

ABSTRACT BOOK

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**MISSION
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CHOOSING
NEW PATHS FOR
CONSERVATION**

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home is also an immensely important forest habitat with significant scientific and conservation value because of its high biodiversity and its history of long-term research and successful conservation initiatives (Wrangham & Ross 2008). The growing neighboring human population presses hard against the park's boundary with poachers entering illegally to snare small ungulates for bushmeat. While not the intended targets, chimpanzees' hands and feet become entangled in wire snares. In response to the long-term negative effects snaring has on chimpanzees, the Kibale Chimpanzee Project started the Kibale Snare Removal Program (KSRP) in 1997. At any given time, an estimated 15,000 snares are set in KNP, resulting in a 3.7% risk of a chimpanzee being snared each year (Wrangham & Mugume 2000). To date, two individuals in the study population have died from snare wounds and historically around half have lasting snare injuries, including a young male who lost both of his feet. Data collected by KSRP has been analyzed in relation to the Kanyawara chimpanzees' snare injuries. The initiation of KSRP is associated with a significant increase in the length of time between observed chimpanzee snare injuries, indicating that the patrol efforts are offering meaningful protection to the chimpanzees. Snares are now more commonly found near the park boundary and outside of the Kanyawara chimpanzee home range. Human interventions to remove snares from injured chimpanzees resulted in fewer permanent injuries than when no intervention attempts were made. While snares can cause serious physical damage, in general they offer much lower known mortality risk relative to orphaning, disease, and aging.

151-LANDSCAPE-SCALE PROTECTION OF BIODIVERSITY AGAINST THE DEVASTATING PLANT PATHOGEN PHYTOPHTHORA CINNAMOMI

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N/A

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Phytophthora cinnamomi is one of the most destructive plant pathogens worldwide. This invasive species leads to changes in species composition, plant community structure and ecosystem function. In south-western Australia invasion by the pathogen has resulted in a permanent loss of biodiversity in more than one million hectares of native plant communities. In recent years, novel approaches to preventing the spread of the pathogen, reducing the impact of the disease, and containment or eradication of infestations have been developed through applied research within conservation management projects. The work has focussed on biodiversity assets and specific sites identified as the highest priority for protection. Management strategies were tailored for characteristics of each disease centre and the hazard/threat profiles of individual priority protection areas. The projects

used a catchment-based strategy that aimed to reduce the risk associated with the four modes of pathogen spread; autonomous spread in surface and subsurface water; root-to-root transmission between plants; animal vectoring; and human vectoring. Management techniques have included fine-scale surveying of infestations, in-situ baiting, hydrological modelling, hydrological engineering, fencing to exclude animal vectors, installation of root barrier membranes, destruction of host plants, and soil fumigation. Over four years of monitoring at the containment and eradication sites within the Fitzgerald River National Park (an International Biosphere Reserve) and Cape Arid National Park has demonstrated that these techniques can be successful, or show promise of success with further work. These strategies and techniques have broad applicability in the management of *P. cinnamomi* and other soil-borne plant pathogens for a range of other scenarios and are currently being employed where most needed, to protect threatened species and ecological communities.

SYMPOSIUM 163: CAN ECOSYSTEM-BASED ADAPTATION ADDRESS THE ADAPTATION NEEDS OF SMALLHOLDER FARMERS? INSIGHTS FROM SMALLHOLDER COFFEE AND SUBSISTENCE FARMERS IN CENTRAL AMERICA

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In many regions, climate change is having significant adverse impacts on the agricultural production and livelihoods of smallholder farmers, with important consequences for global food security.. Helping smallholder farmers adapt to climate change has therefore become a priority for many of donors and governments. Ecosystem-based Adaptation (EbA, defined as the use of ecosystem services and biodiversity as part of an overall adaptation strategy to help people adapt to the effects of climate change) is one approach that could help smallholder farmers, yet there is still limited knowledge on whether EbA can meet the adaptation needs of smallholder farmers. Here, we provide an overview of what EbA means in the context of smallholder agricultural production. Drawing on expert surveys, field work and household surveys of smallholder coffee and subsistence farmers in Central America, we provide examples of EbA strategies that are suitable for smallholder farmers, characterize how farmers are implementing these strategies, and provide insights into the



