly interconnected global economy has made it possible to rapidly supply consumer demand for wildlife products around the world, threatening both local and global populations with extinction. Because management actions to conserve such species ultimately require changes in human behavior and can have profound impacts on human livelihood, research towards solving the illegal wildlife trade crisis must cross disciplines from traditional ecologically focused research into the social and mathematical sciences. In this symposium, we propose tools, frameworks and potential solutions to curtail illegal wildlife trade borrowing heavily from the field of criminology. Throughout the session, we explore the complexities that make illegal wildlife trade a wicked problem, including: taboo trade-offs between conservation, social and moral objectives, market uncertainties, complex feedbacks between suppliers, consumers and wildlife populations, and the financial sustainability of management plans. This is Part II of a series of symposia on wildlife crime. Part I focuses on the spatio-temporal aspects of flora and fauna poaching, Part II focuses on illegal trade, trafficking and incentives to consume and supply illegal wildlife products.

35 Conservation challenges and opportunities in areas of armed conflict

Organized by Pablo Negret / University of Queensland; Jose Manuel Ochoa Quintero / Universidad Federal de Mato Grosso do Sul; Andres Suarez Castro / University of Queensland

- Complexities of conservation in regions in conflict
- Need for conservation planning in post-conflict Colombia
- Highlighting emerging issues of a post-conflict scenario in Colombia
- Bringing up conservation and rural development in a biodiversity hotspot
- The forest frontier as the link between conflict risk coca cultivation and high biodiversity areas
- Integrating social and ecological factors in environmental decision making

Abstract: In the last 50 years, 80% of the world's armed conflicts have taken place in biodiversity hotspots. The presence of armed groups is commonly associated with an increase of threats to biodiversity. Consequently, decisions of how those challenges are faced in conflict areas have important consequences on the natural resource management. There is a need to account for conflict scenarios and risks in order to make informed decisions that help to meet conservation targets. This symposium will provide the opportunity to discuss how to explicitly account for conflict risks in conservation decision-making, while promoting the design of conservation strategies with positive socio-economic impacts. Additionally, it will generate a common understanding about different strategies aiming to face biodiversity conservation challenges given different conflict scenarios. International experts will share experiences on:

1. Spatial overlap patterns between conflict risk and high biodiversity areas
2. Assessment of competing objectives in post conflict scenarios (e.g. economic development vs. conservation)
3. Effective conservation planning in conflict and post-conflict scenarios

45 Animals from the wild how much will they count in sustainable food systems of the future

Organized by Nathalie Van Vliet / CIFOR

- Wild Fauna on the menu challenges and opportunities for the future
- The importance of wild meat in the global south
- The Gordian knot: navigating through the futures of wildlife management in the Colombian Amazon
- Evaluation of drivers and impacts on wildmeat consumption in coastal Guyana South America
- Wild fish and wild meat on the menu in Colombia legal opportunities and bottlenecks for the future
- Policy solutions for a sustainable use of wild meat in the Congo Basin a proposed roadmap

Abstract: Whether they are obtained through hunting, fishing or harvest, wild animals continue to contribute to the diets of human populations. Our session, beyond illustrating the diversity of wild animals used in different ecosystems of the world, will foremost discuss the challenges and opportunities for wild animal foods to continue to feed humans in the future. The focus will be on understanding and discussing the tradeoffs related to the use of wild animal foods, including the ecological sustainability of the harvest, the health and food safety challenges associated with the consumption of wild foods and the competition from highly processed and industrialized meats characteristic of the nutritional transitions. In a context in which governments are under increasing pressure to balance biodiversity conservation, food security and human health, we will discuss the feasibility and effects of conserving wild animal foods in the menus of future sustainable food systems.

56 New tools for ecosystem assessment and monitoring

Organized by Lucie Bland / The University of Melbourne

- Towards a global typological framework to support Red Listing of ecosystems
- Indicators of collapse for ecosystem risk assessments
- Using multiple lines of evidence to assess the risk of ecosystem collapse

- Ecosystem conceptual models at multiple spatial scales help piece together the biodiversity puzzle
- Assessment of the quality of input data to apply the criteria of the IUCN Red List of ecosystems
- Panel Discussion

Abstract: Developing ecosystem indicators to assess progress towards the Aichi 2020 Targets remains a challenge, as ecosystems are complex in nature, scale-dependent, and data-intensive to monitor. Integrating long-term field studies and remotely-sensed data, together with a conceptual understanding of ecosystem processes and drivers of change, can provide a powerful basis for quantifying ecosystem change. This symposium focuses on new tools for tracking the status of ecosystems, including Essential Biodiversity Variables for ecosystem structures and functions developed by GEO BON (Group on Earth Observations Biodiversity Observation Network) and IUCN Red List of Ecosystems risk assessments. By showcasing case studies from a wide range of ecosystems – from the Meso-American Reef to forests of eastern Australia – the symposium will illustrate common challenges and solutions in ecosystem monitoring schemes. We will address the need for consistent ecosystem classifications, a strong understanding of ecosystem processes, wise selection of indicators, and implementation of predictive models for monitoring ecosystems from local to global scales. These advances promise an evidence-based monitoring process for ecosystems that will further enhance our ability to assess progress towards Aichi targets and support ecosystem conservation.

60 The State of Social-Ecological Science in Environmental NGO Practice (A SCB SSWG Sponsored Symposium)

Organized by Catherine Christen / SCBI; Rebecca Garvoille / Denver Zoo

- A SES Approach to Community-Based Reticulated Giraffe Conservation in Northern Kenya
- Expanding conservation monitoring evaluation and learning tools to embrace complexity
- A rights-based approach to collaborating with Indigenous People in Bolivia Ecuador and Peru
- Using the nexus between Traditional Knowledge and Western Science to Advance Conservation Globally
- Integrating SES at Smithsonian-Mason School of Conservation & Smithsonian Conservation Commons

- Social-Ecological Science in the Field: Human Well-Being and Community Conservation in Kenya

Abstract: Recent scholarship discusses the state of social-ecological science (SES): research that integrates the social and natural sciences to address current conservation challenges and their drivers across the globe. This literature offers recommendations to scientists on how to more effectively approach these kinds of interdisciplinary collaborations. For example, Moon and Blackmon (2014) encourage natural scientists to learn more about the philosophical principles and theoretical assumptions of social science disciplines. However, there is limited understanding about how these SES insights are being applied at the project-level across environmental non-governmental organizations (ENGOs), and if ENGO experiences with SES differ from theory. Environmental NGOs operate at local-to-global scales, focus on concrete actions to conserve biodiversity, are mission-driven and have varying resources. This symposium addresses key questions pertinent to ENGO practice: What does it take to effectively integrate the natural and social sciences in conservation projects across the spectrum of ENGOs? How do problems of understanding, philosophy, capacity and method play out in ENGO projects? From an ENGO perspective, what are the limits to a SES approach? What do ENGO social scientists think about the efficacy of SES approaches? ENGO scientists leading SES projects will discuss their experiences and provide recommendations on advancing interdisciplinary conservation solutions in an era of rapid global change.

Talks: SES Insights from The Nature Conservancy's Kenya Program; WCS' Rights-Based Approach to Collaborative Conservation in the Amazon; Social and Natural Sciences Monitoring to Improve Micronesian Conservation; Expanding Conservation Monitoring, Evaluation and Learning Tools to Embrace Complexity; Integrating Social-Ecological Science into the Smithsonian's Conservation Commons; A SES Approach to Community-Based Reticulated Giraffe Conservation in Northern Kenya

70 Shaping the future of Conservation Technology

Organized by José Lahoz-Monfort / University of Melbourne; Matthew McKown / Conservation Metrics, Inc.; Shah Selbe / Conservify

- The road to ultra-affordable tagging why systematically open-sourcing key technologies offers value
- Shaping the future of Conservation Technology the current landscape
- Applying Artificial Intelligence to Analyze: The Growing Mountains of Data From Environmental Sensors
- The Internet of Earth Things
- The Future of Conservation Technology
- From the Ground to the Cloud: Big Data Analytics for Conservation

Abstract: Technology has great potential to revolutionize the way we collect data on species and habitats, and provide new tools to support conservation action. We believe the time has come for conservation to move from being technology consumer to become an innovation leader and to actively seek to design novel technologies and devices to suit our specific needs.

The invited talks of this symposium provide an overview of where we stand in terms of conservation technology, and explore the key gaps that need to be addressed to achieve its full potential as a transformative tool.

72 Mapping human pressures globally and the role of protected areas in mitigating biodiversity threats

Organized by Enrico Di Minin / University of Helsinki; Jonas Geldmann / University of Cambridge; Michael Harfoot / Unep-wcmc & Microsoft; Lucas Joppa / Microsoft Research; Katharina Schulze / University of Amsterdam; Derek Tittensor / UNEP-WCMC; Neil Burgess / UNEP - World Conservation Monitoring Centre

- Using the red list to map threat to biodiversity

- Global hotspots of species threatened by unsustainable harvest
- Evaluating the relationship between the legal and illegal wildlife trade
- Governance and Politics of Reducing the Threats of Deforestation and Forest Degradation through
- Protected Areas in the Peruvian Amazon
- Damming fragments species ranges and heightens freshwater fish extinction risk
- The effectiveness of Protected areas in reducing pressure

Abstract: It is widely accepted that the main driver of the observed decline in biological diversity is increasing human pressure on Earth's ecosystems. However, the spatial patterns of, and change in, human pressure and their relation to conservation efforts are less well known. Without understanding what is threatening biodiversity we will not be able to take the most appropriate actions to tackle them and reduce the rate of biodiversity loss. This symposium is divided in to 3 themes. In the first theme, we will explore "the gold standard" for threat maps and how to move past the current paucity of threat data. The second theme will highlight three novel approaches to understand the distribution of human pressure. The first talk will use methods derived from citizen science, to spatially map pressures to biodiversity based on the threat status of ca 15,000 species in the IUCN red list. The next talk will focus on identification of global hotspots of Red-listed species threatened by one of the most important and most poorly mapped threat: exploitation of biological resources. The third talk will use CITES trade data combined with data border seizures to shed light on the relationship between legal and illegal trade. The last theme will showcase the role of protected areas in mitigating pressure and reduce threats to biodiversity, using data from ca. 2,000 protected areas. The first talk will explore geographical differences in the threats as well as driver associated with highly threatened protected areas. The final talk will be a global analysis of protected area effectiveness in terms of reducing human pressure as well as what factors are contributing to their success and failures. The discussion will explore the policy relevance of the results presented and what data and tools are needed to improve our understanding of threats to biodiversity.

73 Key Biodiversity Area identification and safeguard: development and application of the new standard

Organized by Thomas Brooks / IUCN; Zoltan Waliczky / BirdLife International

- The new global KBA Standard
- The KBA identification process and key actors
- Organisation of the new KBA Programme and Partnership
- Key Biodiversity Areas for Investment in the Tropical Andes
- Application of the new Key Biodiversity Area KBA criterion for ecological integrity
- End-Users of KBA Data The KBA Consultative Forum

Abstract: The 2016 World Conservation Congress marked the culmination of 12 years of work to consolidate an umbrella standard for the identification of Key Biodiversity Areas (KBAs) and launch a partnership of 11 international conservation organisations to support this identification. The process was led by a joint taskforce led by the IUCN Species Survival Commission and World Commission on Protected Areas, and built from four decades of effort to identify important sites for different elements of biodiversity (e.g. IBAs, AZEs).

This new standard and partnership serve critical roles at the interface between conservation science, policy, and practice. The science underlying the standard draws from state-of-the-art techniques in biodiversity monitoring, risk assessment, and systematic conservation planning. In terms of policy, it serves central roles in implementation and monitoring of national and international instruments including Aichi Target 11 of the Strategic Plan for Biodiversity 2011–2020 and the Sustainable Development Goals 14 and 15. The practical applications of KBA identification are deeply rooted, guiding conservation action at local and national levels, investment through financial mechanisms like the Global Environment Facility and the Critical Ecosystem Partnership Fund, and safeguards under the International Finance Corporation's Performance Standard 6.

This symposium, convened by IUCN and BirdLife International on behalf of the KBA Partnership, will discuss these themes of KBA science, policy, and practice, giving particular attention to assessment of the rationale for – and advantages and disadvantages of – decisions made in the process.

