DICE 2020 CONFERENCE

#DICECON20

Welcome to the DICE 2020 Conference

Thank you to all the DICE members who've agreed to showcase their research & special thank to our session chairs:

Prof. Erik Meijaard, Dr Janine Robinson, Dr Jacob Bentley, Matthew Hatchwell, Dr Matt Walpole, Dr Helen O'Neill, Prof. Rachel McCrea, Dr Glynn Davies, Dr Hazel Jackson, Dr Maria Voigt, Dr Phoebe Maund, Prof. Jon Hutton, Dr Rob Fish, and Annette Lanjouw

DICE
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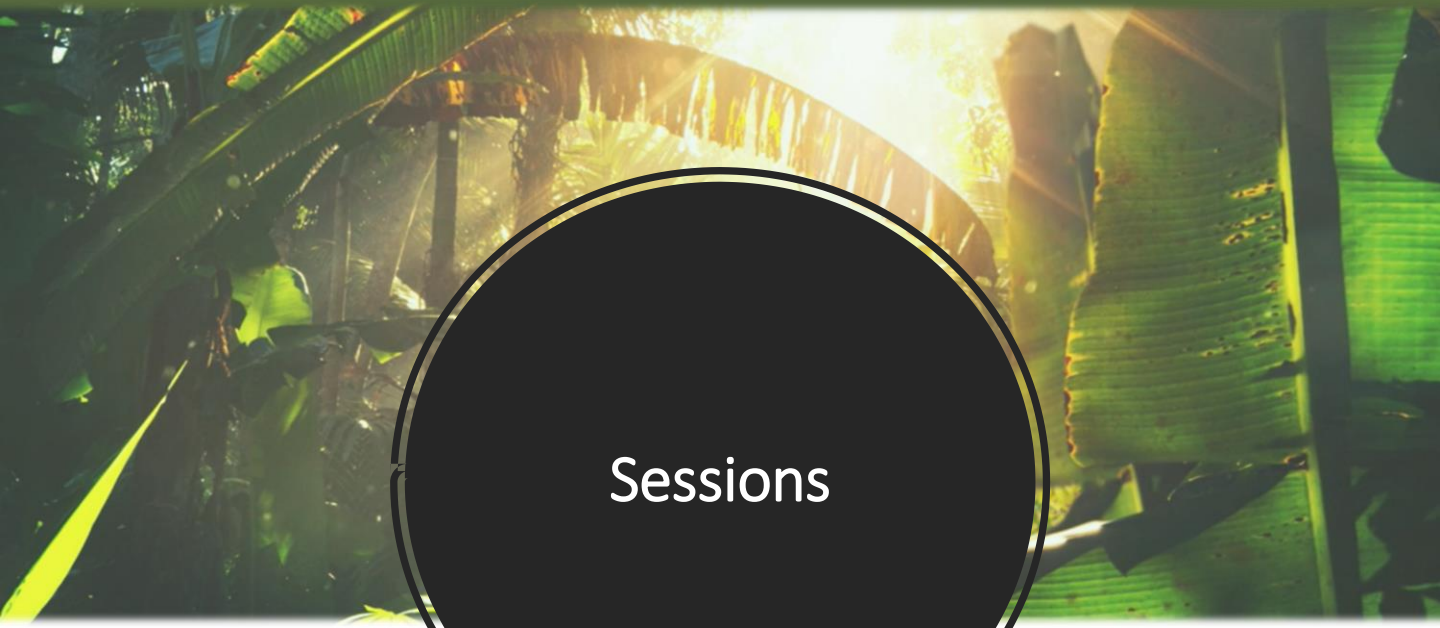
The Queen's Anniversary Prizes
For Higher and Further Education
2019



Sessions

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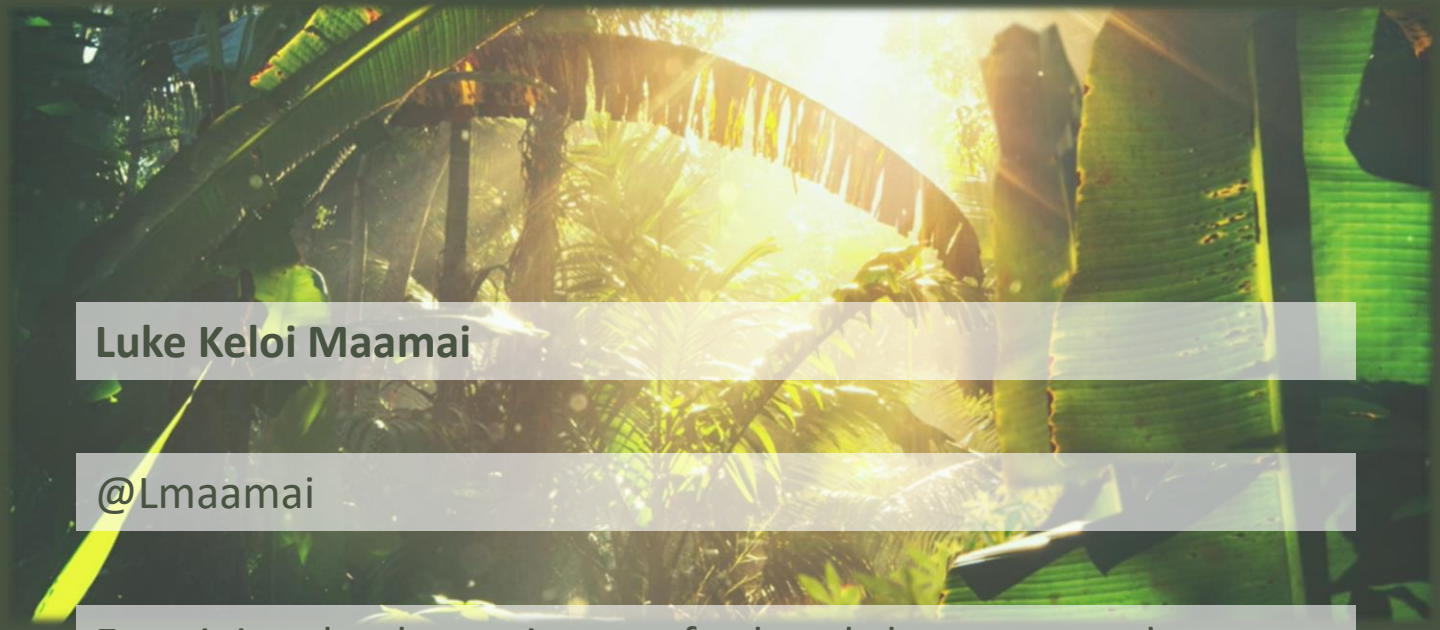


Luke Keloi Maamai

@Lmaamai

Examining the determinants of cultural change towards motivations in lion killing among the Maasai

Due to increased cases of lion killing in the Amboseli ecosystem, the lion population has been affected over the years. Different conservation organization has integrated some of the appropriate cultural practices into lion conservation but still, lions are being killed by the local people. Therefore, my study will investigate why are the killing happening and the motivations behind the level of intolerance

The Maasai people have acted as the historical stewards of the land and wildlife of the Amboseli Ecosystem for centuries. Maasai culture and its accompanying traditions compose one of the most well-studied anthropological systems in the world. Currently, Maasai culture is facing more challenges than ever before. As a result of the changes in Maasai culture, the conservation of African lions (Panthera leo) is facing increasing challenges. Lion distribution and population density are being affected due to increase in conflicts between lions and livestock, change in land use, and the adaption of new techniques in lion killing (e.g. variations of the distribution of poison to carnivores). Historically the relationship between Maasai and lions were tenuous, where lion killing was a rite of passage by warriors and a way to defend the community against dangerous animals. Therefore, understanding the cultural context of Maasai in relation to their tolerance and motivations toward lion killing is essential to mitigate the current trend of lion killing.

Adam Roberts

@ConservationAR

Indigenous populations, livelihoods and deforestation

Having worked with two NGOs alonsgside indigenous communities in Mondulkiri, one focusing on elephants, one on gibbons, both on the preservation of the forest environment & indigenous culture, I have seen and am watching first hand how deforestation impacts the cultural ways (among many others) of the indigenous communities here in Mondulkiri, Cambodia.

Ben Galea

@GaleaEcology

The impact of transportation and service corridors on primates: knowledge, gaps, and mitigation

Most primate populations across the globe are declining, some rapidly and facing the imminent risk of extinction. Amongst the many threats to primates, the expansion of transportation and service corridors – roads, railways, and utility and service lines poses one of the greatest risks to their populations. Roads and railways can penetrate through pristine land and extend for many hundreds of kilometres, whilst utility and service lines may intertwine into complex networks with significant densities. Predicted to increase dramatically in conjunction with the rising human development and demand for inclusive economic growth in many developing countries without appropriate regulation and environmental impacts assessments (EIAs), the construction of transportation and service corridor infrastructure results in a variety of impacts. Habits are lost and fragmented, barriers to movement and resources are established, and primates are mortally wounded by vehicle collisions and electrocutions. As research into these impacts and associated mitigation measures increases, a wide variety of approaches, findings, and recommendations are present throughout literature. This necessitates the need for a systematic review of extant literature, synthesising the impacts, mitigation measures, and knowledge gaps.

Dr Diogo Veríssimo

@verissimodiogo

Using culturomics to monitor attitudes towards wildlife at a global scale and in real-time

While there is a long tradition of efforts to monitor the biological aspects of wildlife at a large scale, the human dimensions have received less. With the mainstreaming of the internet, we can now gain a global understanding of how different wildlife is perceived across the globe. In this talk I will showcase how online sources can be used to gain large-scale insights into human and wildlife relationships, as well as the challenges that these methods present.

Prof. Keith Somerville

@KSAfricaHack

Hyenas and humans - despised and demonised

My research - to be published as book in 2021- looks at the history (from Pleistocene to present) of hyena-human coexistence and conflict. It concentrates particularly on the growth and persistence of myths about hyenas, the demonising of the animal and its resulting low conservation status. From before Aristotle through the the Lion King and beyond, hyenas are depicted as cowardly, evil, thieving and filthy. Think again.

Caitlin Melidonis

@cait_melidonis

Measuring tolerance for elephants using the Wildlife Tolerance Model (WTM)

Human-wildlife conflict (HWC) is a global phenomenon that impacts both the development and conservation sectors. Therefore, a multidisciplinary approach is needed in order to mitigate the effects of HWC for people and wildlife. Understanding human tolerance and attitudes towards wildlife is considered the key to developing effective and sustainable species conservation plans with long term benefits for both humans and species.

The Wildlife Tolerance Model (WTM) developed by Kansky et al. (2016) will be used as a framework for measuring tolerance as it is a useful and broadly applicable tool for cross-species and cross-cultural comparisons. My current MSc project compares the tolerance of the UK general public with the tolerance of local communities in Zambia and Namibia towards living with elephants. In collaboration with the Southern Tanzania Elephant Program (STEP) and thanks to a Rufford Small Grant and funding from Elephant Family, I will be gathering data from local communities in the Kilombero Valley in Tanzania to identify how key factors contribute towards community tolerance of elephants. These data will also be analysed using the WTM and will aim to improve STEP initiatives locally.