perceived advantages and drawbacks of different practices for reducing farmer vulnerability. Our study highlights that many agricultural practices that smallholder farmers already use (e.g., agroforestry systems, soil conservation practices, live fences) can be considered EbA, as they are based on the management of biodiversity and ecosystem services and help and enhance the resilience of agricultural systems. Most smallholder farmers are aware of the relative benefits of EbA practices, but also acknowledge important constraints, such as the cost of setting up the practices and maintenance, and limited financial, technical and political support. Scaling up the use of EbA through targeted government policies, extension services and farmer programs could not only help smallholder farmers adapt to climate change, but also ensure healthy, sustainable agroecosystems that sustain local livelihoods.

LESSONS LEARNED IN MARINE PROTECTED AREA ESTABLISHMENT? THE CASE OF KOH RONG ARCHIPELAGO MARINE PROTECTED AREA, CAMBODIA

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For the last several years, Cambodia has been creating a large-scale marine protected area around the Koh Rong archipelago. Called the Koh Rong Archipelago Marine Fisheries Management Area (KRA MFMA), it has already seen several markers of progress including gathering biophysical data for use in zoning decisions, conducting community consultations on draft zoning maps, conducting private sector consultations on zoning and management, and creating a provincial management committee and a technical working group. 2015 is expected to bring the official governmental proclamation of the MFMA. The Cambodian government has indicated a desire for and movement towards establishing a representative MFMA network across its coastal provinces. Like with the Koh Rong Archipelago MFMA, future MPAs in this network will use community fisheries – marine areas where communities are empowered to govern their own fisheries resources – as the foundation of the effort. This presentation presents research which analyzes the enabling conditions and barriers to the establishment of the KRA MFMA. Data for this research was gathered through participant observation, semi-structured interviews with key stakeholders from across sectors, and a collaborative workshop (to be) held in May 2015. Preliminary results indicate that a governmental willingness to move away from historic mindsets, involvement of communities and the private sector in zoning consultations, and creation of targeted governance mechanisms all played an enabling role in the KRA MFMA's establishment. Meanwhile, barriers to establishment included a lack of intergroup trust and difficulty in balancing different perspectives on shared governance. With Cambodia

on the cusp of an expansion in marine management, this presentation begins a productive dialogue with the wider conservation community with the aim of informing Cambodian marine conservation planning.

SYMPOSIUM 24: USING SOCIAL NETWORK ANALYSIS TO UNRAVEL COMPLEXITY IN AGRICULTURAL BIODIVERSITY GOVERNANCE

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In 2013 the EU launched the new EU Green Infrastructure Strategy to make another attempt to stop and possibly reverse the loss of biodiversity until 2020 (EC 2013), by connecting habitats in the wider landscape. This means that conservation would go way beyond current conservation practices to include landscapes that are dominated by conventional agriculture, where biodiversity conservation plays a minor role at best. Thus, for exploring the options of the green infrastructure implementation we consider it important to identify, analyse and include a) actors at the implementation levels (regional and local levels), b) other affected policy sectors and c) the vertical and horizontal interplay, between actors at different levels and from different policy sectors. We used the Net-Map tool for our analysis as it combines measures of attributes of actors – especially concerning their perceived influence and their goals – with structural measures. Further it provides vast information on institutional backgrounds and governance settings in particular for agricultural policy. The investigation started with interviews with key informants on the regional level in the German Bundesland Saxony-Anhalt such as regional planners, representatives of relevant federal ministries and continued at the local level with farmers and other members of the community. Concerning network concepts, multiplexity is considered important to uncover the diverse relations that connect actors and centrality and associated different roles provide important insights in combination with the notion of agency. Last but not least, the concept of cognitive social structure allows conclusions about diverging network perspectives and resulting learning opportunities.

TOURISTS' PREFERENCE FOR SENSE OF PLACE AND LESS CHARISMATIC BIODIVERSITY: UNVEILING NEW OPPORTUNITIES FOR CONSERVATION

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