74 Environmental indicators: Measuring change in a dynamic and uncertain world

Organized by Michael Burgass / Imperial College London; Emily Nicholson / Deakin University;

- The Sufficiency and Suitability of Global Biodiversity Indicators to monitor biodiversity change
- Testing whether biodiversity indicators detect policy induced change in marine ecosystems
- Progressing Performance Measures to Ecosystem Questions
- Navigating uncertainty in environmental composite indicators
- A global mitigation hierarchy for nature conservation
- Panel Discussion

Abstract: The aim of this symposium is to review lessons learnt & short comings from the current global indicator process, highlight methodological advances and requirements in indicator design, and discuss future frameworks for indicator use.

Despite the proliferation of biodiversity indicators, there remain large challenges to their effective implementation. Many biodiversity targets have poorly aligned indicators or no indicators at all and the majority of these remain untested. Indicators can and should contribute to policy formulation and evaluation at global, regional, local levels if properly constructed, but is rarely the case and gaps remain in the understanding of how indicators work and relate to real life in an uncertain and dynamic world. This symposium will demonstrate lessons learnt from well-known environmental indicators, new research in testing and improving current indicator design as well as new frameworks to work towards. The symposium will stimulate discussion on these aspects, the role of indicators in policy and how society chooses to move forward.

The first 60 minutes will be 5 presentations of 12 minutes, followed by a chaired 30-minute panel discussion. Panelists will take audience questions to discuss the content of the presentations and future directions of indicators.

75 Linking conservation science to decisions in the real world

Organized by John Garcia-Ulloa / ETH Zürich; Siyuan He / WWF China; Claudia Múnera-Roldán / Australian National University, Fenner School of Environment and Society; Carina Wyborn / Luc Hoffmann Institute; Angela Guerrero Gonzalez / University of Queensland

- Working at the Interface: Approaches that enhance the contribution of science to real world
- Linking biodiversity impact to global supply chain actors: the case of soy production in Brazil
- Knowledge co-production with palm oil supply chain in Cameroon
- Management of protected areas in Colombia under climate uncertainty
- Setting China national parks within an ecosystem services framework
- Leveraging graduate student interest and agency needs for climate change planning

Abstract: Bridging the gap between science and practice remains one of the greatest challenges facing the conservation community. To address this, scientists are now expected to do more than just robust research; they need to engage with multiple disciplines and sectors to collectively produce and implement knowledge into decision-making. Navigating such an engagement process is not a trivial task. Science-policy-practice interfaces (SPPIs) are often complex, requiring the capacities and needs from different stakeholders to be taken into account. Yet, the toolbox available to address such complexity is expanding. Approaches such as knowledge coproduction, mental model elicitation, adaptive management and theory of change mapping have all shown promise in recent years.

This symposium will showcase and discuss the value of such tools in maximizing conservation science impact. We aim to start the session with a talk that frames SPPIs within conservation and presents the mechanisms through which each tool can help science's role in SPPI. Our speakers will then present their

research projects, demonstrating the real-world application of such approaches in a diversity of conservation contexts. We aim to cover not just successes, but also failures, to promote debate during the closing discussion. All symposium participants will be encouraged to add their experiences.
This structure aims to fuel a thought provoking, and needed, discussion within the conservation community. The ICCB it is a unique podium from which to reach such an audience.

78 Learning from across the social sciences to inform evidence-based demand reduction strategies

Organized by Diogo Veríssimo / Rare/Johns Hopkins University; EJ Milner-Gulland / University of Oxford

- Reducing demand for wildlife: how are we doing?
- Using methods from economics to understand consumer preferences for wildlife
- Applying social marketing to reducing demand for wildlife - three campaigns experiences.
- Designing positive bear bile reduction campaigns for Chinese tourists
- Conservation criminology approaches for managing demand for wildlife products
- Panel Discussion

Abstract: The unsustainable trade in wildlife is increasingly recognized a key threat to biodiversity. Efforts to mitigate the impacts of this trade have historically focused on curtailing supply through regulation and enforcement. While the extent of success of such measures is a matter of debate, a consensus has emerged that without a focus on the demand side of the trade, any attempt to limit it to a sustainable level will fail in the long run. As influencing demand for wildlife products entails understanding and changing human behavior and societal norms, the methods needed are within the realm of the social sciences. This can be a barrier to conservationists, who may not be aware of the potential for different fields to contribute to demand reduction research and intervention. In this Symposium, we will bring together professionals from across the social sciences to showcase approaches used in their fields to influence human behaviours. Our speakers will

cover academic fields such as psychology and economics, whose goal is to better understand human decisions, as well as applied fields such as social marketing, that have a wealth of knowledge on how to design, implement and evaluate behavior change interventions. By bringing together researchers and practitioners in fields that are still not well integrated within conservation science, we aim to foster a wider adoption of social science among those working to manage demand for wildlife products. The symposium will also be of interest to those aiming to influence human behaviour or better integrate social science into their research.

82 A standard framework to convert spatial data into meaningful conservation management information

Organized by Lilian Pintea / the Jane Goodall Institute; Nick Salafsky / Foundations of Success

- From pixels to decisions: Using remote sensing data to inform chimpanzee conservation in Tanzania
- Spatial adaptive management of Siberian Crane conservation across East Asia
- Advanced spatial data collection with native peoples in South American Forests
- Synthesizing prioritizing and mapping science and management needs in the NW Basin and Range
- The Biodiversity Indicators Dashboard: Toward a spatial framework of biodiversity status and trends
- Key principles for developing a standard framework to manage spatial conservation information

Abstract: In recent years, expansion in the scale and the scope of our conservation work has required that we integrate conceptual and spatial conservation planning. There is also a growing torrent of geospatial data on ecosystems and species from remote sensing tools and crowdsourcing platforms. Satellite images showing changes in forest cover. Ranger patrols mapping poaching snares. Community projects conducting stakeholder analyses. Donors assessing results of conservation interventions. And there is a proliferation of systems for managing these data. We need a standard framework for converting these data into useful information for project management and decision making. For example, common classifications to systematically describe conservation work. Common indicators for assessing viability of a species. Common

metrics for determining the threat status of a forest. Or common standards for mapping the location and determining the effectiveness of conservation actions.

This standard framework, when coupled with appropriate intellectual property sharing arrangements, is the key to more coordinated and effective large-scale adaptive management of species and ecosystems. It is also the basis for shared learning that is the foundation of true evidence-based conservation. An inter-disciplinary working group of conservation practitioners, researchers, funders and policy makers has pilot-tested integrating spatial data with the Open Standards for the Practice of Conservation in the context of large-scale conservation projects around the world. In this symposium, we present the results of this work, drawing on case studies involving Chimpanzees Conservation in Tanzania, Siberian Cranes Across Continental Flyways in East Asia, Conservation Work with Indigenous Peoples in Colombia and Suriname, and Managing an Ecoregion in the Western United States. We then present key principles that have emerged from this work and a plan for developing and rolling-out this framework at scale.

87 Successful scenario planning

Organized by Hedley Grantham / Wildlife Conservation Society; Sean Maxwell / The University of Queensland

- Scenario planning: a tool for conservation
- Priority areas for landscape protection and restoration in the face of climate change
- Balancing carbon, forestry, indigenous and mining values in the Congo
- Overcoming barriers for large-scale revegetation in a degraded agroecosystem of south Ecuador
- Minimising the cumulative impacts of urban expansion scenarios for 600 species
- Panel Discussion

Abstract: Scenario planning is a rare example of science bridging the implementation gap. Originally used by governments and businesses to improve their long-term decision-making, scenario planning is now being applied to address conservation challenges. But care must be taken to ensure that a wider application of the

approach is met with a complete understanding of its strengths and weaknesses. Scenario planning resonates with laypeople because it can evaluate trade-offs between conservation, development and societal goals, and thereby allow more transparent and robust management decisions to be made. Successful scenario analysis is interdisciplinary, requiring expert elicitation, modelling and dissemination skills, and often requires forging new research collaborations. This symposium will present a scenario planning masterclass, detailing six case studies where the approach has solved conservation challenges on the ground. Case studies will cover interactions with government, non-government and public stakeholders, and involve three major conservation challenges; threatened species management, the delivery of ecosystem services and climate change adaptation. The aim of the symposium is to provide an improved understanding of scenario planning methodology, as well as the benefits and pitfalls of the approach. The symposium presentations will be followed by an open discussion, which is designed in part to facilitate new research collaborations between audience members seeking to conduct their own scenario planning analysis.

91 Developing the scientific basis that enables businesses to support biodiversity conservation

Organized by Joseph Bull / University of Copenhagen – KU; Prue Addison / University of Oxford;

- Engaging with business to revolutionize biodiversity conservation
- What biodiversity information does business need
- Developing robust indicators for private sector conservation and natural capital accounting
- A quantitative worldwide assessment of biodiversity offsetting
- Resolving controversies in compensatory conservation
- Panel Discussion

Abstract: The fundamental goal of conservation science is to provide the technical understanding and tools that enable humanity to conserve biodiversity. End-users of conservation science include international

policymakers, governments, and NGOs. More recently, an important end-user of conservation science has emerged – businesses, an increasing number of which seek to take an active role in biodiversity conservation. Businesses face serious barriers that prevent them from supporting biodiversity conservation. These barriers are scientific, as much as social and economic, including: establishing metrics for objectively evaluating and reporting on biodiversity performance; methods for comparing performance across multiple scales; and, managing biodiversity in the face of uncertainty. In fact, efforts to conserve biodiversity as part of business operations expose gaps in the scientific basis underlying conservation science more generally.
In this symposium, we will discuss 'business and biodiversity' though the lens of topics including 'no net loss' conservation mechanisms (e.g. biodiversity offsetting), natural capital accounting, and factoring industry into landscape conservation planning. The symposium will showcase recent developments in the 'business and biodiversity' research field, identify critical research gaps, and will provide an opportunity for delegates to join discussions around engaging businesses more meaningfully in applied conservation.

92 What is hindering the success of conservation translocations?

Organized by Oded Berger-tal / Ben-Gurion University of the Negev

- What is hindering the success of conservation translocations
- Monitoring for Success in Species Translocations
- Using behavioral ecology to improve reintroduction outcomes
- Translocation success for dibblers *Parantechinus apicalis* is explained by invertebrate abundance
- Parasites and pathogens in reintroductions and translocations
- Driving the need for conservation translocations.

Abstract: Translocations are a common conservation and management strategy, but despite their popularity, translocations are a high-cost endeavor with a history of failures. It is therefore imperative to maximize the success of translocations by learning from past successes and failures. We reviewed the IUCN's Global Re-introduction Perspectives Series, making use of its highly structured format to extract all the difficulties that

were reported by wildlife managers to hinder the success of their translocation programs. The over 1,000 difficulties reported provide an invaluable examination of the common "spokes in the wheels" of this popular management tool. In this symposium we will review these difficulties and then explore five of the most common ones encountered by wildlife managers translocating animals for conservation purposes – monitoring difficulties, animal behavior issues, lack of public support, predation, and diseases. Each of the talks will offer possible solutions that can alleviate these difficulties and increase the chances of translocation success. The symposium is aimed at giving wildlife managers applicable tools that would help them in preparing future translocations programs.

94 Monarchs, Pangolins and Vaquita: Using U.S. Laws to Leverage Global Conservation Gains

Organized by Brett Hartl / Center for Biological Diversity

- Introduction to the Symposium Using U.S. Laws to Leverage Global Conservation Gains
- Curbing Harmful International Wildlife Trade
- Does the U.S. Endangered Species Act Benefit Neotropical Migrants
- Saving the Monarch Butterfly Requires International Cooperation In a Time of Hostility Under Trump
- Agriculture and Biodiversity in the 21st Century
- The State of the U.S. Endangered Species Act Under A Trump Administration

Abstract: The United States' domestic environmental laws provide many tools to promote conservation objectives both within and beyond its borders. For example, in 2016 the Obama administration finalized a set of regulations that will likely prevent the deaths of 650,000 marine mammals worldwide each year by requiring that every nation which seeks to import seafood into the United States meet with the strict, protective standards of the Marine Mammal Protection Act. This symposium will examine several case studies where U.S. environmental laws and policies have been leveraged in creative ways to address some of the most urgent issues in conservation today. This symposium will, among other things, discuss (1) how the

Endangered Species Act is being used to address international wildlife trafficking of species including pangolins and African elephants, (2) how fisheries and trade policies are being employed to protect the critically-endangered Vaquita by addressing the illegal Totoaba swim-bladder trade, (3) how a combination of U.S. laws and international treaties are being used to protect the monarch butterfly across its migration, and (4) how migratory birds are protected on their wintering grounds and during their migration through U.S. funded conservation programs. Finally, this symposium will review the first six months of the Trump administration and what early policy changes likely mean for biodiversity conservation both in the United States and abroad.