Brian Crudge

@BrianCrudge

Interdisciplinary Conservation of Bears in Southeast Asia

Southeast Asia is home to two species of bear: the Asiatic black bear (Ursus thibetanus), and Malayan sun bear (Helarctos malayanus). Both species face multiple threats throughout their ranges, including widespread habitat degradation and loss through logging and agricultural conversion, as well as unsustainable hunting for illegal wildlife trade, particularly for Traditional Medicines. In order to effectively address the multifarious drivers of these threats and reverse the decline in populations, it is necessary to adopt a collaborative, multi-pronged and interdisciplinary approach. Free the Bears is a leading bear conservation organisation, with field programmes in Cambodia, Laos and Vietnam. Core activities designed to improve the conservation status of bears include: facilitating effective law enforcement through rehabilitation of confiscated animals; illegal wildlife trade research; conducting pioneering consumer research and implementing behaviour change interventions; monitoring of wild bear populations; ex-situ conservation research; and strategic planning. Ensuring a sustainable future for bears in Southeast Asia will only be possible through the application of both social and natural science approaches – as championed by DICE.

Siri Ockerman

@SiriOckerman

Effectiveness of international wildlife trade interventions and policies: A systematic review

International wildlife trade (IWT) is a huge business with a growing demand threatening both the survival of species as well as the human livelihoods that may depend on them. Following increased international attention in recent decades, a broad range of interventions have been established to regulate IWT - ranging from the Convention on International Trade in Endangered Species (CITES), to engaging local communities in protecting wildlife, to awareness raising campaigns in key consumer countries. Outcomes of these interventions are diverse, affecting species conservation as well as human well-being. However, an evidence base is lacking and there is a need to review the effects of these policies and programmes. The aim of this project is to synthesise the literature and studies on IWT interventions and policies to create an up-to-date evidence map highlighting the nature of interventions and outcomes to improve our knowledge base and identify main learning insights, as well as major gaps that represent future research priorities. Through a systematic review, this project will further evaluate the effectiveness and direction of impact of IWT interventions. This will hopefully enable evidence-based decision making for future efforts and identify promising areas for investment to ensure a sustainable international wildlife trade.

Elysia Davies

@ElysiaScarlett

Breeding Cycle and Habitat Selection in Frigatebirds on Aldabra Atoll, Seychelles

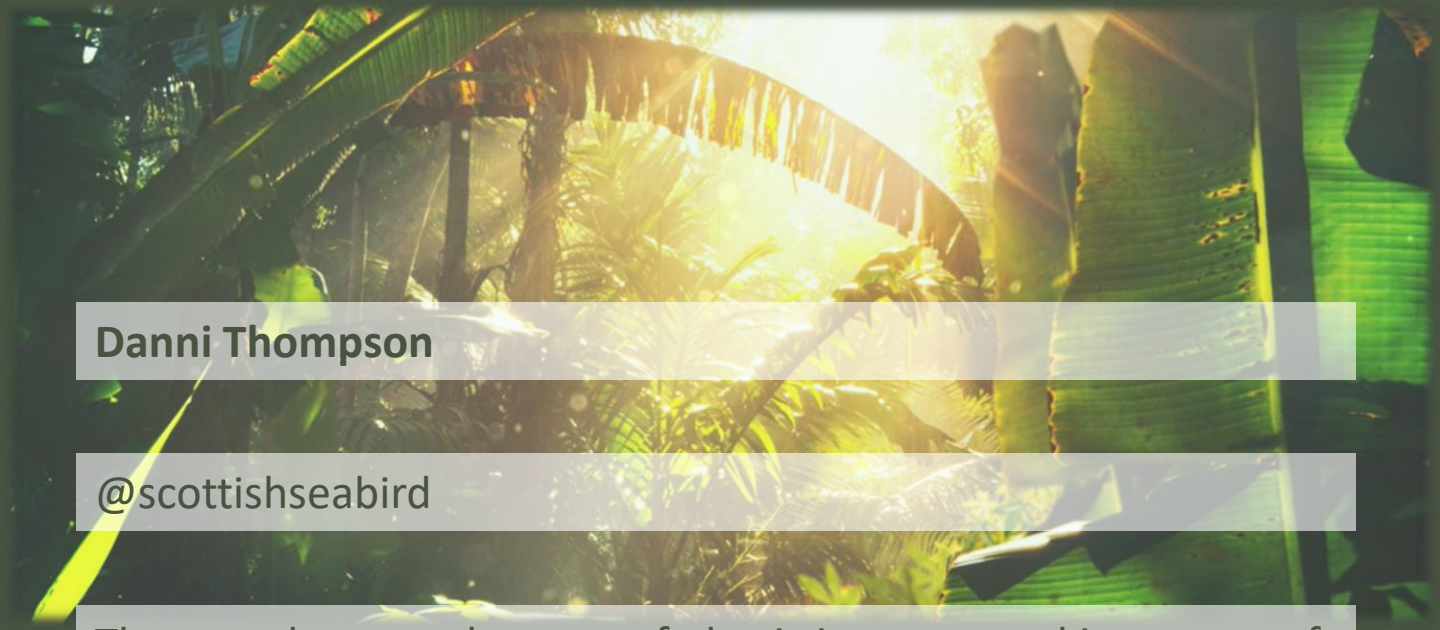
Seabirds are the most vulnerable avian group and are an important indicator for marine ecosystem functionality. Aldabra Atoll in the Seychelles, a UNESCO world heritage site, has the largest frigatebird breeding colony in the Indian Ocean. The frigatebird population has been surveyed annually since 2011. This data is crucial to understand if the population is being impacted by invasive species, over-fishing, and increasing extreme weather events due to climate change. This research explores the breeding cycle of the two species of frigatebirds (Fregata minor and F. ariel) across their four colonies on Aldabra and investigates habitat selection in colony location. The results indicate that F. minor has a consistent and synchronous annual breeding pattern whereas F. ariel does not. The difference in the two species is suggested to be due to differences in parental care and nest disturbance by lone males. Location of breeding colonies appears unaffected by habitat type, but habitat type plays a substantial role in nest location selection within colonies. The results of this will help to inform the long-term monitoring and protection of the frigatebirds on Aldabra. In particular, in deducing the ideal time to survey the population.

Micaela Grove

@MicaelaGrove8

Possible sources of bias in beach-cast data for Māui dolphins (Cephalorhynchus hectori maui)

The small, declining population of Māui dolphins, the smallest and rarest of all marine dolphins, is restricted to a small stretch of coastline on New Zealand's North Island. The Department of Conservation (DoC) has established a detailed and long term dataset on Māui dolphin mortalities, including necropsies which help identify cause of death, e.g. entanglement in fishing gear and toxoplasmosis. However, there may be geographical biases that determine where deceased individuals are likely to become beach-cast, including bathymetry and shore exposure. There may also be seasonal/beach characteristic biases in the recording rates, referring to certain locations being more frequented by people. Only beach-cast individuals can provide an insight into causes of death and the corresponding locations where those particular risks might occur. The project report will use the DoC dataset, ArcMap and Google Earth to analyse specific data (bathymetry, accessibility etc.) from beach-cast locations and other sites in order to determine where one would and would not expect to see beach-castings, and locations associated with a particular cause of death. The report will add data from unexplored perspectives to help identify biases in existing data with a view to increasing the effectiveness of management strategies to slow the population decline.



Danni Thompson

@scottishseabird

The prevalence and source of plastic incorporated into nests of five seabird species

There is little evidence documenting the prevalence of plastic nest incorporation for different seabird species and populations, and even less detailing the source of such debris as nesting material. This study presents a baseline dataset on the presence of plastic in the nests of five seabird species on Lady Isle, Scotland using a novel and repeatable methodology for quantifying plastic incorporated into nests. Plastic was found in 24.5% to 80% of nests of all species. We analysed pellets of regurgitated material and the spatial distribution of herring gull nests containing plastic in the context of the tide and nesting habitat. Differences in the types of plastic found in pellets and nests suggests that plastic incorporated into herring gull nests was not derived at foraging sites and likely collected from the local environment. Targeted beach cleans before the breeding season could help minimise the quantity of plastic available to herring gulls.

Jack Slattery

@jackinthewild93

Modelling Possible Breeding Territories for the Reintroduction of Red-billed Chough to Kent

There is growing interest in the reintroduction of the red-billed chough (Pyrrhocorax pyrrhocorax) to Kent because it has a strong cultural connection with local people. Three individuals appear on the University of Kent Coat of Arms. Before a reintroduction goes ahead, it is important to ensure that the release area meets the ecological requirements of the focal species. During this study, potential nesting and foraging habitat were analysed, and then a qualitative rule-based modelling approach was used to identify possible breeding territories in which potential foraging habitat is in close proximity to potential nesting sites. In addition to 298,371 ha of potential foraging habitat, there is 219 ha of coastal cliffs, 440 ha of inland rocks/quarries and 123 Scheduled Monuments for choughs to constructs their nests. Depending on the model input parameter set, there are between 53 and 92 clusters of possible breeding territories. Many of which are large enough to support at least five breeding pairs. These could be used as suitable release areas for the reintroduction of choughs to Kent, but further analysis of physical habitat characteristics, future management strategies and opportunities to control limiting factors, such as resource availability and predators, is required beforehand.

Michaela Lo

@Mic_Lo1

The relationship between forests and freshwater fish consumption in rural Nigeria

Nigerians depend on fish for maintaining diverse and healthy diets. Fish are a key source of protein and micronutrients, both of which are important for healthy diets. Some research has shown that forests provide important ecosystem functions that support the productive capacity and sustainability of inland fisheries. Our study aims to empirically assess the relationship between forest cover around rivers and fish consumption. We use data from the Living Standards Measurement Survey (LSMS) and spatially merge household and village data with forest cover and river maps. We estimate the relationship between forest cover around rivers and average village fresh fish consumption, while also accounting for other socio-economic and geographical determinants. We find that that the density of forest cover around rivers is positively and significantly correlated with village consumption of fresh fish. Our results suggest that forests influence the consumption of fresh fish by improving the productivity of inland fisheries and increasing the availability of fish. Aquatic habitats tend to be overlooked in debates on land use and food production, and yet can be critically important sources of nutrient-rich foods that are limited in rural diets in developing countries, particularly for the poor. Clearing forests for agriculture in order to produce more agricultural crops might have the unintended consequence of reducing another important food source.

Joseph Oakley

@JosephOakley94

Quantifying the impacts of agriculture on biodiversity

In tropical regions, agricultural expansion is the biggest driver of habitat degradation and biodiversity loss. However, it is important for meeting increasing food demands, and poverty alleviation. The area of tropical land used to grow crops increased by 110% between 1961 and 2018, with rice and maize taking up the most area. While many crops expanded steadily during this period, soybean production increased disproportionately by 4540%. The biodiversity value of croplands usually depends on how ecologically and structurally similar they are compared to their natural counterparts, in addition to proximity to undisturbed habitats. Many studies suggest that species richness decreases in response to agricultural conversion in most taxa, although there are some exceptions. Agricultural landscapes are generally characterised by widespread, common, and generalist species, and the loss of disturbance-sensitive, endemic, and threatened species. Most previous studies are limited to particular taxa, crops, or geographic regions. In this study, a meta-analysis will be conducted to compare the magnitude of the impacts between different crops upon biodiversity in the tropics. The findings could contribute to determining the conservation values of different types of agriculture, and be incorporated into the modelling of agricultural expansion scenarios to influence future policy development and conservation management.