103 The role of Natural History Museums in sustaining biological and cultural diversity

Organized by Nora Bynum / Field Museum

- Conservation strategies at Natural History Museums an overview
- The immense value of scientific collections in conservation research
- Twenty years of direct work on conservation and community wellbeing in South America
- Contrasting fundamental research and citizen science for conservation
- Capacity development conservation and museums
- Museums looking to the future removing barriers to global collaboration for conservation

Abstract: What role should natural history museums play in sustaining the world's biological and cultural diversity? Conservation efforts are structured in various ways in these collections-based institutions, which often have a distinct public profile, serve as trusted conveners in science and education, and have breadth and depth in intellectual and physical resources. This symposium addresses the spectrum of conservation strategies that museums undertake, such as deploying knowledge from collections in conservation research; using biological and social inventories to direct conservation action; developing citizen-science programs that engage communities from local to international scales; and building capacity for diverse target audiences. We

also will discuss the role of fundamental biodiversity research and how it complements and differs from conservation action; how we measure the success of biological conservation efforts and cultural engagement; how we evaluate quality of life; and how we look to a future with a global community of museums working on conservation, removing barriers to collaboration among these institutions.

114 Conservation Planning; where is it now, what is its potential and how do we get there?

Organized by Sam Lloyd / Imperial

- The status quo of systematic conservation prioritisation: a global survey
- Conservation planning and business reducing uncertainties cutting costs and improving outcomes
- Using conservation planning to engage with government decision making. Lessons from South Africa
- Rules versus reality limits to industry capacity when planning for NNL at the landscape scale
- Real-World Spatial and Conceptual Conservation Planning in Large Complex Systems
- Panel Discussion

Abstract: If conservation science is to contribute to sustaining the diversity of life on earth, then it must inform and influence human behaviour. Conservation planning has emerged to address this need, acting as a vehicle for translating complex ecological understanding into an easily communicated set of priorities, activities, and goals. Considerable attention has been devoted to developing plans designed to both guide conservation interventions and communicate conservation knowledge to other sectors. Reports from practice suggest however that effective implementation depends not just on the final product itself, but on the approach used in plan creation and dissemination.

This symposium will bring together speakers from government, private sector, NGOs and academia to share their experiences of using conservation plans in practice. The presenters will discuss how they have used the approach to influence political decision making, mitigate the impact of development, and bring multiple organisations together under a single goal. The academic literature has widely addressed the technical issue of

processing and presenting information, this symposium however aims to further the debate on how to overcome the ubiquitous issue of transitioning from knowledge to effective action and political influence.

116 The urban challenge: Latin American cities as hotspots of opportunities for biodiversity conservation

Organized by Juan Amaya-Espinel / Instituto Alexander von Humboldt - Pontificia Universidad Javeriana

- Green cities anthropogenic biodiversity hotspots
- Diversity function and ecosystem services provided by conservation areas in Latin American cities
- Spatio-temporal fragmentation of ecosystem services for Bogota and Santiago
- Global patterns of bird richness and abundance along urbanization gradients and green areas

Abstract: The accelerated rate of urban growth in Latin America represent a contrasting duality of challenges and opportunities for the biodiversity conservation. First, for the negative effects that this process could have on the structure and functioning of natural ecosystems, the survival of multiple groups of fauna and flora and their participation in ecosystem services delivery closely linked to the urban dwellers well-being in this development countries. But on the other hand, also for the significant opportunities that these cities could be still offering for reducing the rate of biodiversity loss in this part of the world. The growing interest for address these challenges and opportunities for biodiversity conservation in Latin American cities has been promoting an increasing series of descriptive studies and quantitative analysis. In addition to process to incorporate biodiversity as a strategic element in processes of urban planning and environmental management. This symposium seeks to present current advances towards integral conservation of biodiversity in Latin American urban areas. To achieve this goal, a series of presentations and a panel discussion about conceptual and practical developments will be promoted, as well as various case studies to address comprehensibly the ecological, social, economic and political aspects that converge around the conservation of biodiversity in cities of Central and South America. This symposium will contribute to a better

understanding of the importance of cities into the Neotropical biodiversity conservation and what role must to play conservationist, urban planners as well as decision makers to guide actions and policies needed to accomplish this purpose.

118 Rural communities and Indigenous Peoples Contributions to the Conservation of the Amazon Basin

Organized by Zulema Lehm / Wildlife Conservation Society; Robert Wallace / Wildlife Conservation Society

- Indigenous and communal strategies to conserve biodiversity in the Amazon Basin.
- Conservation and Development of Local Riverine Populations in the Amazon
- The indigenous territorial and natural resources management in the Madidi Landscape-Bolivia
- Putumayo Amazonas indigenous landscape: Rights and uses for a sustainable governance
- Basic Necessities Survey and governance's assessment in the Mosaic of Rio Negro–Brazil
- Panel Discussion

Abstract: In the 1980's conservation science proposed a new theoretical and practical "paradigm" called Community-based Conservation, contrasting with the more traditional conservation approach "without people". Since then a broad "rainbow" of associated theoretical, methodological and practical tools have been developed, and new data highlights the importance of communal rural systems on the access and use of land and biological diversity. Globally, it is estimated that more than a half of terrestrial land is held by these traditional systems, however, their social and economic importance is not fully appreciated. Protected areas and indigenous territories cover 45.5% of the Amazon Basin, of which 28.1% corresponds to indigenous territories. Deforestation between 2000 and 2013 is less in indigenous territories (0.8%) than in protected areas (1.1%) and between both, markedly less than the rest of the Amazon (3.6%).
The objective of this symposium is to highlight and discuss which models have worked better, which have failed, what capabilities are required, and which conditions are necessary for successful community-based

territorial management models. Presenters will detail traditional access and use systems employed by different kind of Amazonian rural and Indigenous Peoples, as well as new strategies that they are applying to use and conserve their lands and territories in the 21st century.

121 Land acquisitions for conservation: reconciling plans with empirical reality

Organized by Christoph Nolte / Boston University

- Land acquisitions for conservation drivers of spatial allocation in the USA Chile and Colombia
- Identifying socio-economic drivers of land acquisitions over a century in California
- Social and Environmental Predictors for the Spatial Distribution of Conservation Easements
- Cost-effectiveness of buying vs. borrowing land in a Natura 2000 site in Northern Germany
- Who will conserve? Understanding stakeholders to improve prioritization of private land conservation
- Comparing acquisition strategies for private land conservation revolving funds

Abstract: Land acquisitions are a key instrument in the conservationist's toolbox. Over the past decades, organizations and individuals have spent billions of dollars to protect habitats through the purchase or donation of full or partial land rights. The role of acquisitions for conservation is bound to increase, as climate change pushes species outside existing reserves while public park creation has stalled in many countries.

Scientists have made significant progress in optimal site selection and policy design. Yet, real-life acquisitions seldom occur in "optimal" ways. Discrepancies between planning and reality are documented, but scholars rarely explain why they exist and persist. Rigorous assessments of the drivers and impacts of land acquisitions are key to understanding where acquisitions occur, why, and how they can be improved.

This symposium brings together empirical quantitative analyses illuminating key aspects of the practice of land acquisition in six countries. Questions include: how and why do patterns of land acquisitions diverge from identified priorities? How can key attributes of parcels, landowners, and donors be incorporated into acquisition strategies? How do incentive policies affect rates and patterns of private land protection? Under

what circumstances is buying land more cost-effective than borrowing land? Insights will inform discussions on how to narrow gaps between conservation planning theory and practice.

123 Seasonally Dry Forest conservation in the Neotropics

Organized by Santiago Madriñán / Jardín Botánico de Cartagena

- Tree diversity patterns and regional conservation priorities in Central American-northern South American Dry Forests
- The environment vs. Tropical Dry Forests: functional responses of six tree species to drought
- Will Tropical Dry Forests be vulnerable or resistant to changes in rainfall?
- Plant diversity biogeography and conservation of Neotropical Seasonally Dry Forests
- Seasonally Dry Forest conservation in the Colombian Caribbean
- Panel Discussion

Abstract: Seasonally Dry Tropical Forests are amongst the most endangered ecosystems on Earth. It is estimated that ca. 10% of the original extent of SDTF in the Neotropics remains. In the Colombian Caribbean region, SDTF are particularly endangered through expansion of urban areas and a long history of occupation and destructive land use practices, such as conversion to pastures for cattle ranching and urbanisation. In this symposium we will explore conservation strategies of SDTF through five presentations by leading personalities in the field including: 1) an overview of current state of SDTF in the Neotropics (biodiversity, land use, conservation, threats); 2) climate history and future climate change scenarios in SDTF; 3) landscape analyses of extant SDTF; 4) preservation and ecological restoration strategies of SDTF conservation, and 5) economics of SDTF conservation and sustainability through ecotourism, silvopastoral models, community involvement and REDD+ strategies. At the end of the oral presentations there will be a 15 min roundtable inviting the presenters and participants to comment of drivers of SDTF change and solutions to leading towards its conservation.

130 New conservation strategies to sustain coral reefs under climate change

Organized by Kenneth Anthony / Australian Institute of Marine Science

- Reef resilience through assisted evolution can we climate-harden the reef engineers
- The new conservation challenge for coral reefs
- Integrating climate risk and refuge into conservation portfolios for Indo-Pacific coral reefs
- How human responses to climate change impact biodiversity
- Time for triage which coral reef conservation objectives do we prioritize
- Panel Discussion

Abstract: Coral reefs are the rainforests of the sea and nature's food stores in the tropics. Their services to humanity are more valuable than most global businesses. But climate change will place unprecedented pressures on coral reefs and the values they provide to society. To sustain coral reefs and dependent people through the climate crisis will require conservation strategies that explore a broader range of approaches than usual, including radical and high-risk/high-reward options.

The symposium presents contributions from conservation practitioners, scientists and other outside-the-box thinkers. The symposium explores innovative solutions that include genetic rescue, reef design, restoration, and new conservation models.

1. The new conservation challenge for coral reefs. This introduction will lay out the paradigm shifts needed and how presentations will integrate under a broader solutions framework.

2. Integrating climate risk and refuge into data-driven conservation portfolios for Indo-Pacific coral reefs. The talk will present a decision tool to support the design of climate-smart conservation plans for coral reefs.

3. Reef resilience challenges to deliver critical ecosystem services in the Coral Triangle. Talk explores the challenges and opportunities for sustaining key fisheries species and tourism values.

4. How human responses to climate change impact biodiversity. The speaker presents examples of how shifts from farming to fisheries in drought-stricken regions can degrade reef systems. Interventions are proposed that help communities adopt sustainable alternatives.

5. Reef resilience through assisted evolution – can we climate-harden the reef engineers? Talk proposes a suite of restoration techniques to increase the adaptive capacity of key coral reef species.
6. Time for triage: which reef conservation objectives do we prioritize? Climate change will force reef managers to trade some conservation objectives off against others.

134 Adaptive management in Latin American Protected Areas: challenges and opportunities

Organized by Eduardo Silva-Rodriguez / Departamento de Ecología y Biodiversidad, Universidad Andres Bello, Chile; Maximiliano Sepulveda / Gerencia de Areas Silvestres Protegidas, Corporacion Nacional Forestal, Chile

- Adaptive management for Protected Areas Systems effectiveness: Challenges and learnings from Peru
- Conservation planning for the Protected Area System and priority ecoregions in Chile
- Uruguay's Protected Areas: integrating conservation between scales and public policies
- The long and windy road to adaptive management of the Lower Rio Negro Mosaic Brazilian Amazon
- Theory of change as a framework for sharing learning between protected areas
- Evidence-based conservation planning and the multiple roles of academia

Abstract: Uncertainty and lack of "sufficient" information are more the norm than the exception in conservation practice. However, many pressing problems that affect biodiversity require decisions that cannot wait for sufficient or even minimal information. Adaptive management often is recommended because, through monitoring and evaluation, proximate decisions can be adapted. However, the flexibility of adaptive management often collides with rigid structures that include regulatory instruments, personnel performance metrics, and general resistance to change. In addition, many practical constraints challenge the flexibility required for adaptive management. For example, sharing is critical for learning; however sharing "failures" may be problematic, especially for those who "failed". Similarly, implementation of monitoring plans is constrained by severe resource limitation and poor understanding of the natural history of conservation

targets. Despite these and other limitations, adaptive management is being implemented in protected area systems in Latin America. Here we will present results of adaptive management experiences from governmental, non-governmental and academic perspectives. Each of the case studies includes unique features, but also important commonalities that transcend local scales.

139 New technologies for novel conservation solutions

Organized by Barbara Bollard Breen / Auckland University of Technology

- Pokémon Go Benefits Costs and Lessons for the Conservation Movement
- A World for Every Classroom
- The use of conservation drones to improve protected area management
- Conservation drones quantifying wildlife monitoring accuracy using birds
- Harnessing the mobile revolution to improve small-scale fisheries management
- Panel Discussion

Abstract: Conservation researchers and practitioners are increasingly turning to technology to develop novel, interdisciplinary solutions to conservation challenges. As such, the field of conservation technology is rapidly expanding around the world. Conservation technologies provide accessible and cost-effective tools to improve monitoring, encourage stakeholder participation, and improve decision-making processes. In addition, the rapid increase in conservation technology has encouraged our capacity to innovate, problem solve, experiment, learn, and collaborate. As a result, conservation technology is changing the face of conservation. In this symposium we explore a range of different conservation technologies, and discuss how these technologies provide new opportunities for us to achieve our conservation goals. Talks will cover a range of technologies, including conservation drones, remote sensing, interactive data visualisation, virtual reality, augmented reality, gaming, and how mobile phones can be used to improve conservation management. As the scope and potential of conservation technology continues to expand, there has been no

better time to explore how these innovations can help us address key conservation challenges and deliver effective conservation outcomes.

141 Tackling over-collection of wild plants - is horticulture a conservation problem or solution?

Organized by Lauren Gardiner / Conservation Science, Royal Botanic Gardens, Kew; Amy Hinsley / University of Oxford

- Are private horticultural collections species' saviours or drivers of extinction?
- Ex situ conservation of succulent plants: examining tensions in horticulture
- Seed banking and horticulture: complementary tools for the conservation, restoration, and increased genetic diversity of wild plants
- Horticulture as strategy for in situ and ex situ orchid diversity conservation in the Andes
- Can cultivation of the economically valuable Xate palm take pressure off its wild populations?
- Horticultural propagation versus wild collection for commercially viable yields

Abstract: Although much conservation attention is paid to charismatic megafauna, one in five of the world's almost 400,000 plant species is threatened with extinction. Of those, IUCN data shows that more than 20% are directly threatened by collection from the wild for subsistence use or trade, including for food, building materials, medicine and as ornamental plants. Horticultural techniques that have been developed over thousands of years to grow crop plants and living collections in botanical gardens have long contributed to the ex situ conservation of plants around the world. Yet horticulture can also be a threat: many rare plant species have been collected to extinction for the horticultural trade, and encouraging propagation of useful plants is an often suggested solution to over-collection, but one that may actually increase wild-collection. This symposium will bring together experts from research and practice to present experiences and viewpoints, from different disciplines, of the role of horticulture in preventing over-collection of wild plants and securing their representation in ex situ collections. Speakers will include anthropologists working on

sustainability of subsistence use, botanists and conservationists who specialise in different groups of threatened plants, as well as practitioners who work closely with horticultural traders and corporations using wild plant material.

144 Conservation in an Urbanizing World: Conservation science and application in urban systems

Organized by Travis Gallo / Urban Wildlife Institute, Lincoln Park Zoo

- What is a coyote? The discourse of human-coyote interactions in an urban area
- If you build it will they come Mammal diversity and metacommunity dynamics in urban green spaces
- Control of Corvids in urban environment applications in human-wildlife conflict management
- Crossing boundaries to sustain freshwater ecosystems services and values in an urbanizing world
- Urban Wildlife and Human Disease Using Landscape Genetics of Rats to Inform Public Health in Brasil
- Panel Discussion

Abstract: Urbanization has significant effects on global biodiversity through increased demands for natural resources, landscape modifications, and habitat alterations. However, the science and practice of urban conservation is not limited to conserving species and habitats, but also encompasses socio-economic issues, human values, and environmental aesthetics. As urbanization and its consequences for biodiversity magnify, understanding the nexus between ecology, social science, and urban planning is more important than ever. This symposium will highlight some of the world's most state-of-the-art ecological, social, and policy-relevant research in the field of urban ecology. Presentations will cover applied topics such as the functionality of urban green spaces, multi-city approaches to urban wildlife conservation, and exploring the relationship between urban green space and human well-being. This symposium is intended to complement the symposium "Conservation in an Urbanizing World: How is urbanization changing the science and practice of conservation?" Together these symposiums will facilitate an informative conversation about urban conservation such that the audience can feel better equipped to continue the conversation in their

professional and personal lives. Therefore, this symposium will conclude with an interactive panel-audience discussion about the next frontiers in conserving biological diversity in an urbanizing world.

147 Mind the gap an open- science network for integrated ecosystem research in Colombia

Organized by Maria Londono / Instituto Alexander von Humboldt; Bjorn Reu / Universidad Industrial de Santander; Lina Estupinan-Suarez / Instituto de Investigacion de Recursos Biologicos Alexander von Humboldt; Juan Posada / Universidad del Rosario

- An open-science network for integrated biodiversity and ecosystem research in Colombia
- Towards an Earth System Data Cube for Colombia Current status and potential
- Design of a Research Infrastructure for a Terrestrial Ecological Observatory System for Colombia
- From National to Global: Building an Interoperable Network of Biodiversity Observation Systems
- Panel Discussion

Abstract: Colombia is experiencing a tremendous societal and economic transformation with unknown consequences for its biodiversity and ecosystems. While rates of change of land cover and climate have reached unprecedented velocities, information about the state of Colombian ecosystems is becoming increasingly available and openly accessible. However, these data are often heterogeneous, dispersed, and difficult to access. Moreover, the monitoring efforts in Colombia occur at different sites and timing. In order to respond to the challenges of rapid ecosystem transformation in Colombia, we invite you to join this initiative for an open science network for integrated ecosystem research, and share your research experience from a multiscale and transdisciplinary perspective. This will foster the discussion about establishing an ecological observatory system for monitoring important ecosystem variables such as climate, biogeochemistry, biodiversity, and socio-economic drivers. We are interested in understanding not only local ecosystem process, but also interactions between the biosphere and atmosphere; how these are affected by human activities and do affect ecosystem services and human well-being.

The symposium aims to:

- Show data platforms and compile new initiatives that investigate ecosystem functioning across disciplines
- Foster the exchange of experiences on studying ecosystem change in Colombia, and merge activities for a more complete understanding of ecological process and drivers
- Discuss the formation of an emerging network/platform on open ecosystem science

149 The impact of Earth's changing human footprint on biodiversity and humanity

Organized by Kendall Jones / University of Queensland

- Mapping global patterns of human impact on threatened species and their last remaining refuges
- Recent catastrophic declines in wilderness and what this means for Half Earth
- Red Listing human behaviors that impact global biodiversity
- One third of the global protected area estate under intense human pressure
- Global restoration priorities for achieving protected area targets
- The human influence on fire dependent ecosystems, where to from here?

Abstract: Humanity and nature forms a coupled system and anthropogenic pressures on the environment have profound impacts on biodiversity, social equality and economic prosperity. Understanding how and where changes in human pressures have occurred is vital not just for biodiversity conservation but also our understanding of essential ecosystem service provisioning. Until recently, global assessments of human pressure change have been limited in that they have focused solely on single measures of human pressure, such as forest loss. But recent advances in cumulative impact mapping have profoundly changed this, as they simultaneously capture the impacts of numerous human activities across space and time, and demonstrate huge recent increases in human pressures globally. This symposium will utilise these advances to present novel methods for measuring the impacts of human pressure on biodiversity and ecosystem services and explore the possibility of reconciling human development and biodiversity goals. We will explore the relationship between human pressure change and socio-economic change over the past two decades, asking

the question: Can economic growth and human development be decoupled from biodiversity loss? Second, we will highlight advances in mapping human impacts to biodiversity. Finally, we will investigate how human pressures are affecting conservation efforts globally, assessing the effectiveness of protected areas for mitigating human pressures, and highlighting areas where human pressures compromise abilities to meet international environment targets.

150 Harmonizing conservation & local realities: inter-disciplinary approaches to just sustainability

Organized by Paulami Banerjee / The University of Texas at El Paso (UTEP); Michael Liles / Texas A&m University; Tarla Peterson / University of Texas El Paso; Kathryn Wedemeyer-Strombel / University of Texas El Paso; Eastern Pacific Hawksbill Initiative

- Challenging old models of carnivore conservation in Sweden and the United States
- Social marketing of community managed marine protected zones in Indonesia
- Biting the hand that feeds you priorities for conservation and human wellbeing in Central America
- Action Research for co-management of inhabited protected areas in Mozambique
- Community-based forest management A case study of Joint Forest Management in Sikkim India
- Fishers Ecological Knowledge for endangered sea turtle conservation in Central America

Abstract: One of Earth's most profound sustainability and social justice challenges is including the full spectrum of society in decision-making and actions regarding the use of natural resources. Global biodiversity conservation priorities often focus on the biological needs of species and ecosystems without concomitant attention to the needs and concerns of local human residents. The misalignment of conservation strategies and the priorities of the human population can result in exclusion of local human residents from conservation planning. Excluding locals can escalate latent conflict and hamper desired outcomes, particularly when local residents wield power to influence the success or failure of conservation initiatives. Achieving just sustainability requires inter-disciplinary strategies that harmonize international conservation priorities with

diverse realities of local communities. This requires moving beyond simply listening to local voices to actively incorporating local realities into conservation. This symposium explores how conservation strategies that promote dialogue between conservationists and primary resource users can encourage both to recognize their interdependence and create an environment of mutual respect and appreciation. The symposium's six case studies examine environmental conflicts in aquatic and terrestrial ecosystems at multiple scales, including: Community-based forest management: A case study of Joint Forest Management in India; Biting the hand that feeds you: priorities for conservation and human wellbeing in C. America; Social marketing of community managed marine protected zones in Indonesia; Action Research for co-management of inhabited protected areas in Mozambique; Challenging old models of carnivore conservation in Sweden and the United States; Fishers' Ecological Knowledge for sea turtle conservation in C. America. These approaches open spaces previously limited to resource managers, and reintegrate local communities to conservation.

157 Coral Reefs Conservation Effectiveness

Organized by Nohora Galvis / Observatorio Pro Arrecifes Coral, Fundacion ICRI Colombia

- Measuring Coral Reef Conservation Effectiveness to plan improvements
- Up to 80% coral cover in peril: Varadero, an unusual coral reef
- Contributing to the effective management of the Mesoamerican Reef
- Optimizing invasive lionfish control to protect Caribbean reef fish communities
- Evaluating differences in marine zoning management to promote coral conservation
- Effectiveness of indicators for monitoring ecological integrity of coral reefs in the Mexican Caribbean

Abstract: It is relevant the identification, measurement and monitoring of indicators of Conservation Effectiveness in coral reef areas to plan improvement of management efforts. Managers think global and act locally to report accountability. However, they face national priorities for unsustainable development that may hamper the survival of coral reef areas. Low Effectiveness Percentages seem to be normal in current coral

reef ecosystems. While some that are far away from populated areas present low coral cover others that are close to overpopulated areas that are not yet protected, have resilient high healthy coral cover. Multidisciplinary Scientific explanations including from citizen science to genetics, point at different levels of adaptation to chronic or acute exposure to anthropogenic impacts such multinational oil exploration, dredging, shipping, illegal fishing, weapon testing, garbage and sewage dumping that may exacerbate global warming effects in isolated coral reefs.

International Case studies find approaches for adaptive management focus on research questions such as:
1) Recommendations to improve effectiveness of conservation to achieve ecological, social and economic objectives
2) Successful efforts for Multi-Species Coral Reef Ecosystem Restoration vs. Constrains faced by the Coral Mono-Species Restoration
3) Integrative approaches

161 Human-carnivore conflicts in regions undergoing land-use change

Organized by Arash Ghoddousi / Humboldt University-Berlin; Tobias Kuemmerle / Humboldt University-Berlin; Alfredo Romero-Muñoz / Humboldt University-Berlin

- Land-use change and direct threats as drivers of jaguar and puma habitat loss in the Gran Chaco
- Land-use practices influencing human-leopard conflicts in a human-dominated landscape
- Co-existence in a Tiger Reserve in India Complex interactions between people wildlife and forests
- The influence of values and land use on attitudes toward management of human-wildlife conflicts
- Panel Discussion

Abstract: Human-wildlife conflict causes socioeconomic losses to people and leads to wildlife killing, both of which undermines conservation success. Important improvements regarding our understanding of the ecological, socioeconomic, and psychological factors involved in leading to conflicts or promoting

coexistence between people and carnivores have recently been made. However, how land-use change, by itself the single most important driver of biodiversity loss via habitat loss, degradation and fragmentation, affects how human-carnivore interactions play out remains under-researched. This symposium explores how human-carnivore conflict and coexistence varies across different types of land-use change (e.g., agricultural expansion vs. intensification), different land-use transition stages (e.g., frontier landscapes vs. stable landscapes), and different land-use actors (e.g., smallholders vs. agri-business farmers). Finally, we will explore how addressing underlying drivers of land-use change on the supply and demand side provide opportunities for lessening human-wildlife conflict. Collectively, the symposium will highlight that a more systematic assessment of the relationships between land use and conflict is an important step for avoiding and resolving human-wildlife conflicts.