Dr Joe W Bull

@wildbusiness

Evaluating biodiversity conservation impact in social-ecological systems

When evaluating the impact of a biodiversity conservation intervention, a 'counterfactual' is needed. Counterfactuals are alternative system trajectories in the absence of intervention, and comparing observed outcomes against the counterfactual allows the 'impact' (change attributable to the intervention) to be determined. There are many plausible counterfactuals, given they can include multiple drivers of biodiversity change and be defined on various spatiotemporal scales.

Conservation interventions always take place in social-ecological systems (SES). Evaluating conservation impact within an SES means taking into account the different counterfactuals assumed by different actors. Different counterfactuals will give rise to perceived differences in the impacts of an intervention, leading to disagreement about the effectiveness of the underlying approach. No single counterfactual is definitively 'correct' for assessment, so multiple evaluations of intervention efficacy could be considered justifiable.

Therefore, we propose the need to calculate the 'sum of perceived differences', which captures the range of impact estimates associated with different actors within an SES. The sum of perceived differences gives some indication how closely actors within an SES agree on conservation impact. We illustrate the concept using a set of global, national and regional case studies, and discuss options for minimising the sum.

Sarah Humphrys

@hhhisarahhh

Fading Fady: Changing Respect for Customary Institutions in Eastern Madagascar

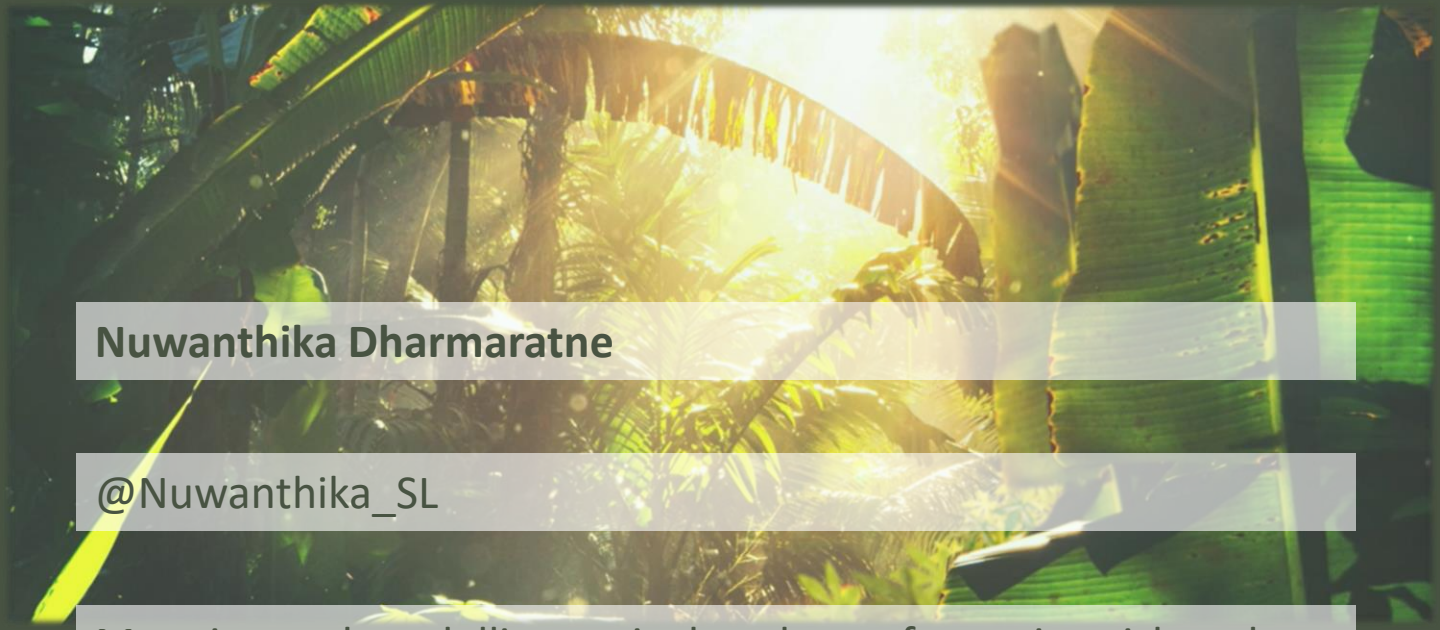
Customary institutions, meaning the unwritten rules governing behaviour, can contribute to biodiversity conservation, particularly in areas lacking capacity to enforce formal conservation rules. In Madagascar, for example, social taboos (fady) prohibiting certain behaviours have played a part in protecting some species and habitats. There is, however, considerable debate regarding the conservation potential of customary institutions, with suggestions that they might be eroding. This study, based on data from 63 semi-structured interviews conducted in eastern Madagascar, aimed to investigate whether and how customary institutions here are changing, and to explore the drivers of this change. Respect for fady appears to be decreasing in this area, reported by the majority of respondents (n=52) in addition to many respondents (n=23) admitting to abandoning fady themselves. Christianity and modernisation seem to drive this change by undermining the perceived legitimacy of fady, reducing unquestioned acceptance and impacting social behavioural norms. This process is contributed to by migration and intensified by poverty, altering the perceived costs and benefits of rejecting fady. An understanding of local peoples' customary institutions, whether and why these are changing and how this shapes interactions with the natural environment, is vital for designing and implementing locally-sensitive and effective conservation projects.

Prof. Bob Smith

@AnotherBobSmith

Developing a national-level system to inform land-use policy and practice in the UK

The United Kingdom is going through a step-change in conservation policy, as shown by the Defra 25 Year Plan. This calls for new Nature Recovery Networks, 'environmental net gain' when building houses and infrastructure, better access to nature, and an environmental land management system to replace farm subsidy schemes post-Brexit. Achieving this will involve navigating many national- and local-level trade-offs, but we lack a system to guide us through such decision-making processes. In this presentation I advocate a new approach based on systematic conservation planning, the most widely used method for guiding where best to implement competing land-use actions. I outline a set of steps that would bring together experts and stakeholders to: (1) identify and map important conservation features, such as species, ecosystem types and ecological processes, and (2) set UK-level targets for each feature, together with subsets of targets at the relevant regional- and sub-regional level. This should be an iterative process, repeated every 3 years, that would also fund work to fill data and research gaps. The resulting maps and targets should underpin the proposed Nature Recovery Network, net gain and agri-environment programmes, helping ensure decision-making is efficient, repeatable, transparent and equitable.



Nuwanthika Dharmaratne

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Mapping and modelling agricultural transformation risk and ecotourism potential in Maputaland

Identifying and addressing competing land use objectives is an integral part of effective conservation planning, especially in landscapes that are shared between people and nature. The Maputaland Center for endemism is situated within a globally important biodiversity hotspot in southern Africa which is also home to some of the poorest communities in the region. A Conservation Planning System (CPS) has been developed for Maputaland to help guide ongoing conservation activities. However, the inclusion of human driven land use practices in the CPS is limited. Therefore, this study builds on the current CPS by highlighting the importance of human driven land use objectives in conservation planning with special focus on agriculture and ecotourism. The study first employs land use change analysis and statistical modelling techniques to identify areas that are most at risk of agricultural transformation and the factors contributing to it. Secondly, it utilises multi criteria decision analysis techniques with spatial modelling to recognise areas with high ecotourism potential in the region. The results of this study is expected to help conservation planners and local authorities to prioritise and select appropriate conservation areas and methods as well as to empower local communities to maximise benefits from the landscape sustainably. planning with special focus on agriculture and ecotourism.

Will Hayes

@NatureWilling

From the Neotropics with Birds: Urban Dwellers

The neotropics are rapidly urbanising, with natural ecosystems being replaced by human-modified habitats such as towns and cities. Urban planners need better information about urban habitats to maintain or enhance biodiversity in towns and cities. Urban habitats can support diverse communities of plants and animals. However, most of our knowledge has been derived from studying temperate ecosystems. The aim of this study was to identify the habitats and features of a neotropical urban environment that are important in supporting bird diversity and conservation.

Gwili Gibbon

@gwiligibbon

Using elephants as a surrogate for landscape connectivity

Conservation is fundamentally a spatial pursuit centred on human decision-making. Protected areas remain a cornerstone of such efforts, aiming to protect both biodiversity and nature's contribution to people, commonly termed ecosystem services. These protected areas need to be connected to larger systems to ensure the resilience of species and ecosystem processes to environmental and climate change. Connectivity conservation must therefore be achieved through holistic spatial and strategic planning, informed by interdisciplinary approaches at appropriate scales. We applied such an approach using elephants as a surrogate to understand how policy relevant scenarios of future land-use would affect connectivity dynamics in Kenya's Central Highlands. We identified and evaluated nine linkages, providing immediate recommendations for connectivity conservation. We then predicted how these dynamics could change by the year 2030. Connectivity was shown to weaken with increased agriculture and, to a lesser degree, silviculture, and improve with reforestation and the establishment of grassland linkages. Current land-use plans were shown to have marginal and mixed results, with more pronounced mixed results from managing the landscape for water and forest resource conservation. Considered together, the scenarios capture how synergies and trade-offs between different land-use priorities would affect landscape connectivity.

Dr David Gaveau

@GaveauD

The Borneo and Papua Atlas: Geo-platform tracks development on remote islands, as-it-happens

More Agribusinesses are promising to rid their supply chains from deforestation. As companies try to clean up, we need watchdogs, participation and civil engagement to make sure companies are delivering on their promises.

We built the CIFOR Atlas so you check the deforestation footprint of agribusinesses because no one wants their food and other product to be the cause of forest destruction. This geo-platform offers the opportunity to verify the activities of > 100 oil palm, pulp and paper and mining companies and their subsidiaries on the islands of Borneo and New Guinea. The most recent update detects forest loss weekly in concessions and other land units to allow for rapid identification of deforestation and who might be responsible as it happens. It brings this information at users' fingertips via impactful time-lapse animations and a dynamic graphical user interface.

The CIFOR Atlas is an open platform for companies, governments, researchers, advocacy groups, journalists, and anyone interested in deforestation and in tracking corporate actions. It is used to carry out planting permit reviews, concession monitoring, environmental impact assessments, conservation planning. It gives everyone the opportunity to review the evidence for themselves and think about the potential impacts of their consumption habits on the rainforests of Southeast Asia.