166 Red Lists of Ecosystems in Latin America: From national efforts to a regional strategy

Organized by Irene Zager / Provita; José Ferrer Paris / Ivic

- A continental challenge: Assessment of tropical and temperate forest decline in the Americas
- Assessing changes to ecosystem function in Latin America
- The Red List of Ecosystems for Colombia and the conservation of biodiversity
- Evaluation of terrestrial ecosystems in Chile according to the IUCN Red List of Ecosystems
- Collaborative and applied science - The pathway for integrating the Ecosystem Approach
- Integrating biodiversity in conservation planning for human health and well-being

Abstract: Risk assessment is an important tool for informing biodiversity conservation and represents one step in the process of setting conservation priorities for future actions, as well as informing efforts aimed at meeting international goals such as the Aichi Biodiversity Targets and the UNDP Sustainable Development Goals. The IUCN Red List of Ecosystems (RLE) proposes a unified risk model with standard, transparent and repeatable criteria for addressing the risk of ecosystem collapse equivalent to the one used by the Red

List of Threatened Species. Recently several RLE assessments have been completed in Latin America through national and subnational initiatives based on locally described but internally consistent classifications. However, a broader strategy is needed in order to scale-up these efforts and advance toward a global assessment of the world's ecosystems. This regional strategy must address methodological and conceptual challenges in order to bridge the gaps that arise between countries due to uncertainties in unit definitions and delimitation, the use of alternative sources of data, and divergent approaches for the calculation of changing attributes of ecosystems.

We will present the results of recent developments in ecosystem risk assessment in Latin America with contrasting examples, from continental analysis based on regional vegetation units and broad ecosystem definitions, to national and sub-national assessments focused on locally described but internally consistent classifications. We will close the session with an outlook of the role that the RLE can play in international and national policy. After the presentations, we will discuss the strengths and weaknesses of the different approaches, and draft guidelines for future steps toward a better integration of national and regional efforts.

167 Conserving Cotton-top Tamarins in Colombia: An Integrated and Strategic Approach in Saving a Species

Organized by Katie Feilen / Disney's Animal Kingdom; Anne Savage / Disney's Animal Kingdom

- Understanding how biology of cotton-top tamarins informs the conservation of the species
- Evaluating the Impact of Conservation Education Programs on Knowledge Attitudes and Behaviors
- Creating Environmental Entrepreneurs Developing Alternatives to Forest Resource Extraction
- The Importance of Adaptive Management in Conservation
- Developing effective tropical dry forest protection and restoration programs in Colombia.
- Panel Discussion

Abstract: Since 1987, Proyecto Tití (PT) has used a multi-dimensional approach with scientific research, community programs, education, and forest conservation to reduce deforestation and the illegal pet trade.

Addressing the needs of communities, PT develops innovative solutions that increase the level of local partnerships and position the cotton-top tamarin (ctt) as a flagship species for conservation in Colombia, which has led to a successful program that is reversing the decline of this species in the wild. Our long-term scientific studies have provided the first information on social organization, infant development, feeding ecology, reproductive biology, and how habitat changes have influenced this species in the wild. Through our Tití Ventures program, we have developed programs that reduce the need to extract forest resources, are positively impacting the environment, and developing economic alternatives for communities. Our education programs work to engage students from elementary thru secondary school in activities that promote the conservation of ctt and program evaluations have shown that knowledge and attitudes have positively changed as we develop the next generation of environmental stewards. However, given the dramatic reduction in forest coverage in Colombia, efforts to conserve some of the last remaining forest strongholds for ctt are critical. We have worked in partnership to form three protected areas and developed restoration and reforestation efforts. These combined efforts have effectively helped us to determine that the current population of ctt has remained stable for the last five years, a remarkable accomplishment given the increasing pressures of human population growth and agricultural expansion in Colombia.

169 The role of forest plantations in biodiversity conservation

Organized by Gabriel Castaño / Universidad de Caldas; Francisco Fonturbel / Pontificia Universidad Catolica de Valparaiso

- Differential effects of native and exotic plantation on bird diversity a global assessment
- Root functional traits at Alder plantation and secondary forest
- Functional diversity of an Andean Alder forest plantation: Implications for bird conservation
- Landscape heterogeneity explains the occurrence of a frugivorous marsupial at exotic plantations
- Bird-plant mutualistic networks in natural and planted ecosystems in a highland protected area
- Pollination and seed dispersal interactions in abandoned plantations

Abstract: Forest plantations are increasing worldwide, covering thousands of hectares across countries and ecosystems. Originally forests plantations were considered as green deserts, but recent evidence showed that some plantations could provide habitat for many native animal species. However, our understanding about the actual value of forest plantations for conservation is more focused on patterns rather than processes. The purpose of this symposium is to discuss the role of productive and protective forest plantations in conservation and management endeavors. Then, we will approach the discussion from three points of view: global changes in biodiversity associated to forest plantations, ecological interactions and evolutionary processes, and functional diversity. Focusing research on the ecological and evolutionary processes underlying forest plantations would improve our knowledge about its actual and future value for conservation, going beyond than species richness.

After the presentations, we will have a joint debate to stimulate discussion on this subject between the presenters and the audience.

172-206 Status of bushmeat exploitation and trade implications for biodiversity conservation

Organized by James McNamara / The Breakthrough Institute; John Fa / Durrell Wildlife Cnsrvtn Trust; Yaa Ntiamoa-baidu / University of Ghana; and Evi Paemelaere / Panthera; Dafna Angel / Panthera

- Bushmeat Supply chain in Ghana and implications for risk of zoonotic disease spill-over to humans
- How land-use and climate define the value of commercial bushmeat harvests in Ghana
- Differences between Pygmy and non-Pygmy hunting in the Congo Basin
- Drivers of compositional changes in hunted Central African vertebrates
- Moving from data to action Sharing ownership of the research process with indigenous scientists
- Tracking the use of wild animals A global database of wild animal offtake consumption

Abstract: The exploitation of bushmeat for food and trade represents a severe ecological crisis for both people and nature. Finding solutions will require innovative interdisciplinary approaches that bring together experts from various disciplines to understand both the ecological and human dimensions of the problem. This symposium will present the latest research into the drivers of the bushmeat trade from leading researchers in the field, using long-term, decadal data sets to explore the spatial, economic and socio-ecological drivers of the trade. A diverse range of issues will be examined, from the geospatial dynamics of commercial hunting systems in Ghana, to the processes that underpin the hunting strategies of indigenous pygmy groups in Central Africa, and the driver of demand and consumption of bushmeat in Gabon. We close the session with an overview of the latest global trends in hunting-driven mammal declines that highlight the perilous ecological crisis that the bushmeat trade represents if left unmanaged. The session will bring together researchers to share new insights and methodologies and encourage the development of key partnership to provide a strategic front in seeking solutions to bushmeat harvesting.

173 The IUCN Red List as a Tool for Conservation Action in Latin America

Organized by Thomas Lacher / Texas A&M University

- The Brazilian National Species Red List and the National Biodiversity Strategy and Action Plan
- The IUCN Red List in Conservation Action: The Conservation Value of Saving the Small
- Small Mammal Assessments as a Tool for Addressing Threats to Habitat Specialists
- From assessment to conservation using The IUCN Red List of Threatened Species to protect amphibians
- Mesocarnivore Decline and their Role in Ecosystem Function
- Integrating Assessments of Climate Vulnerability into Species Assessments

Abstract: Recent research has documented the global decline in biodiversity and media outlets have communicated these concerns to the public. The emphasis has historically been on “charismatic megafauna”, primarily large mammals and birds; other lesser-known groups receive little publicity and relatively little financial investment. However many of these overlooked groups serve critical roles in maintaining functional

tropical ecosystems, and can serve as more sensitive indicators of habitat degradation and climate change. Small species also often have restricted ranges, high levels of habitat specificity, and are more susceptible to extinction than wider ranging larger species. In addition, small species are vulnerable to local scale drivers that can be ignored with larger species. Their conservation therefore will require emphasis on local, community driven actions that require interdisciplinary solutions.

We will discuss the value of the IUCN Red List as a tool for addressing conservation action, and use example assessments of species of smaller body size, smaller geographic distributions, and higher sensitivity to disturbance. We follow with the importance of addressing climate vulnerability into the assessment of these groups. We argue that our focal species have high value in designing local or national conservation plans, and can lead to more effective site-specific conservation actions.

175 Adapting to climate change effects at extreme latitudes and elevations

Organized by Molly Cross / Wildlife Conservation Society

- Climate change at high elevations and latitudes: The challenge for conservation
- Extreme Conservation Confronting Species Losses at the Edges of the World
- Climate Change Effects on Wildlife and Human Livelihoods in Arctic Beringia
- Failed Climate Stabilization of the Arctic in Response to the Actions from the COP-21 Paris Agreement
- Adapting conservation investments in high latitudes and elevations in the face of a changing climate
- Panel Discussion

Abstract: Climate change is likely to affect conservation targets across the globe, but species at extreme latitudes and elevations face particular challenges. The rate and magnitude of warming is projected to be more extreme at high latitudes, and places closer to the poles and higher in elevation often tend to be covered in ice and snow, conditions that are vulnerable to warming. Confronted with rapid and large changes in climate, plants and animals in high latitudes and on mountaintops may not have options for finding nearby areas that

are relatively cooler or more climatically suitable. These challenges also affect the livelihoods of indigenous communities in these extreme landscapes–livelihoods that can be inextricably linked to the health of wildlife and ecosystems. The dramatic changes expected from climate change in these landscapes pose serious questions about whether and how we will be able to conserve plants, animals and livelihoods–What do we need to do more of? What do we need to do differently? How do we think about our goals for nature conservation and human well-being in the face of these transformative changes? We will hear from ecologists, policy analysts and funders about the challenges that climate change poses for nature conservation and indigenous livelihoods spanning the Arctic to the Patagonian Steppe, and strategies for adjusting our conservation actions, policies and investments to cope with this accelerating threat. Then we will discuss opportunities for maintaining conservation, socioeconomic and cultural values in these highly vulnerable landscapes.

176 More Problems Come to The Ocean: Emerging Issues in Marine Conservation Science

Organized by María De Lourdes Martinez Estevez / UNAM /UCSC

- Solving the hard questions to increase the effectiveness of marine conservation
- Filling the Science-to-Policy Gaps: Boundary Practitioners in Marine Conservation
- The Global Ocean Refuge System initiative to scale up the quantity and quality of MPAs
- Maintenance of marine biodiversity through offsetting: innovative financing or risky business?

Abstract: Once considered as an infinite source of goods and services, oceans face the highest rates of extraction with the subsequent loss of species, degradation of ecosystems and the decline in the provision of services for human beings. The Marine Section of the Society for Conservation Biology promotes scientific research and public policies, supports the inclusion and diversity, encourage interdisciplinary work, and disseminates, through education, the importance of the oceans. Although our efforts seem insufficient in the face of new threats and the pace of degradation, the discussion of different approaches to solve them is a

good way to identify the future direction of the section and the improvements needed in the marine conservation realm. This symposium seeks to explore the issues that impact the effectiveness of marine conservation, and to discuss the initiatives that bring solutions to conservation problems. The session brings together specialists whose work in these subjects will give us a better understanding of different approaches to increase the long-term conservation gains, from the perspective of different actors and at different scales.

179 Biodiversity knowledge management for flora conservation in megadiverse countries

Organized by Carolina Castellanos / Instituto Alexander von Humboldt

- Institutional networks for biodiversity data management and flora conservation in Colombia
- Lessons learnt from assessing the flora of a megadiverse country
- The Urgent Need of a Comprehensive Plant Risk Assessment in Mexico
- Challenges and Perspectives for Plant Conservation a study case from Brazil
- Conservation action plans for plant conservation in a megadiverse country, Colombia
- Panel Discussion

Abstract: Every day new biological data is been produced by researchers, government institutions and an increasing number of citizens. In addition, a great realm of historical data lays in biological collections and unpublished documents. How to effectively use scientific data for biodiversity management and policy-making is a challenge been faced by many countries, especially those considered as megadiverse, due to the high percentage of species diversity they hold and the responsibility this involves?
Brazil, México, Colombia and South Africa together possess more than 100.000 species of plants and there is a great need to monitor their conservation status. In this scenario, red listings offer an effective approach to prioritize conservation actions and position threatened species in the focus of politicians and society. At present, national red listings are available in these countries and an established institutional framework for flora conservation is in place. However, there are still gaps to improve in terms of capacity building for

management and use of biodiversity information, science-policy interface and society involvement. To address these gaps, a collaborative network of biodiversity institutions is taking place, with the aim of finding solutions to common problems through knowledge and technology transfer.