Shanna Challenger

@specieswithshan

Redonda Reborn: Rapid impacts of invasive mammal removal on a remote Caribbean island ecosystem

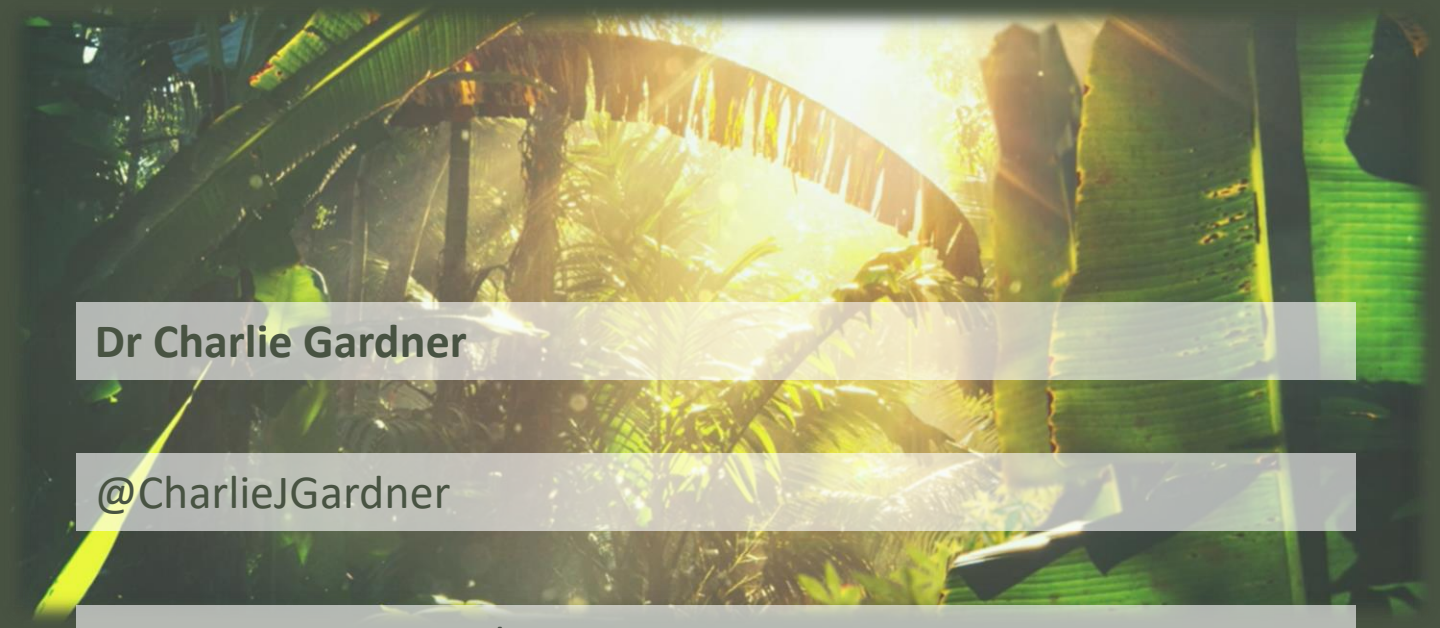
Worldwide, invasive species pose the largest threat to native wildlife, especially on islands. Feral goats and black rats have been incrementally introduced to islands as humans explored the world's oceans. Without predators or competition, these animals can easily distort an ecosystem - dramatically demonstrated on Redonda, the third island of the tripartite state of Antigua and Barbuda. Redonda is recognised as a Key Biodiversity Area and supports globally significant populations of fauna and flora, including nesting seabird colonies and critically endangered lizards. A herd of feral goats and over 6,000 black rats altered the island's once lush forests to a moonscape devoid of vegetation. An intensive eradication effort in 2017 included monitoring that documented the changes in wildlife and vegetation. Populations of lizards have increased three-fold, and species of landbirds not seen in decades have returned. Even in these early stages, Redonda's restoration demonstrates the value of invasive species removal for rewilding and restoring ecosystems to ensure long-term species sustainability and survival. As the recovery continues, Redonda has the potential to be a widely-used example of a Caribbean island restored to its state before human colonization, and can inspire other islands with invasive species issues to do the same.

Trishant Simlai

@trishantsimlai

Negotiating the Gaze: People, Power and Conservation Surveillance

In recent years, the use of new and existing surveillance technologies in the practice of conservation has increased rapidly. This includes the use of drones, camera traps, satellite and thermal imagery for activities such as wildlife monitoring, anti-poaching and law enforcement. In many respects surveillance is constitutive of modern society, especially in urban spaces where its use has been widely discussed. In the conservation context, surveillance intensifies the demarcation of spaces between nature and people by intensifying territorialization , and it has been suggested that it could impact the wellbeing of local stakeholders in various ways. However, the social and political implications of surveillance technologies in conservation and natural resource management remain an underexplored field of empirical inquiry. Drawing from 11 months of ethnographic fieldwork in the Corbett Tiger Reserve, India, this paper unpacks and explores the social and political implications of a wide range of surveillance technologies on local communities and on conservation governance. It is argued that these technologies are used to establish multiple surveillance regimes, resulting in several environmentalities and in the production of disciplined people, wildlife and spaces. These regimes exacerbate already prevalent social injustices and structural inequalities of gender, caste and class discrimination, resulting in mistrust and negative perceptions of local communities towards conservation policies.



Dr Charlie Gardner

@CharlieJGardner

Science is not enough in an emergency

Climate and conservation scientists have warned society and its leaders of the need for radical change for decades, but these warnings have not resulted in the required actions. In an essay published in Nature Ecology and Evolution, @clairefrwordley and I argue that, given the urgency of global environmental crises, scientists must go further in order to effect change, and take part in peaceful civil disobedience. We briefly review the evidence for the historical effectiveness of non-violent direct action and encourage scientists to join or support the recent upsurge in environmental civil disobedience. The presentation will conclude with discussion of this essay's impacts, as it became one of the top 1000 most talked-about scientific papers ever online.

Dr Sara Oldfield

@sarabotanical

Global Tree Assessment

There are around 60,000 tree species and an estimated 20 percent are threatened with extinction. Experts worldwide are assessing the extinction risk faced by each tree species as a basis for conservation action. Progress in the Global Tree Assessment, with its 2020 deadline, will be summarised and the implications for biodiversity conservation discussed.

Dave Seaman

@DaveSeaman86

Orangutan persistence and connectivity across human modified landscapes

Agricultural expansion is a leading driver of biodiversity loss across the tropics, with much of this attributed to palm oil production. This is particularly true for Southeast Asia, where Malaysia and Indonesia combined supply roughly 85% of the global demand for palm oil. Orangutans are found in both Malaysia and Indonesia and are considered critically endangered on the IUCN Red List of Endangered Species, with habitat loss, fragmentation and hunting being considered major threats to the species. Recent research has shown that orangutans demonstrate unexpected ecological resilience, however there is still little research focused in human-modified landscapes. Using both observational data and simulations, we try to better understand how orangutans are using these heavily degraded areas and the long-term implications for conservation of the species. We show that, conservation initiatives which maximise the retention of natural forest areas within agricultural landscapes, will support orangutan populations, and facilitate movement between otherwise isolated populations.

Anna Jemmett

@AnnaJemmett

Detecting Wild Camel Hybrids

The critically endangered wild camel (Camelus ferus) is threatened by hybridisation with domestic Bactrian camels (Camelus bactrianus). In Mongolia the wild camel survives only in one protected area (Great Gobi A Special Protected Area- GGASP) and in one captive population. Hybridisation has previously been detected in both these populations and this study aims to monitor its extent. Initial results can be used to determine whether samples collected are maternally domestic. This will allow for the mapping of domestics/hybrids in the national park and for initial frequency data. Using PCR-RFLP technique on mitochondrial DNA hybridisation between wild and domestic camels can be detected. By conducting a hybridisation study in both the captive bred and wild camels in the GGASP it will allow for better understanding of the species and for improved management in captivity and in the wild.

Cathy Dean

@savetherhino

The Sumatran Rhino Rescue Project

With fewer than 80 animals left in the world, the Critically Endangered Sumatran rhino's fate is at a tipping point. After decades of poaching and habitat loss, the few remaining Sumatran rhinos are found in fragmented and dispersed pockets in Sumatra and Kalimantan, Indonesia. Increasing numbers is therefore the overall goal of the Sumatran Rhino Rescue Project (SRRP).

The SRRP, which will likely need to continue for at least two decades, involves three components:

- Capacity building: Establishing two new Sumatran Rhino Sanctuaries in Indonesia, one in Indonesian Borneo and the other in northern Sumatra, and expanding the existing facility in Way Kambas National Park
- Search and rescue: Undertaking search and rescue operations to move isolated Sumatran rhinos to managed conservation breeding facilities
- Care and protection: Incorporating rhinos into a single conservation breeding programme that uses state-of-the-art veterinary and husbandry care designed to maximise population growth

The SRRP is managed by the Sumatran Rhino Survival Alliance, which includes the following lead partners: Global Wildlife Conservation, the International Rhino Foundation, IUCN SSC, National Geographic and the World Wide Fund for Nature. Save the Rhino International is proud to be a Strategic Partner, contributing $100,000 over two years.

Lucy E Perera

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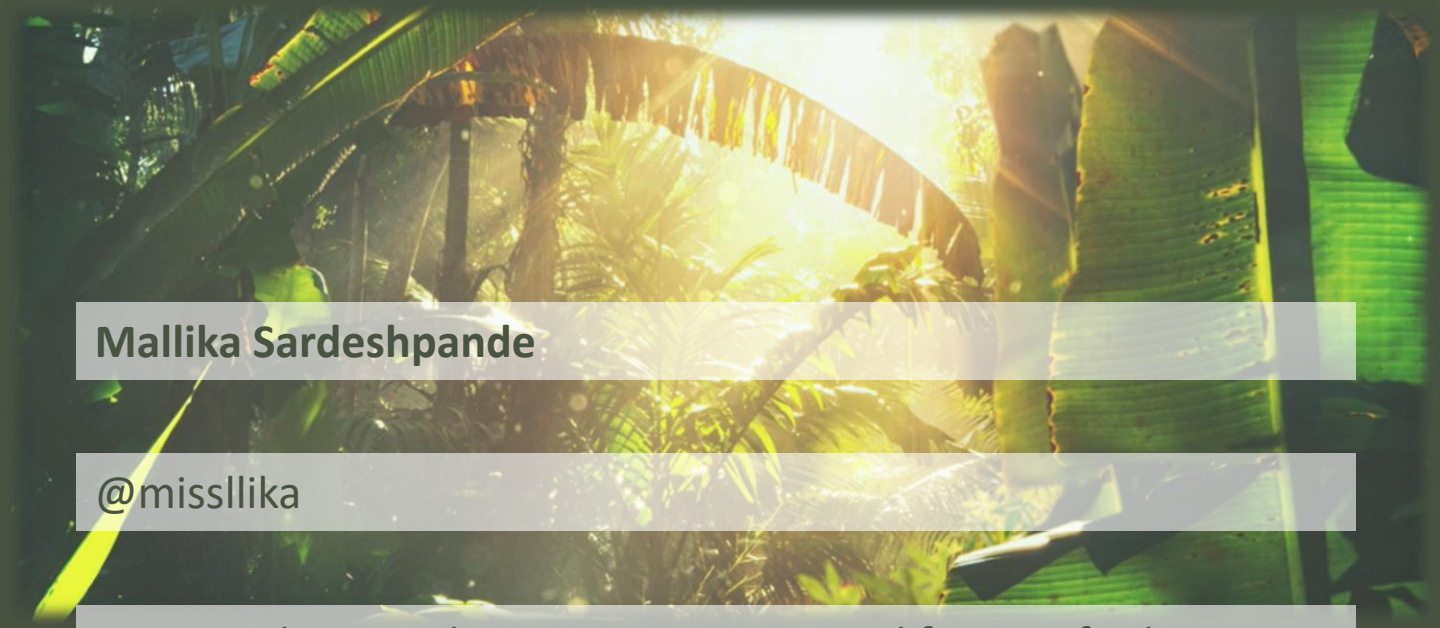
Assessing the impacts of human disturbances on wildlife communities in Maya Biosphere Reserve Guatem

Having measures to monitor wildlife communities in tropical forests, is critical for measuring conservation effectiveness of community-based forestry concessions. We use multispecies occupancy to assess the response of terrestrial vertebrate communities along a gradient of human disturbances, while also aiming to identify ideal features and season for monitoring. Our work was conducted in Uaxactun, a community-based forestry concession located at the heart of the Maya Biosphere Reserve, Guatemala. We conducted a camera trap survey for dry and rainy seasons covering an approximated area of 747 Km2. Preliminary results show no significant change in species richness along the gradient. From 27 species, ten showed positive occupancy with higher distance to the community for both seasons, but significant only for Crax rubra and Tapirus bairdii. Nine species showed higher, but not significant occupancy near the community while eight showed varying positive and negative effects within seasons.



Mallika Sardeshpande

@missllika

Fruits in the city: the nature, nurture, and future of urban foraging

Urban foraging is a widespread global informal phenomenon that has been documented in the Global North more than other parts of the world. I present results from my PhD, from interviews with urban foragers and land managers in four cities in the eastern coastal region of South Africa, with an aim to understand urban foraging in a developing nation context. I highlight the synergies between biodiversity conservation, sustainable development, and urban foraging in the long term, and also add a note on short-term prospects for pandemic-induced socioeconomic recovery.

Hannah Conduit

@hannahconduit

Campaigning and Climate Change

Campaigning around climate change can be difficult, especially given the polarising impact it can have on political discussion. However, despite the challenges around encouraging people to act in defence of climate, ecosystems and vulnerable people, it is essential that we still try.

#ItsOurTime was a politically neutral campaign to engage large numbers of people under 30 who care about climate change to register to vote in the 2019 UK General Election. This campaign explored demographic information about unregistered voters aged between 18-30, along with their attitudes toward climate change; whilst also drawing insight from previous voter-registration campaigns and framing resources on climate messaging.

For us at If Not Now, our role meant taking the lead on everything digital, including running the advertising campaign, influencer marketing, content creation and publishing on social media channels.

Within four weeks, the campaign had a potential reach of 30 million people, through news articles, social media channels, a short film by POCC and engagement from the creative industry.

Creative campaigns like It's Our Time are a valuable tool for those working to make the world a better place, especially when they can change minds and bring about action in defence of people and the planet.

Sophus zu Ermgassen

@sophusticated

Biodiversity offsets: more important than you think; less effective than we need

Under the Sustainable Development Goals, the global community has committed to expanding the world's infrastructure networks (projected >$60 trillion spending in the next 20 years) whilst ending biodiversity loss (SDGs 14&15). No Net Loss policies, which mandate the application of a mitigation hierarchy to the biodiversity impacts of development (avoid; remediate; minimise; offset), have emerged around the world to manage trade-offs between economic expansion and biodiversity. But do they work? We present the results of a global review of the actual outcomes of biodiversity offsets. There is a widespread lack of evidence regarding the outcomes of offsets; but in the small sample that met our inclusion criteria, we found decent success rates in wetland offsetting systems (predominantly North American), and no evidence for success in woodland/native vegetation offsetting systems (predominantly Australian). To mitigate the biodiversity impacts of the global infrastructure boom, there is a need for: a) much less, but much smarter, new infrastructure; b) a complete transformation of the governance of No Net Loss systems with stricter oversight, monitoring, and the ability to hold non-compliance to account; and c) convincing infrastructure developers that society values biodiversity and that biodiversity outcomes are a core deliverable of new developments.

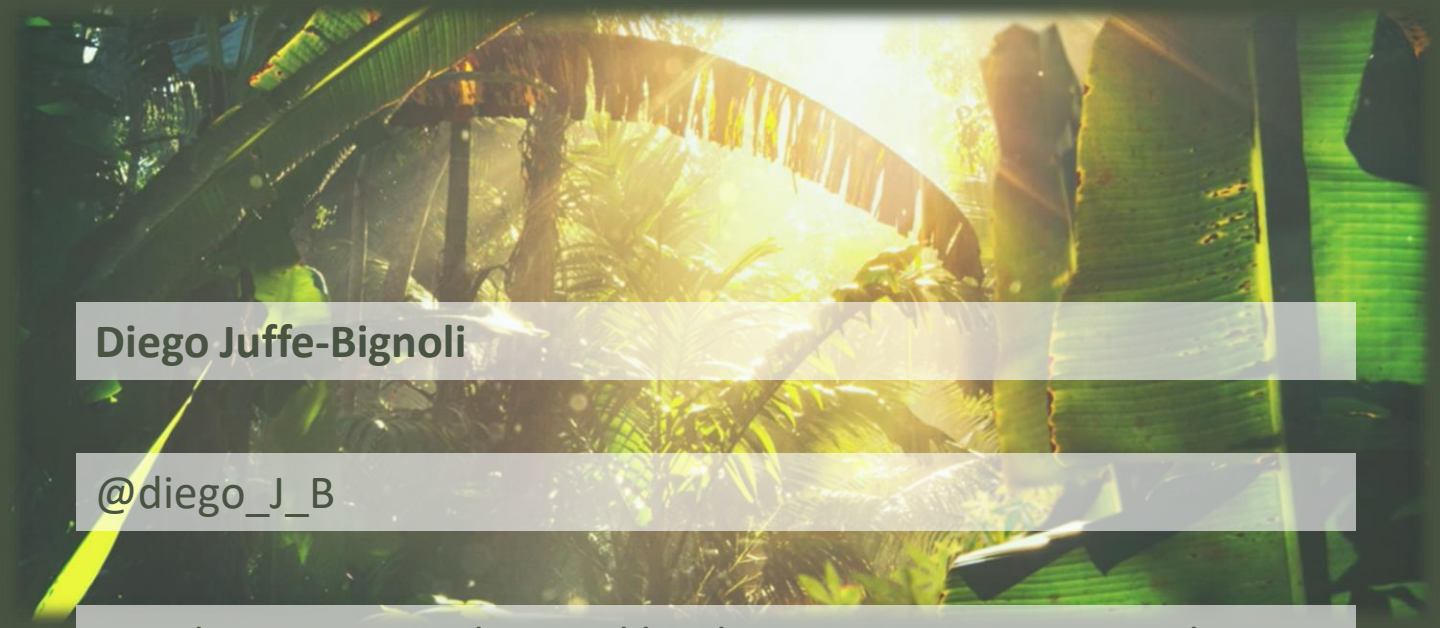
Ceire Booth

@Ceire_Booth

Understanding the impacts of climate change adaptation on biodiversity: A conceptual framework

Climate change is affecting the quality and quantity of ecosystem services available to humans. Human dependency on ecosystem services will require communities to adapt in response to these changes. However, whilst biodiversity is recognised as being critical for maintaining ecosystem services, and human adaptation becomes increasingly vital in response to a changing climate, very little attention has been paid to the explicit impacts that human adaptation could have on biodiversity. Without this knowledge, we are ill equipped to manage human adaptation to climate change in a way that is beneficial for biodiversity.

This will be the first study of its kind to examine the relationship between human adaptation to climate change and the possible impacts that human adaptation could have on biodiversity at a global scale. By piecing together evidence in the literature, the study aims to build a conceptual framework offering detailed examples of how human adaptation to climate change can impact biodiversity. It is intended that the conceptual framework will help to place biodiversity at the center of adaptation research and ensure that we take a cautious approach to adaptation whilst planning for the best biodiversity outcomes.

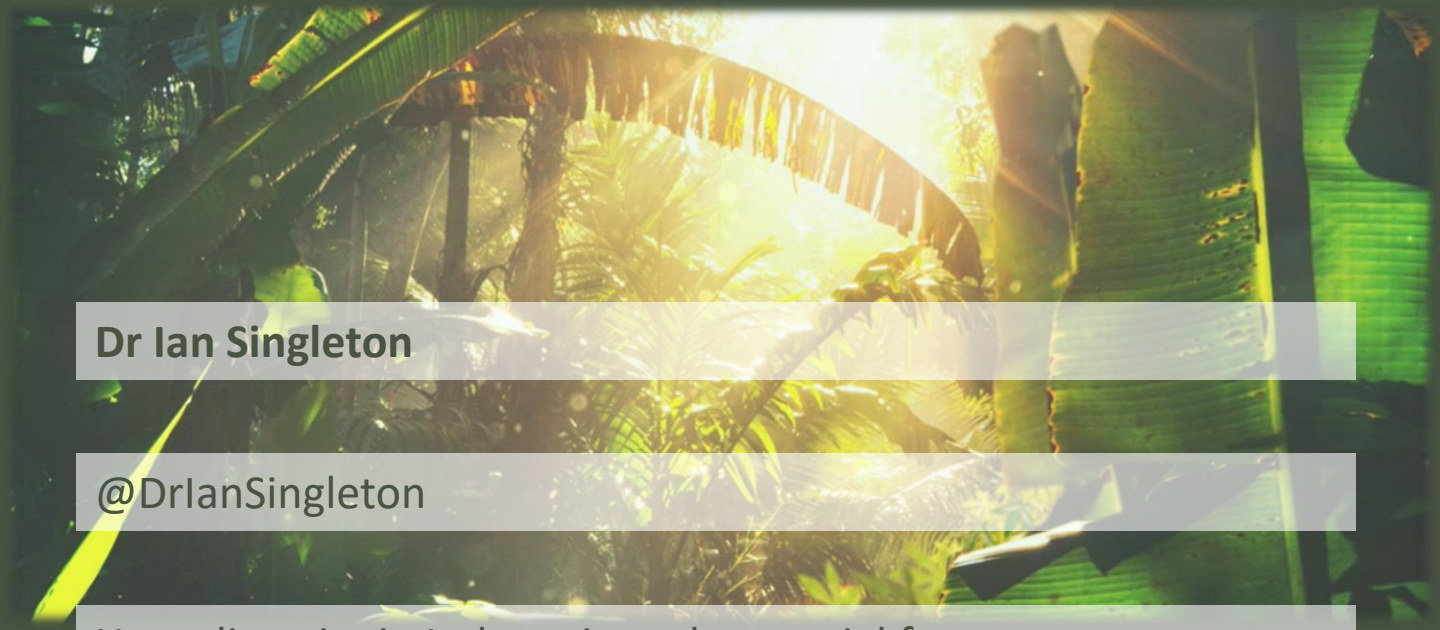


Diego Juffe-Bignoli

@diego_J_B

Development corridors and biodiversity conservation: what are the options?

Kenya and Tanzania are experiencing much-needed economic growth, with several major infrastructure and development initiatives spanning across wide areas of both countries. This includes proliferation of extractive industries, expansion or development agricultural schemes, cities and ambitious road, and rail development plans, ports and transport hubs to serve them. How do these projects propose to manage impacts on biodiversity? What are the practical approaches to avoid and minimise these? Could no net loss of biodiversity be achieved for development corridors? This presentation will show preliminary results of the first year of a part time PhD aiming to explore these questions.



Dr Ian Singleton

@DrIanSingleton

Herp diversity in Indonesia and potential for engagement

I would like to highlight a few interesting aspects of Indonesian herps and herpetology generally here, and the incredible potential for more research and species conservation work with herps. Examples include our own surveys and experimentation with Ichthyophis caecilians, Joko Guntoro's work on Batagur turtles, the existence of our own 4 permanent field research stations, and the work of Mistar Kamsi in our own team with his numerous surveys and field guides etc.