185 Providing solutions to current conservation challenges with novel genetic approaches

Organized by Melanie Murphy / University of Wyoming

- Genetic Rescue Managing evolutionary processes with genomics
- Amphibian distribution connectivity as a function of rarity using eDNA and NGS
- Integrating morphology physiology and genomics to identify source populations for re-introduction
- From dung to demography Using noninvasive methods in the conservation of elephant populations
- Does Greater Sage-Grouse Habitat Quality Increase likelihood of Lek Extirpation?
- Panel Discussion

Abstract: Current conservation challenges in conservation biology include managing species in fragmented landscapes, maintaining or restoring functional connectivity, controlling hybridization risk, estimating critical demographic parameters for long-lived species on a time-line relevant for conservation and alleviating negative consequences of inbreeding. Interdisciplinary approaches that incorporate cutting-edge genetic tools can address these key questions in conservation science. Our symposium will address a range of conservation questions from single species conservation to landscape-level preservation of biodiversity and from genes to communities. In addition, we present a broad-range of contemporary genetic methods that can be leveraged to address the greatest conservation challenges of our time: environmental DNA, non-invasive sampling, novel analytical approaches and next-generation sequencing. We will demonstrate how genetic approaches can inform and catalyze conservation action with local, national and international examples.

186 Using interdisciplinary frameworks to address coral reef conservation

Organized by Fraser Januchowski-Hartley / Institut de recherche pour le développement; Dominique Pelletier / IFREMER

- How identifying deviance from expectations can inform reef conservation and management
- Tradeoffs and Synergies in MPA impact for Social and Ecological Objectives
- National scale land-sea planning for Papua New Guinea
- A business case for coral reef conservation
- Effective Dispersal of Caribbean Reef Fish is Smaller than Current Spacing Among MPAs
- Panel Discussion

Abstract: Coral reefs are an ecosystem under great threat, exposed to numerous complex stressors. Complicating how stressors can be tackled, is the tendency to investigate or address factors such as ecology, physiology, governance, poverty, gender, culture and social hierarchies in isolation, often treating other aspects of coral reefs as a "black box", with little acknowledgement of the dynamics operating outside of the direct field of interest. To address and solve the challenges these stressors pose in an equitable manner that ensures long-term success, coral reef conservation needs to expand its repertoire of tools beyond reserves and fisheries restrictions. This will only be achieved through a truly inter-disciplinary approach acknowledging the dynamics and complexities of each field. This symposium aims to bring together researchers and practitioners currently working on coral reefs from social, biological and conservation science backgrounds, to discuss what the current challenges and opportunities are in coral reef conservation, and how we can leverage interdisciplinary research to most effectively address these. The presentations will focus on practical, interdisciplinary, applied work, setting the context for a panel discussion and dialogue. This dialogue will specifically involving conservation practitioners and researchers that approach reef conservation predominantly from the biological or from the social, as well as inter-disciplinary researchers to identify opportunities, and to share experiences of stumbling blocks and how these can be best avoided.

191 Challenges and opportunities in using a biocultural diversity conservation framework

Organized by Fabrizio Frascaroli / University of Zurich; Rick Stepp / University of Florida

- The Importance of Ethnobiological Knowledge to Conservation
- Changing Tides Evolution of Community-Based Conservation towards Spiritual Ecology
- Intangible values meet monetary constraints economic implications in biocultural conservation
- Biocultural approaches to sustainability indicator development opportunities and challenges
- Panel Discussion

Abstract: This symposium explores challenges and future directions in linking the conservation of biological and cultural diversity. The notion of biocultural diversity has been gaining traction for over a decade. Among else, it provides a robust and empirically tested framework for integrating environmental and human dimensions in conservation. Yet, biocultural approaches still face a number of difficulties. Firstly, there are no definitive methods or guidelines for translating a biocultural framework into actual conservation initiatives. Further, the success of biocultural conservation often depends on involving groups that have been long underrepresented in conservation, like indigenous people and faith communities. This requires specific strategies of engagement and a level of disciplinary integration that is still uncommon for most scientific and implementation projects. Securing institutional support and funding for interdisciplinary projects also remains problematic, in spite of growing attempts to redress this issue. Finally, legal and policy mechanisms need to be further developed to promote biocultural conservation schemes at different scales. The symposium reviews these and other challenges through selected presentations. Enough time is also allocated to discussing responses and strategies that can advance biocultural approaches in research and implementation. The future of conservation largely hinges on creating broader coalitions and delivering long-lasting solutions. Biocultural approaches offer critical opportunities in this sense, whose timeliness and potential must be seized.

196 More People Come to The Ocean: Data on Inclusivity in Marine Conservation Science

Organized by Clare Fieseler / UNC Chapel Hill

- The State of Interdisciplinarity in Marine Conservation Science: A multi-method review
- Solving Ocean Problems through Open Innovation: the Blue Economy Challenge
- The influence of hidden cognitive diversity on the productivity of conservation teams
- Building an Inclusive and Diverse Community to Protect the Oceans
- A Case Study of Increasing Diversity in the American Elasmobranch Society
- The New Code: Inclusive Safe Conservation Science Thrives Under Codes of Conduct

Abstract: Science is inherently a hierarchical community but it doesn't follow that access to conservation science, dialogue and professional opportunities should be restricted to the same organizational structure. It is well-documented that diversity and inclusivity improves the quality of scientific research. If our conservation science spaces are inaccessible, then the work that we do to support Earth's biodiversity will suffer as well. At a time when societies, such as the Society for Conservation Biology, are working to increase diversity within membership, we must do whatever we can to understand the state of diverse opinions, people, and spaces in our field. We must also understand where barriers exist and how they can be removed. This symposia, organized by board members of the Marine Section of the Society of Conservation Biology, aims to present new data and case studies about inclusivity trends among marine conservation science collaborations, professional engagement, and advocacy arenas. The five data-driven presentations serve as a springboard for a 15-minute discussion on how to address knowledge gaps on conservation science inclusivity with scholarly research and SCB programming. The symposium complements a subsequent symposium organized by the SCB-Marine Section, "More Problems Come to The Ocean: Emerging Issues in Marine Conservation Science."

208 Critically examining 'success' - Session I: Exploring the politics of how 'success' is constructed

Organized by Josie Chambers / University of Cambridge; Robert Fletcher / Wageningen University; Chris Sandbrook / UNEP World Conservation Monitoring Centre

- Examining success in Water Fund Conservation Arrangements in Ecuadors Andes
- The pursuit of win-win success for forests and people in the Peruvian Amazon
- Adaptive social impact management for conservation
- Conservation through a communication frame: valuing the journey and the destination
- Achieving no net loss with development led conservation? Win-win logics and performing success
- Panel Discussion

Abstract: Among conservation projects, the narrative of 'win-win' success for people, biodiversity, and climate change is commonplace. Yet, efforts to probe these notions of 'success' often expose unintended impacts and local contestations, such as the leakage of deforestation into other areas and exacerbated social inequalities. These contradictory accounts emerge from divergent practices for prioritizing and interpreting outcomes in ways which best serve particular aims. This three-part symposium seeks to critically examine how and why conservation project 'success' narratives can become unrepresentative of local realities, and how interdisciplinary approaches can help improve accountability.

Session I focuses on the underlying political dynamics, common practices and assumptions which can facilitate a significant mismatch between interveners' perspectives of project 'success' and local realities. The speakers explore the potential to reframe outcome-focused narratives of 'success' as broader on-going adaptive socio-political processes to improve their local accountability.

207 Critically examining 'success' - Session II: How accountable success stories are to local realities

Organized by Gert Van Hecken / University of Antwerp; Josie Chambers / University of Cambridge

- Community participation in co-managed protected areas in Madagascar: from success to reality
- The impact of benefit sharing programs on perceptions of development and conservation sentiment
- Understanding the drivers and impacts behind the adoption of land sharing and land sparing models
- Local communities' perception on protected area management: Case of Yankari Game Reserve Nigeria
- Dissecting win-wins through the reinterpretation of PES 'success stories' in Nicaragua
- Panel Discussion

Abstract: Among conservation projects, the narrative of 'win-win' success for people, biodiversity, and climate change is commonplace. Yet, efforts to probe these notions of 'success' often expose unintended impacts and local contestations, such as the leakage of deforestation into other areas and exacerbated social inequalities. These contradictory accounts emerge from divergent practices for prioritizing and interpreting outcomes in ways which best serve particular aims. This three-part symposium seeks to critically examine how and why conservation project 'success' narratives can become unrepresentative of local realities, and how interdisciplinary approaches can help improve accountability.

Session II explores how well intervention narratives of 'success' and local realities align in practice, drawing on empirical evidence from Payment for Ecosystem Service projects and community-based conservation initiatives across Latin America and Sub-Saharan Africa. The speakers seek to develop understandings of 'success' which move beyond superficial 'panacea' views and are rooted in the particularities of heterogeneous socio-ecological contexts.

200 Critically examining 'success' - Session III: Inter-disciplinary approaches to measuring success

Organized by Jeremy Brooks / The Ohio State University; Daniel Miller / University of Illinois; Josie Chambers / University of Cambridge

- Interrogating contemporary debates about the role of poverty alleviation in conservation
- Follow the money: analyzing funding views of conservation success through country-scale mapping
- Predictive Proxy Indicators to Assess the Long-Term Impacts of Forest Conservation Funding
- Evaluating conservation outcomes: can we develop a standardized approach for measuring success
- Panel Discussion
- Panel Discussion - across triple symposia (208, 207, 200)

Abstract: Among conservation projects, the narrative of 'win-win' success for people, biodiversity, and climate change is commonplace. Yet, efforts to probe these notions of 'success' often expose unintended impacts and local contestations, such as leaked impacts into other areas and exacerbated inequalities. These contradictory accounts emerge from divergent practices for prioritizing and interpreting outcomes in ways that best serve one's interests. This three-part symposium seeks to critically examine how and why conservation project 'success' narratives can become unrepresentative of local realities, and how interdisciplinary approaches can help improve accountability.

Session III explores how conservation success has been operationalized by scholars and practitioners, conservation organizations, government agencies, and donors. Particular attention is paid to tradeoffs and synergies among outcomes and efforts to develop practical indicators. Talks in this session will review various success measures and discuss proxy indicators. This session concludes with a discussion about the challenges with operationalizing notions of 'success' which are accountable to local realities in conservation research and practice.

209 Wildlife Crime Bridging the Gap Between Conservation Science and Criminology Part I

Organized by Justin Kurland / Rutgers University

- A Spatio-Temporal Analysis of Albatrosses Exposure to Illegal Long-lining Hooks in the CCSBT
- Disparities in Primate Vulnerability to Hunting and Implications for Managers
- Preventing human-elephant conflict in forest areas of Tamil Nadu India The role of electric fences
- Crime Script for the Illegal Wildlife Trade of Peru
- Teasing apart environmental and social influences during group movement in free ranging animals
- The Spatial Pattern of Redwood Burl Poaching Incidents: Implications for Prevention

Abstract: Wildlife crime—and the various forms of poaching in particular—threatens both local and global populations of particular species with extinction. To date, those with backgrounds in the biological sciences have conducted the majority of the research on wildlife crime. However, theories and methods for addressing illegal behavior from the social and mathematical sciences have much to offer in examining wildlife crimes. More specifically, the session will explore how criminologists, and those from other disciplines, might improve conservation efforts by analyzing various types of poaching to determine where, when, how, and what is being targeted. The papers seek to identify patterns and the underlying opportunity structures involved that make them amenable to prevention. This is Part I of a series of symposia and a workshop on wildlife crime that will be cross-branded by the social sciences working group. Part I focuses on the spatio-temporal aspects of flora and fauna poaching, Part II focuses on illegal trade, trafficking and consumer demand, and Part III focuses on human-animal conflict. Across the three sessions we have secured a 50:50 speaker gender ratio, with representation across five continents, a mix of academics and practitioners, and a Stockholm Prize winner (the Nobel Prize of criminology).