Steven Allain

@stevoallain

Population and disease monitoring in snakes

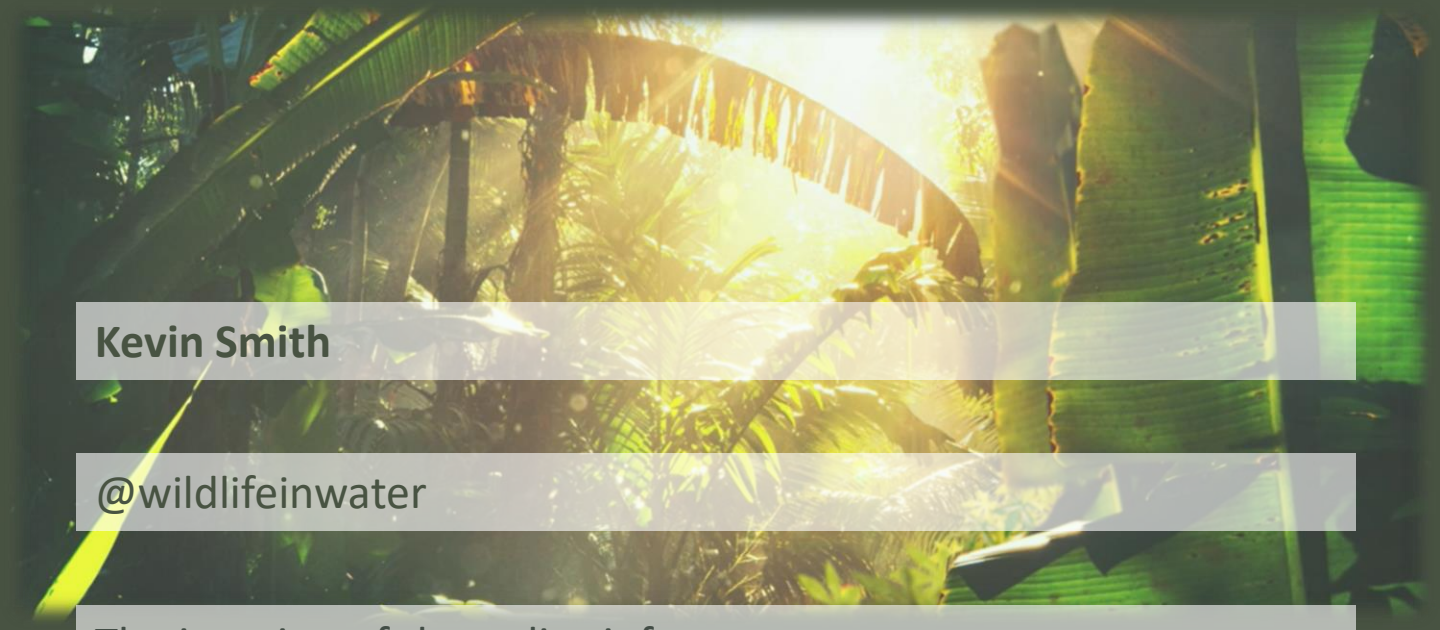
Ophidiomycosis, formerly known as snake fungal disease, is an emerging infectious disease known to affect snakes and recently identified in a barred grass snake (Natrix helvetica) population in Norfolk, England. The causative agent is a fungus called Ophidiomyces ophiodiicola, which leads to the development of skin lesions. The barred grass snake is widespread in Great Britain, but little is known about the species' population biology. Capture-mark recapture methods were used to study a population of snakes in Norfolk. Snakes using artificial cover objects were captured and identified using photographs of belly patterns and image matching software. Survival, detection probability and transience were estimated from the resulting capture histories. Snakes were also swabbed and scored for the presence of skin lesions, occurring mainly on the ventral surface. Using standardised techniques, these swabs were tested for the presence of O. ophiodiicola. The data is being used to reveal how ophidiomycosis affects barred grass snake populations in terms of survival and increased predation risk.

Rhianna Goble

@RhiannaGoble

What makes male newts sexy? Development of the crest at individual and population levels

Reproductive success in animals depends on competition between males, and selection of the fittest males by females. This leads to sexual dimorphism, with males displaying conspicuous breeding adornments. Due to high levels of sexual dimorphism among newts of the Triturus genus, females are likely to choose males with more attractive crests. However, the implications of the growth and development of such characteristics at the population level are poorly understood. This study analyses the seasonal growth of the male crest in a population of great crested newts (Triturus cristatus). Over 2 breeding seasons, 98 male newts were photographed in profile. The resulting images were processed using the image analysis software ImageJ to determine a range of crest characteristics: crest area, crest height, and overall shape of the crest. The results will be compared to other factors such as age, duration of aquatic period, and body condition. Preliminary results suggest high variation among maximum crest size, which likely corresponds to age and overall size. Timing of peak growth may be synchronised between individuals, but this date appears to vary by year. This study will contribute towards understanding evolutionary drivers of urodele life histories, as well as wider understanding of phenological trends.



Kevin Smith

@wildlifeinwater

The invasion of the policy informers

How IUCN provides science and data on invasive alien/non-native species to inform policy implementation and development at the national, and international level. Focusing on the work we do to support the EC with the implementation of the EU Invasive Alien Species Regulation 1143/2014, and the recent IUCN Environmental Impact Classification for Alien Taxa (EICAT).

Claire Stewart

@clairecology

Farmer and landowner attitudes and perspectives towards rewilding in Britain

Over the past decade, rewilding has grown in popularity, with numerous private and charity-led rewilding projects launching across Britain. There have been calls from scientists and environmental activists to replace agricultural subsidies with incentives to rewild marginal farmland, and the charity Rewilding Britain advocates that rewilding principles should be enshrined in the proposed Environmental Land Management schemes. However, as there is no agreed-upon definition of rewilding, there has been confusion and disagreements around what counts as rewilding. Farmers and landowners have also voiced concerns about the impact rewilding could have on their livelihoods and the safety of rural communities. If farmers and landowners are to engage in rewilding on their land, we need to understand their attitude and perspectives towards rewilding and identify potential knowledge gaps and misconceptions. To achieve this, we are interviewing over 100 farmers and landowners across Britain using a structured survey and Q-study. This research seeks to improve our understanding of farmer and landowner attitudes towards rewilding and how their perspectives vary across Britain. With approximately 72% of Britain managed for agriculture, it is important to understand farmer and landowner rewilding attitudes and perspectives, if policies to incentivise rewilding on private land are to succeed.

Julia Daly

@JuliaNishimoto

Rapid evidence assessment of large herbivore impacts on vegetation in relation to rewilding

Rewilding is a relatively new nature-based solution that can be used to help mitigate the climate and biodiversity crises. Rewilding with large herbivores has been found to have several impacts on vegetation, such as stopping woody encroachment and ensuring seed dispersal. Large herbivores can be used to transform a landscape. These impacts are not always consistent, making rewilding with large herbivores challenging for conservation mangers. For my project, I will be conducting a rapid evidence assessment of the literature on large herbivore impacts on vegetation also noting non-vegetation impacts. Ideally this will produce data showing which species are the most researched and what impacts they have had on an area's vegetation. Hopefully this will aid conservation managers in decision making when considering potential large herbivores for rewilding projects.

Gemma Harding

@amphibigem

Trends and Commonalities in Conservation Reintroduction Success

Reintroduction has become a recognised management tool in species recovery, often forming a key part of conservation action plans. This study reviews a number of published reintroductions and explores drivers of perceived success. Our analysis show that reintroduction success rates vary significantly between different taxa and preliminary results from multinomial logistic regression models showed that taxon, region and the inclusion of a Species Action Plan may influence the success of a reintroduction project. Goals, Indicators, and the number of organisations involved did not appear to influence success. Further data gathering and manipulation is required to confirm these early results.

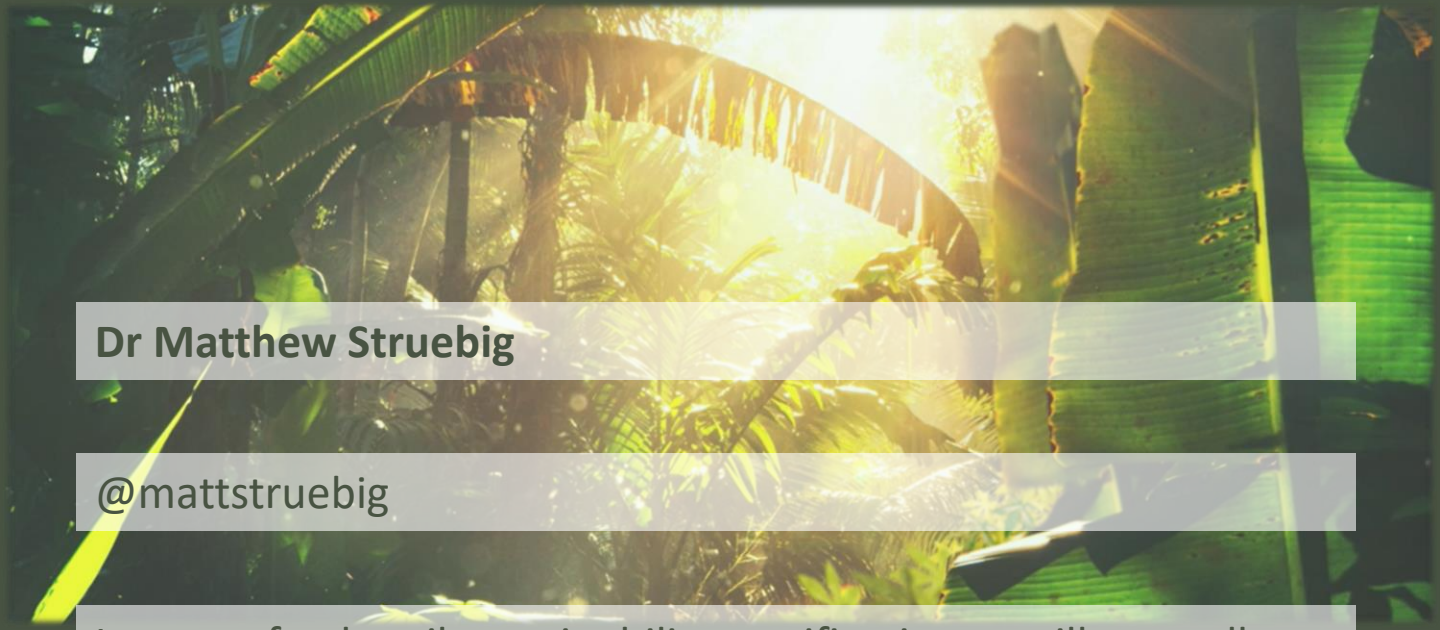
Dr Gail Austen

@lililutra

How do people relate to biodiversity attributes?

Interaction with nature is fundamental to human wellbeing. Although the positive effects of nature on human wellbeing are widely documented, there is a paucity of evidence describing how biodiversity influences this relationship. Biodiversity is a complex and multifaceted concept, with a wide range of attributes that can impact wellbeing in a number of ways. Neither nature nor humans are homogeneous, yet how people react to and relate to biodiversity remains largely unexplored.

Using images characterising species found in British woodlands, we applied Q methodology to explore how people view and relate to different aspects of biodiversity. Q methodology is a semiquantitative technique that provides a structured way to elicit people's viewpoints on a given topic. We found that where people held similar opinions on certain biodiversity attributes, the reasons underpinning those shared opinions could be multifarious. Furthermore, the way that participants related to biodiversity attributes was not consistent across species. Tweets will be accompanied by images drawn by the resident artist during data collection.



Dr Matthew Struebig

@mattstruebig

Impact of palm oil sustainability certification on village well-being and poverty in Indonesia

The Roundtable on Sustainable Palm Oil (RSPO) has emerged as the leading sustainability certification system to tackle socio-environmental issues associated with the oil palm industry. To date, the effectiveness of RSPO certification for achieving its socioeconomic objectives remains uncertain. We evaluate the impact of certification on village-level well-being across Indonesia by applying counterfactual analysis to multi-dimensional government poverty data. We compare poverty across 36,311 villages between 2000 and 2018, tracking changes from before oil palm plantations were first established to several years after plantations were certified. Certification was associated with reduced poverty in villages with primarily market-based livelihoods, but not with those in which subsistence livelihoods were dominant before switching to oil palm. We highlight the importance of baseline village livelihood systems in shaping local impacts of agricultural certification, and assert that oil palm certification in certain village contexts may require additional resources to ensure certification's socioeconomic objectives are realised.

Jess Fisher

@jessjessfisher

Human-wildlife interactions in urban Guyana

Future urbanisation poses a major challenge for both biodiversity conservation and human welfare. Within cities, green and blue spaces (e.g. parks, rivers, coastline) offer resources for biodiversity, but also opportunities for people to interact with nature, shown to improve human wellbeing. Very little evidence originates from the tropics, where population growth, urban sprawl, and biodiversity loss are rapid. Here, we examine the relationship people have with urban green and blue spaces in Georgetown, Guyana (South America). Using ecological and social science methods, we found that urban green and blue spaces in Georgetown are important for biodiversity, but also offer psychological health benefits to people. We then used participatory video to facilitate members of the public sharing their own perspectives of urban green and blue spaces with decision-makers, including the Mayor of Georgetown. This process enabled a change in the way both stakeholders viewed these spaces. Finally, we delivered several public outreach activities to spread our findings more widely. In a city undergoing rapid transformation, these findings can be applied to future urban planning initiatives with implications for both public health and conservation.

Dr Niki Rust

@NikiRust

Inspiring future conservationists through the power of storytelling

We are living in an increasingly polarised world where connections with each other and with nature seem to be diminishing. What can unite us? This presentation will focus on the power of storytelling as a crucial way of building empathy with each other and with our environment. I'll highlight key ways conservation researchers and practitioners can use effective storytelling tools to increase their impact and inspire future generations of conservationists.

Laura Thomas-Walters

@LauraThoWal

Targeted values: The relevance of classical Chinese philosophy for illegal wildlife demand reduction

The illegal wildlife trade is a global conservation priority, prompting a rise in interventions aimed at reducing the demand for wildlife products. Research shows that designing campaigns to target the values held by a specific audience is an effective way to alter their behaviour. However, many demand reduction campaigns are grounded in the perspective of Western morality. This is problematic when the recipients of these campaigns frequently reside in East Asia, rooted in the historical and cultural praxis of Confucianism and Daoism. We have examined some of the central concepts of classical Chinese philosophy to see how they could be used by practitioners to design more effective behaviour change campaigns. Acknowledging that the East Asian cultural sphere has a long history of consumptive wildlife use, we still find potential for appealing to a relational ethic. There is a fundamental metaphysics that all of nature is unified. Qi is the vital force of the universe linking all life-forms, creating the basis for a profound reciprocity between humans and the natural world. We consider some of the key virtues in Chinese philosophy, and how they could be interpreted through the lens of demand reduction.

Ruth M Thompson

@RuthM_Thompson

Progress in automating detection of elephant ivory sales online through machine learning

Online illegal wildlife trade is still largely carried out on popular websites, including online marketplaces and social media. Keywords used by traders relating to elephant ivory are ambiguous; searching for these results in large amounts of unrelated items, making enforcement time-consuming. Machine learning can be used for improving detection efficiency by automatically classifying online images used to advertise items potentially containing elephant ivory for sale. To achieve this, we are curating a training dataset of publicly available images containing objects made from elephant ivory or other materials from online marketplaces. These images are not standardised, are of varying quality or contain noise. This requires developing a tailored pre-processing workflow for our training data, as standard pre-processing methods for machine learning applications would result in information usually needed for identification being lost. Narrowing down online content through automated image classification should help create a more flexible detection workflow independent of the website or language used for such transactions.

Reshu Bashyal

@bashyalreshu

Trade in Jatamansi (Nardostachys grandiflora), a medicinal plant from the Himalaya

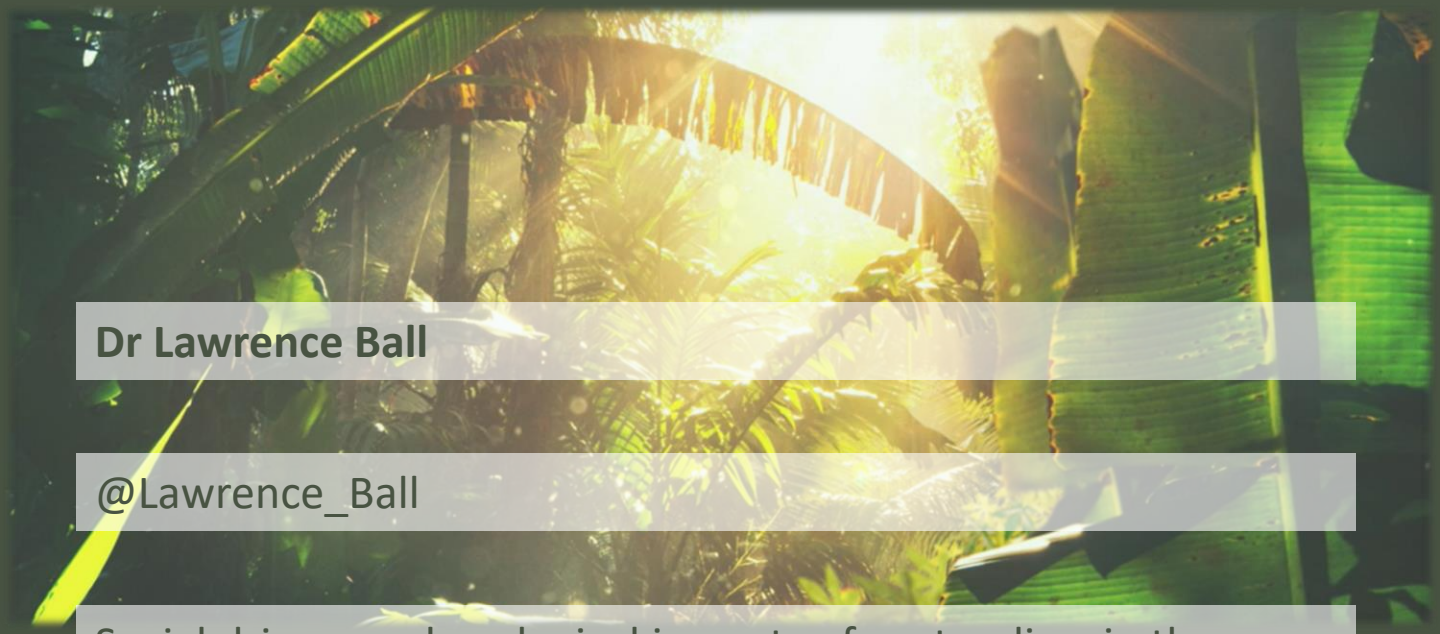
Medicinal plants are considerably traded for their use in traditional medicines at local, national, and international scale. This includes species which may be collected sustainably or unsustainably and traded either legally or illegally. Nardostachys grandiflora is one of the most traded medicinal plants globally; Nepal is its major exporter. Nepal is also the only country to implement its quota system including a complete ban of raw specimens to regulate its harvest and trade. This research explores the overview of its trade using the CITES trade database for the last ten years (2008-2018). We found that 1,532,218kg of N. grandiflora was traded globally; Nepal alone traded 1,531,597kg of rhizomes. The trade was increasing significantly. Major importers were India, Pakistan, Bhutan and European countries including USA and Canada. Surprisingly, Nepal was also a major country for re-exports mostly in the form of processed oils. Almost all these specimens are collected from the wild by unsustainable means and traded without proper processing of the species. The proper processing probably in the form of oils, sustainable harvesting and regulation of illegal trade can help to sustain the species and enhance livelihoods.

Tessa Ullmann

@tessaiull

Pangolin conservation in the Central African Republic

I am a researcher at the Sangha Pangolin Project (SPP), a small research project dedicated to pangolins based in the Dzanga Sangha Forest Reserve in the southwest of the Central African Republic. SPP is the only organization working on pangolin conservation in the country and is committed to advancing the ecological understanding of black-bellied, white-bellied, and giant pangolins, working with the Ba'aka forest people, the indigenous hunter-gatherers of the Congo basin. Their traditional knowledge of the forest informs the ongoing research that informs conservation action. I joined SPP in September 2019 and am leading several projects, including an ecological survey to assess the population distribution of the three species in the concession area. I am also leading the analysis of pangolin scale seizures to document offtake and understand the impact of the illegal trade on local populations. But my core work has been developing a citizen science project to be led by the local Ba'aka communities to gather data on black-bellied pangolins in the Dzanga Sangha Forest Reserve. This initiative will hopefully serve as a precursor for future community-led conservation in this pangolin stronghold.

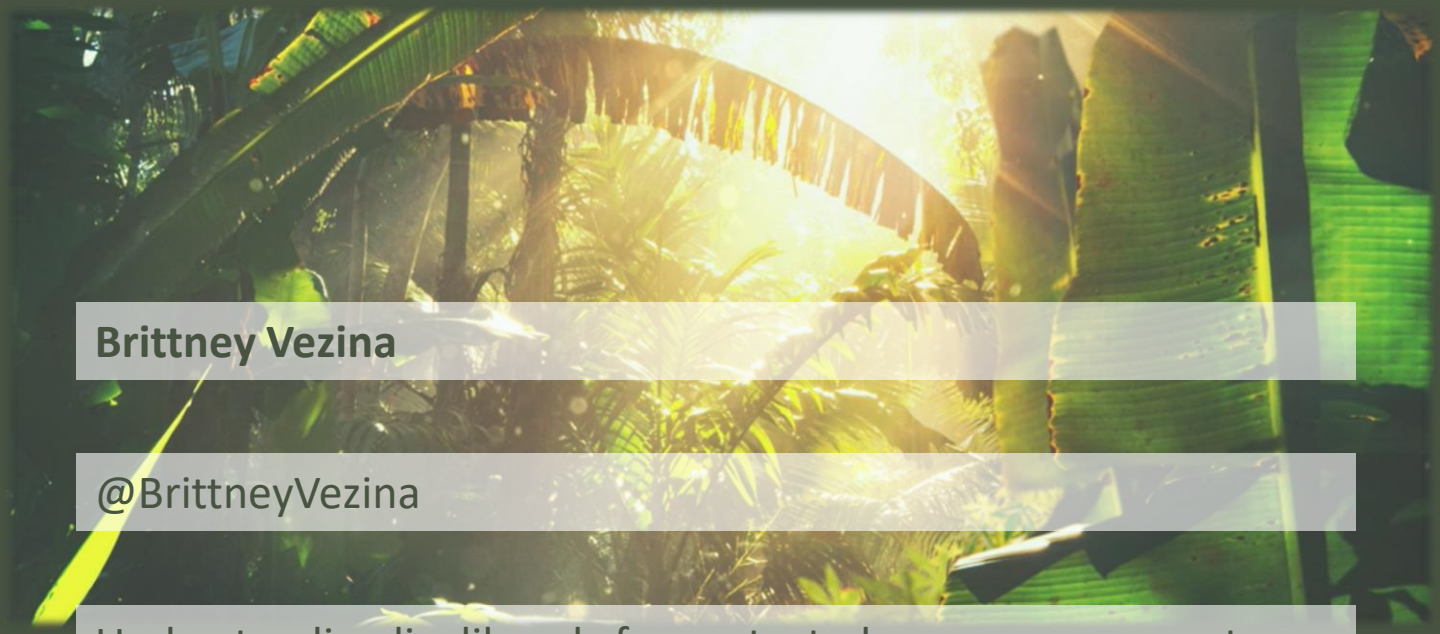


Dr Lawrence Ball

@Lawrence_Ball

Social drivers and ecological impacts of pastoralism in the Dhofar Mountains of Oman