211 Other Effective Area-Based Conservation Measures Advances in Colombia

Organized by Carlos Arturo Saavedra Sr. / Wildlife Conservation Society

- Conservation agreements and private conservation mechanisms in Colombia. Fundacion Natura
- Advances on the identification of other effective area-based conservation measures in Colombia
- Species Conservation Programs and their contribution to other effective area-based conservation mea
- Contribution of purchased public lands to biodiversity conservation in Colombia.
- Panel Discussion

Abstract: The Aichi target 11 specifies that by 2020 at least 17 per cent of terrestrial and inland water and 10 per cent of coastal and marine areas are conserved through effectively and equitably managed ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures and integrated into the wider landscapes and seascapes. However other effective area-based conservation measures OECM was not yet clearly defined by the time this target was adopted impeding the countries to report advances on this respect. Therefore efforts lead by IUCN have been focused on providing guidelines on the meaning of the term which have been recently released and are under evaluation with case studies from all over world. The aim of the symposium is to present the advances on this topic in Colombia through the analysis and discussion of several case studies identified in coordination between governmental institutions privates and non-profit organizations. These studies show the diversity of conservation initiatives and their particular contexts allowing to test OECM criteria for identify the need for adjustments and recommendation to the guidelines.

212 Integrating economics into biodiversity conservation practice.

Organized by Diego Lizcano / The Nature Conservancy

- Co-benefit cost-savings through optimized source water protection activities: The case of Colombia
- A New Methodology for Freshwater Compensation in Colombia
- Forest Monitoring in Colombia top-down and bottom-up approach

- Basin-level trade-offs between conservation and hydropower development in the Magdalena River
- Hydropower development and fish conservation in Colombia
- Integrating climate change in fisheries sustainability in northern South America rivers

Abstract: Economic incentives are a key tool for biodiversity conservation. Governments usually promote policies based on such incentives to mitigate or halt biodiversity loss, e.g. biodiversity offsets and payment schemes. However, careful planning in the design and implementation of incentives is required to ensure that economic benefits reach conservation targets, making their implementation particularly challenging. Furthermore, studying and understanding economic incentives frequently requires a departure from the more traditional conservation biology approaches that have historically dominated our frameworks for investigating, understanding, and managing conservation problems. The proposed symposium brings together multiple study cases, mainly from Latin America, where economic benefits have been integrated into biodiversity conservation strategies. It will provide a unique forum for cross-disciplinary learning among conservation practitioners, policy makers, and researchers that apply a diverse set of tools to merge biodiversity conservation and economics.

213 The future of conservation: one movement or many

Organized by Janet Fisher / University of Edinburgh; George Holmes / University of Leeds; Chris Sandbrook / UNEP World Conservation Monitoring Centre

- Understanding conservationists perspectives on the new-conservation debate
- What do conservationists think? Results from the global Future of Conservation Survey
- Opportunities and Risks for Conservation in the Millennial Generation
- The future of conservation: insights from contentious debates on the illegal wildlife trade

Abstract: The last few years have seen the re-emergence of heated debates among conservationists regarding the rationales, objectives and approaches of conservation. These debates reveal the strong divergence of

views within the conservation community, and have triggered secondary discussions about how to handle such differences of opinion and objective. Some have argued that conservation should be an inclusive movement that embraces diversity whilst maintaining a united front. Others have argued that diversity of views demands open discussion and 'agonistic pluralism', and even possibly the fragmentation of the wider movement into multiple movements and foci. This symposium will bring together voices in this debate to consider new empirical evidence regarding the views held by conservationists and the extent to which shared ways of thinking can be identified amongst a 2015 study of ICCB participants and the findings of the broader 'Future of Conservation' survey. We will use this as a platform to discuss the merits and demerits of conservation fragmenting or coalescing and we will hear a perspective about the importance of the conservation movement incorporating and fostering diverse perspectives. We will also examine lessons from particular areas of conservation (the illegal wildlife trade) and a large scale study of the conservation attitudes and behaviours of Millennials in populous countries. The symposium will comprise five speakers drawn from different disciplinary backgrounds, and will conclude with a moderated debate involving the audience, which will allow for the wider discussion of issues raised during the presentations.

214 Conservation in an Urbanizing World: How is the science and practice of conservation changing?

Organized by Marit Wilkerson / USAID

- Defining Urban Achieving a Common Understanding for a Variable Concept
- The Urban Wildlife Information Network An Integrated Approach to Urban Wildlife Research
- Constructed Wilderness: reorganizing land use policy in Chennai, a metropolitan city, India
- How do we plan for and implement inclusive urban conservation
- People management and biodiversity in cities.
- Where to from here? Discussion led by Urban Conservation WG & guest speakers

Abstract: For the first time in human history, the proportion of the world's population living in urban centers exceeds the proportion living in rural areas. This shift to an urban world is challenging our current concepts of biodiversity conservation like never before. The basic premises of Western-based notions of conservation shift with protecting biodiversity in urban areas. This phenomenon is changing how we can do conservation science, why we do conservation science, and for what and who we do conservation science. The goals of this symposium are to explore the ways that practitioners approach conservation challenges in urban areas and to spark a much-needed conversation within the conservation community that will inform future conservation research, policy, and planning in urban environments. Presentations will span these novel challenges, including topics such as resilient cities, human-wildlife coexistence, urban socio-ecological systems, changing definitions of wildness, and more. Co-developed by SCB's Urban Conservation Working Group, this symposium complements the symposium "Conservation in an Urbanizing World: Conservation science and application in urban systems." Together, these will facilitate an informative conversation about urban conservation such that the audience feels equipped to use these concepts in their work. Additionally, we intend to develop a research agenda that addresses the novelty of conservation in an urbanized world and also detail policy pieces of direct use to the conservation community and allies.

216 21st Century Science Leadership in Conservation Biology

Organized by Mark Burgman / The University of Melbourne

- Symposium introduction science leadership shapes on the ground conservation
- Integrating vision and tenacity to advance and apply science
- Smith Fellows Program identifying potential and developing leadership skills to increase impact
- Conservation science for policy
- Notes from the campaign trail: Science leadership in an advocacy organization
- Panel Discussion

Abstract: Strong science leadership will be needed to meet the conservation challenges of the 21st century. Previous discussions amongst the conservation biology community have recognized that conservation biology requires two types of leaders, those who focus on effective conservation science via developing state-of the art science, and those leaders who integrate science into policy, management, and society-at large. While there has been attention paid to the latter, there has been little discussion on how to develop leaders who can identify where conceptual developments are needed for producing actionable science. This is unfortunate as science is a cornerstone of conservation biology, as the initial goals of the discipline were to "provide principles and tools for preserving biological diversity" (Soule 1985). This symposium brings together leaders of upper levels of government agencies, non-government organizations, and academia to discuss principles and case studies in scientific leadership. It starts with defining scientific leadership and identifying the problems of using traditional business leadership goals, strategies, and targets in the arena of science. Subsequent speakers will then define the essential elements of science leadership, recognizing that science leaders are often not in "command-and-control" situations where they are assigned top-down control of an organization. Scientific leadership can come from the middle of organizations or can be grassroots. Developing effective science leaders is essential but underappreciated. We believe that this symposium will be of great interest to the Conservation Biology community as strong science leadership can act as a force multiplier, amplifying scarce resources to be most effective in the accumulation of knowledge that can be applied to preserve biodiversity.

219 Tenure security and nature conservation A driver or solution for conservation

Organized by Yuta Masuda / The Nature Conservancy;

- The land tenure gap and its influence on socio-ecological conditions
- Mapping the Global Governance Context for Land Tenure Security
- Untangling the effects of formalized tenure on forests and communities in the Ecuadorian Amazon
- A field experiment testing interventions to promote conservation practices on rented croplands
- Systematic Review Indigeneity communal tenure and socio-ecological conditions on forested lands

- Panel Discussion

Abstract: Land tenure insecurity can hinder conservation and human well-being goals, especially in many developing and tropical regions where conservation concerns are often highest. Land tenure security underpins the success many multilateral policy initiatives, including Reducing Emissions from Deforestation and Forest Degradation, the United Nations' Sustainable Development Goals, the Convention on Biological Diversity's Aichi Biodiversity Targets, and the International Platform for Biodiversity and Ecosystem Services. The conservation sector is now thinking about whether and how to better incorporate land tenure strategies into their work with an eye towards increasing conservation and human well-being. Yet the ways in which land tenure security interacts with conservation initiatives, large and small, remains poorly understood and implemented. Greater clarity and evidence is needed to unpack the complex relationship between tenure security, conservation, and human well-being. Insights from this work have important implications for understanding when and how tenure insecurity drives, or is a solution to, conservation challenges. This symposium draws on scholars and practitioners from diverse fields to spur new ideas on how incorporating tenure security can advance conservation science, practice, and policy.

220 Cost-effective tools to support conservation decision-making for Protected Areas in Latin America

Organized by Isaac Goldstein / Wildlife Conservation Society; Viviana Ruiz-Gutierrez / Cornell Lab of Ornithology, Cornell University

- Conservation decision making for protected areas in Latin America
- Decision making for the conservation of Andean bears using presence-absence data
- Occupation models and sustainable hunting at the Tamshiyach-Tahuayo Conservation Area Peru
- Landscape-scale conservation and management of protected areas in Ecuador
- Generating occupancy baselines for monitoring the impact on wildlife of development projects
- Monitoring within an adaptive management framework for informing conservation actions in Colombia

Abstract: Protected areas cover around 14% of the planet's land surface, and are still considered as one of the most effective strategies for conserving the world's biodiversity and natural capital. Latin America has the most land within protected areas in the world- there are 1,949 officially declared protected areas playing a key role in the climatic stability of the region. Recent work by Leisher et al. (2013) found that an estimated 45% of protected areas in Latin America suffered significant land and forest degradation from 2004-2009, and increasing trends in pressures and threats to these critical lands are not showing much signs of declining. To best address the complexity of issues threatening protected areas, we need cost-effective, scalable tools that can provide robust information that is directly linked to the decision-making infrastructure of the protected areas themselves. Most often, protected area staff and officials in charge of designing and implementing management plans for protected areas do not have access to cost-effective, robust approaches to collect and generate much needed information. The end result is a mismatch between the information that can be reliably be collected with the information that is needed to best guide conservation and management practices on the ground. The session will bring together a wide range of experiences in cost-effective monitoring to inform best management practices for protected areas in Latin America. The specific objectives of this symposium are to (1) present examples of applications of cost-effective monitoring tools to generate information that is directly linked to information needs of management plans, and (2) discuss how to best scale and improve lessons.

222 Co-benefits as incentives for conservation in human-dominated landscapes

Organized by Peter Arcese / University of British Columbia; Nina Morrell / University of British Columbia; Amanda Rodewald / Cornell University

- Reducing carbon emissions and attaining co-benefits from timber production landscapes in Borneo
- Robust strategies for carbon policies to maximise biodiversity co-benefits
- High complementarity in biodiversity riparian and carbon values tax-shifting pays in three ways
- Environmental co-benefits of habitat conservation for Andean bears

- Payments for Ecosystem Services Rife with Problems and Potentialfor Sustainability
- Discussion

Abstract: Global protected areas have expanded rapidly in pursuit of the Convention on Biodiversity Aichi Target 11 to conserve a representative 17% of terrestrial and inland waters ecosystems, and Target 12 to prevent the loss of threatened species. But business as usual reserve selection and historic biases for unproductive landscapes still limit efficient investment in conservation. In Canada, for example, a country where roughly 89% of land mass is 'crown land', meeting CBD targets has been particularly challenging despite doubling the extent of protected areas since 1995. Unfortunately, new protected areas on public lands have done little to protect Canada's 600 at-risk species, because ¬≥60% of them occupy human-dominated landscapes where protected areas remain rare and small on average. This problem is common to virtually all nations given the confluence of human development, ecosystem productivity and native species richness. Thus, a key challenge to conserving global biodiversity is to develop tools to incentivize conservation where competing interests and values are at play. This symposium highlights novel approaches to strategic planning in human-dominated landscapes to emphasise multiple values and the development of markets for conservation co-benefits to overcome social and economic barriers to conservation.

224 Global Connectivity Conservation Designation and Design

Organized by Gary Tabor / Center for Large Landscape Conservation

- Using science to produce fuzzy maps of regional connectivity and unfuzzy corridor conservation plans
- The Emerging Practice of Connectivity Conservation - Planetary Conservation for the 21st Century
- Transboundary connectivity initiative in a mosaic of landscapes shaped by humans
- Connectivity conservation areas governance in Costa Rica
- From Yellowstone to Yukon Connectivity and large-landscape conservation
- Panel Discussion

Abstract: With Earth's human population on a trajectory to grow by 3 billion people in the next 50 years, the cumulative impact of human activity on the planet requires a new approach to conservation. Ecological connectivity conservation links natural and semi-natural landscapes, mitigating habitat fragmentation and enabling migratory flows essential to a fully functioning, resilient system. Yet, there is still little practical application to ensure ecological connectivity is protected. Now, two solution sets are emerging as opportunities to implement connectivity conservation on a global scale.

First, The International Union for Conservation of Nature (IUCN) has launched a new Connectivity Conservation Specialist Group (CCSG) within its World Commission on Protected Areas. The membership-driven CCSG is charged with developing a new conservation designation for the world's governments to adopt−Areas of Connectivity Conservation (ACC).

Second, ecological connectivity may be preserved through mitigation and strategic design of linear infrastructure, including roads, rails and pipelines. As part of the ACC process, a Transport Working Group has been formed to provide direction towards mitigating infrastructures' impacts on wildlife movement and mortality. This symposium will discuss the implementation of the ACC conservation designation and offer contemporary research and perspectives on connectivity mitigation through wildlife-friendly infrastructure development.

225 Illegal Wildlife Trafficking: finding synergies to combat a multifaceted threat to biodiversity

Organized by Alex Diment / Wildlife Conservation Society; Adrian Reuter / Wildlife Conservation Society

- Setting the scene: An overview of Wildlife Trafficking across Latin America
- What doesn't work against wildlife trafficking: learning from Asia
- What the War on Drugs and Prohibition can tell us about countering the illegal wildlife trade
- Development of a National Strategy to Combat Wildlife Trafficking: the Peru experience
- Integrated technology for improving effectiveness of management of poaching in protected areas

- Building capacities to improve counter wildlife trafficking efforts in Peruvian borders
- Evaluating the Effectiveness of Efforts to Combat the Illegal Wildlife Trade

Abstract: For most threatened species, overharvesting is the primary threat, with hunting for the illegal wildlife trade the predominant risk for many iconic species. This threat is particularly acute in Asia, but is increasingly spreading to become a global concern. Effective measures to address the trade chain, from supply through to demand, are urgently needed. This Symposium will take a wide-ranging approach to addressing illegal wildlife trade and trafficking, sharing approaches, reflections and key considerations across Asia and Latin America, from diverse sectors and a range of levels. Evidence-based interventions and methods will be presented, to identify effective means for reducing the impacts of wildlife trade and trafficking on biodiversity and wild populations. Presenters will take an interdisciplinary and inter-agency approach, and include scientists and criminologists, NGO professionals, and government officials.

226 Lost in translation? Navigating complex policy processes to deliver conservation outcomes

Organized by Megan Evans / The University of Queensland

- Understanding the governance of biodiversity offsetting information institutions politics
- Doing conservation differently
- Public participation in conservation matters: A global evaluation
- Reframing food research and policy to connect ecological and social outcomes in Southeast Asia
- The role of message framing in delivering effective threatened species conservation programs
- Panel Discussion

Abstract: Translating policy into conservation outcomes is typically a messy and difficult process, regardless of the issue at hand or the location of concern. Existing policy systems are political and value-laden, and involve multiple actors with a range of motivations and interests. This means that scientific evidence tends

not to feed into policy and practice in a neat, linear fashion, making this process challenging and often frustrating for scientists to navigate. Conservation scientists have in recent times sought to better understand how to integrate science into policy, with research on evidence-based and evidence-informed conservation, and the science-policy interface now commonplace. The current public debate about entering a "post-truth" era makes it even more crucial for conservation scientists to understand the socio-political systems in which we all operate. An interdisciplinary lens which combines political science, public policy, economics and other conservation social and natural sciences can be extremely helpful to better understand and engage with the policy process. This symposium seeks to: 1) highlight some of the complexities of engaging with and influencing policy, and where barriers to achieving conservation outcomes can exist; 2) illustrate these complexities with case studies on biodiversity offsetting, polar bear and climate change conflict, and food systems in Southeast Asia; and 3) provide some lessons drawing on these examples and the public policy literature on what are the conditions in which these barriers may be successfully navigated to lead to positive conservation outcomes.

232 Advances in assessing effectiveness of conservation policies Latin America

Organized by German Forero-Medina / Dr.; Daniela Miteva / Duke University

- The dual roles of protected areas in conserving migratory birds and supporting communities.
- Tools to protect and promote Ecosystem Services within certified forest management Pilots in Peru
- Assessing the role of PAs in the conservation of vertebrates in Latin America on the ground data
- The role of property rights property rights in resisting forest loss in the Yucatan Peninsula

Abstract: Latin America hosts a large number of species and is of primary importance for carbon sequestration and maintaining global precipitation patterns. At the same time it continues to experience rapid deforestation and ecosystem degradation due to agricultural and mining expansions. As pressures on biodiversity continue in Latin America, an array of potential solutions are adopted and implemented by governments and the civil society. To counteract threats that cause deforestation, habitat degradation and

species loss, a host of policies including devolution of rights to local communities, protected areas, forest concessions, forest management and supply chain certification have been adopted. Many of these do not include rigorous monitoring to assess their effectiveness for biodiversity conservation. For this reason, only limited evidence exists of the impacts on the ground. This session will bring together researchers employing a variety of methods ranging from rigorous impact evaluations employing big geospatial data to studies reliant on in-depth field data obtained from surveys on the ground to studies exploiting citizen science. The objectives of this symposium are (1) to present recent advances on an array of tools that can be used to assess effectiveness of conservation interventions and support on the ground conservation, and (2) to provide a forum to discuss potential ways to integrate big-data analyses with ground data, in order to improve conservation outcomes on the ground.

233 Monitoring invisible places: Eco-acoustics in marine and freshwater environments

Organized by Simon Linke / Griffith University

- Underwater eco-acoustics as a monitoring tool in freshwater environments
- A spatio-temporal sampling problem Variation in river soundscapes complicates ecosystem monitoring
- Rich composition and curious dynamics of a tropical wetland soundscape
- Where the Noisy Things Are Examining spatio-temporal patterns in underwater soundscapes
- Analysing detection probabilities of baleen whales to develop passive acoustics monitoring protocols
- Acoustic environment context to understand the ecology of marine biodiversity in the Alaskan Arctic

Abstract: This interdisciplinary session will focus on acoustic monitoring in rivers, lakes and oceans - environments in which biodiversity and condition monitoring has proven even more difficult than their terrestrial counterparts. Traditional methods of aquatic survey techniques a) bear risks to the health of the organisms, b) introduce bias and c) only asses populations at single times instead of continuously and d) incur

high costs, particularly in remote areas. Acoustic monitoring - a noninvasive, continuous real-time technique can address all of the above issues.

So far mainly discussed at specialist conferences, this session will review progress and challenges in this new field, with three talks each about marine and freshwater projects from France, Ireland, Australia and Africa. The session is pitched at both the growing number of eco-acoustic researchers and practitioners in SCB, but also at conservation practitioners who want to learn more about using underwater acoustics as a monitoring tool.

After an introduction into freshwater eco-acoustics, we will discuss spatio-temporal sampling problems for freshwater monitoring - a talk later matched by a marine presenter. The remaining three talks introduce examples in automatic detection of single aquatic species, soundscape monitoring as well as study design - three key considerations in bioacoustics. All major groups of soniferous aquatic organisms will be covered: Cetaceans, fish and invertebrates.

235 Conservation and storytelling in a post-truth world

Organized by Alex McInturff / University of California, Berkeley; Justin Brashares / Univ of Ca, Berkeley; Lauren Withey / UC Berkeley

- A new place for stories: obligations and opportunities for storytelling in conservation
- Joining science and storytelling to communicate research on Yellowstone National Parks gray wolf
- Tete are ne nne (Ancient things are today): Integrating local narratives into African conservation
- Geo-journalism: enhancing conservation stories with data collection and visualization
- The Local Perspective: Forest management via indigenous visions
- Reconciling Conservation Narratives: Experience of COCOMASUR Colombia with REDD+

Abstract: The surprising political events of 2016 have demonstrated the power of narrative so emphatically that many claim we now live in a post-truth world. In this context, conservation biology must embrace new opportunities and obligations. A growing contingent of scientists has recognized opportunities to engage new

audiences and access policymaking through storytelling. Meanwhile, interdisciplinary work has revealed powers of stories that oblige us to broaden our thinking: stories shape and express worldviews that have ecological and political consequences, influence the way stakeholders judge conservation, and define the field's priorities and methods. In this symposium, we explore storytelling as a framework in which practitioners, scientists, and stakeholders can better communicate with diverse audiences, approaches, value systems, and responsibilities. We will learn from those using narrative to broadcast scientific findings in politicized landscapes, journalists using new media to engage with stakeholders and public figures, and conservation practitioners telling stories that facilitate public engagement. Representatives of groups often unheard in the conservation world will demonstrate how translating both scientific and culturally-embedded notions of conservation through stories generates better outcomes for all. This symposium will help conservationists build tools to effectively and ethically navigate a new post-truth world.

237 What are we willing to lose: reframing adequacy to achieve conservation outcomes

Organized by Hugh Possingham / The University of Queensland; James Watson / Wildlife Conservation Society; Caitlin Kuempel / University of Queensland

- How much protected area does tropical nature need: A case study from Singapore
- Lessons from the Wild West: Benchmarking biodiversity in the Great Western
- Identification of extinction and colonization debts in tree species of Southern South America
- Are marine protected areas tackling threats?
- The Bottleneck and the Breakthrough a theory of biodiversity conservation in the Anthropocene
- Adequacy: conservation science's dark secret

Abstract: The term adequate is defined as "satisfactory or acceptable in quality or quantity", and in conservation terms, often refers to the ability of biodiversity features (i.e. species, habitats, etc.) to persist into the future. Adequacy remains one of the most challenging conservation principles to implement and

measure. Growing interest in campaigns which advertise that "nature needs half" expose the fact that we still do not know how much is enough to conserve the world's biodiversity. It is both remarkable and alarming that such a fundamental question remains not just unresolved, but so poorly answered.

It is certain that anything less than 100% of effectively protected area will be inadequate to halt biodiversity loss at all levels. However, 100% protection is not a practical or realistic goal, particularly since nearly all area on earth has been impacted by human use. Instead of thinking about how much area we need to protect, which has a very high likelihood of falling short, why are we not asking: what can we absolutely not lose? By using this approach we will be forced to ask the equally important and equally difficult question: what are we willing to lose? Considering that under current conservation commitments (e.g. Aichi Target 11) we are destined to lose 83%, it is important we start to consider what this might entail.

With the proposed series of talks, we aim to 1) synthesize the existing state of adequacy in conservation science, 2) discuss key issues for making decisions about gains and losses for biodiversity, and 3) explore the implications of reformulating the current approach to adequacy on halting biodiversity loss.

243 What are the triggers for people to choose a sustainable lifestyle

Organized by Karla Pelz Serrano / Universidad Autónoma Metropolitana Lerma; Rurik List / Universidad Autonoma Metropolitana; Patricia Manzano Fischer / UAM Lerma

- The current trend in conservationists lifestyle Are we congruent with what we preach
- Researching beliefs to design behavioral change interventions a path towards sustainability
- Opportunities and challenges for sustainability in small-scale fisheries embedded in protected areas
- The impact of Environmental Education Programs on Wildlife Population
- Panel Discussion

Abstract: In the last 100 years humans have damaged the Earth more than ever since Homo sapiens started its evolutionary path. However, besides the technological advances from this last century, there is one primary factor of environmental degradation which can be addressed at the individual level: the lifestyle. Earth will

not be able to sustain the lifestyle most people is having or aspiring to have. It is well documented that if we do not change our daily habits, if we do not reduce our ecological footprint, upcoming generations or even current ones will not have access to the same resources we have today. As conservationists, we have a huge responsibility of being role models for people that do not have the information we do. We need to be consistent with what we preach. If we, conservationists do not have a more sustainable lifestyle, what can we expect from people that are not aware of the consequences of our daily choices? We need to understand which are the triggers that promote changes in people to adopt more sustainable lifestyles. The objective of this symposium is to explore different scenarios or cases, from rangeland, fisheries, economics, consumerism and psychology, in which conservation strategies have worked to change people's choices for different and more sustainable practices. To try to understand what are the strategies or tools used to change people's actions towards a more sustainable lifestyle. This will be a forum to discuss what are the approaches that have worked in specific cases, and how can be applied in a daily life.