Stakeholders are concerned about the ecological impacts of large camel and cattle populations in the Dhofar Mountains of Oman, where fog interception by the worlds' driest cloud forest underpins local ecosystem functions and services. This research aimed to examine the social drivers and ecological impacts of pastoralism in Dhofar. We interviewed pastoralists to understand why they remain committed to pastoralism despite widespread modernization of the country and sampled woody vegetation communities to quantify the impacts of livestock browsing on the cloud forest. We found that people are committed to pastoralism for sociocultural reasons but also that this commitment is under pressure because of husbandry costs and changing values. Capital investment in feedstuff enables pastoralists to overcome the density-dependent regulation of livestock populations, leading to measurable impacts on the vegetation. Using a novel fog detection technique, we found that topoclimatic processes are the principle driver of vegetation patterns, but livestock browsing has affected the compositional and structural characteristics of the woody vegetation. Our results provide a better understanding of the landscape ecology in Dhofar and highlight a requirement for a shift from unsustainable and unproductive pastoralism to a more ecologically and economically viable livestock production system.

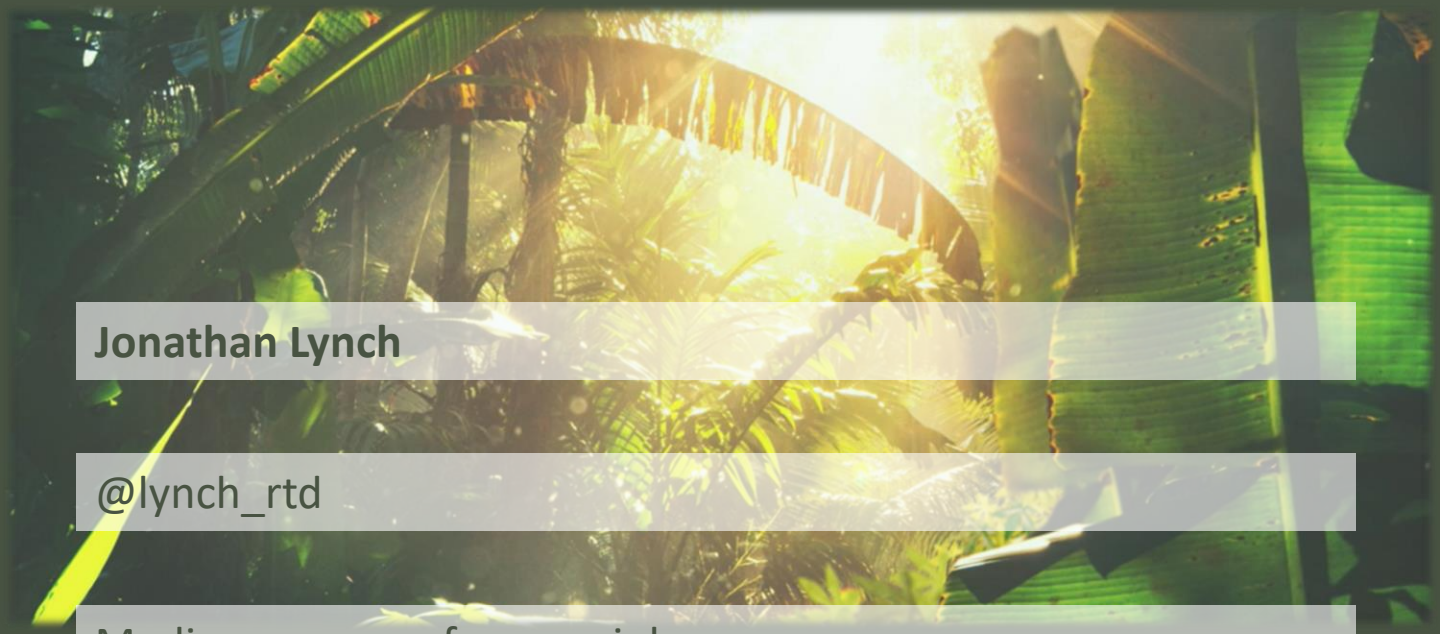


Brittney Vezina

@BrittneyVezina

Understanding livelihoods for protected area management: insights from Northern Madagascar

Protected areas (PAs) are the most common approach to conservation globally; however, their effectiveness is unclear when neighbouring communities are highly natural resource-dependent. While forest-based livelihoods provide important income for rural communities, destructive livelihoods can also threaten the sustainability of PAs. We aimed to understand drivers of livelihood choices in communities surrounding a proposed PA threatened by charcoal production in northern Madagascar, to inform management strategies that promote forest conservation without negatively impacting local communities. We used semi-structured interviews and focus groups to understand livelihood dynamics using the Sustainable Livelihoods Framework. Charcoal production was found to be an important livelihood used to address annual food insecurity. Agricultural yields were limited by a lack of assets for clearing land and building protective fences. Households were also hesitant to invest in agriculture due to perceived risks associated with unpredictable rainfall and cattle grazing. While fishing was an important livelihood for filling income gaps, declining catches due to overexploitation across the study region appeared to be increasing the need for charcoal production. While improvements to agriculture were perceived as promising strategies for reducing forest-dependence, PA managers will need to promote the sustainability of all livelihoods in order to reduce pressures on forest resources.

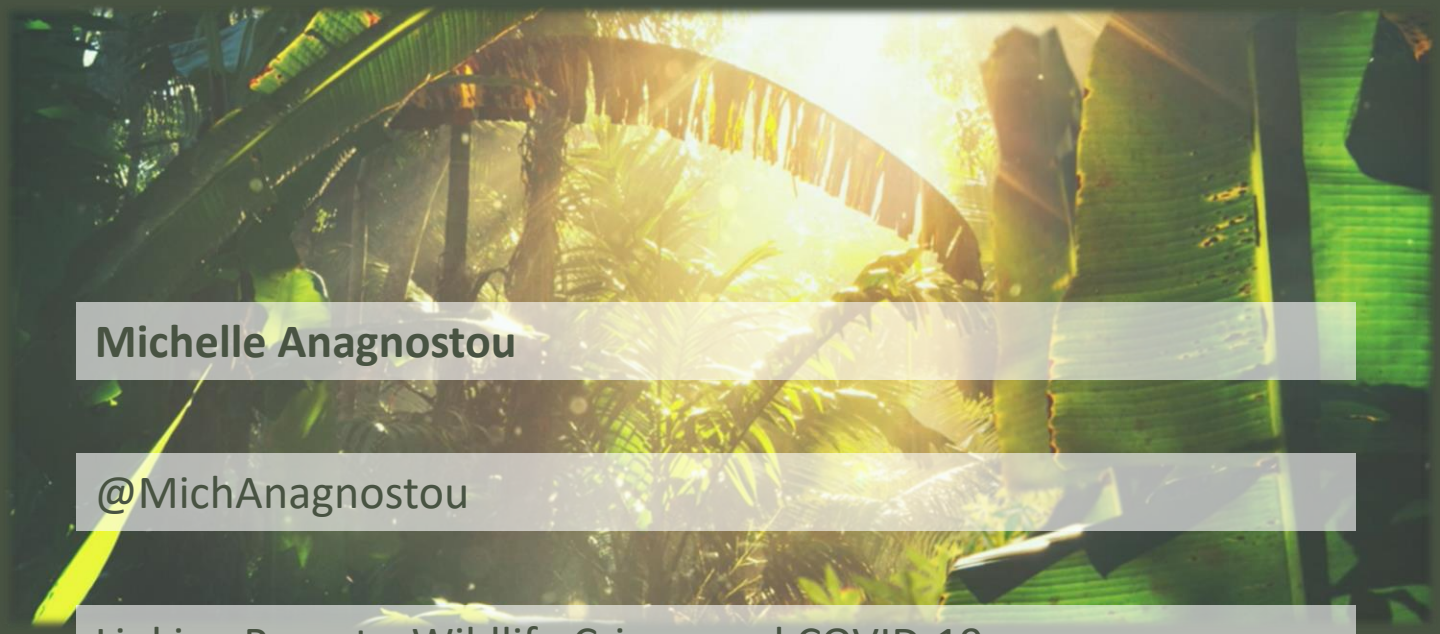


Jonathan Lynch

@lynch_rtd

Media coverage of green violence

Supply chains of illegally traded wildlife and conflicts over resource exploitation in protected areas lead to hundreds of deaths every year. Among the victims are indigenous people, activists, NGO staff, journalists and park rangers, with countries such as Brazil, Colombia and the Philippines bearing the worst impacts of this violence. In many of the countries in which these violent acts are being reported, indigenous people, smallholders, fishermen and suspected poachers are actively displaced, dispossessed and killed by conservationists in unknown numbers as part of a wider conflict over natural resource use which is often neglected by environmental human rights activists. In order to comprehensively determine (1) the scale and shape of and (2) discourses surrounding lethal violence and conservation, this study aims to analyse global news reports dating between 2000-2020 spatially and discursively, contributing to a deeper understanding of conservation and violence.



Michelle Anagnostou

@MichAnagnostou

Linking Poverty, Wildlife Crime, and COVID-19

The COVID-19 pandemic has caused a global recession and mass unemployment. It has particularly affected the rural economies of tropical developing countries where biodiversity is concentrated, through reductions in trade and sectors such as international tourism. As this will exacerbate poverty in these regions, it is important to revisit the relationship between poverty and wildlife crime, so that conservationists can better anticipate and respond to the impacts of the pandemic on biodiversity. We examine literature from conservation, criminology, and social psychology to piece together how the various dimensions of poverty relate directly and indirectly to general criminal offending and the challenges that this poses to wildlife conservation. We provide a theoretical framework for understanding how the pathways out of poverty relate to reduced wildlife crime through improved economic, human, socio-cultural, political, and protective capabilities. Our research highlights that lifting people out of poverty can support wildlife conservation by increasing the opportunity costs for committing an offence, reducing dependence on the natural environment, preventing the development of criminal behaviour, and allowing people the opportunity to make decisions that account for long-term sustainability. We also discuss the implications of this research for policymakers in the aftermath of the COVID-19 pandemic.

Tony King

@tonyking643

Saving primates in human-modified landscapes

The world is facing a biodiversity crisis and many primate species are clinging to survival in landscapes modified to a greater or lesser extent by human activity. Habitats and populations are often becoming fragmented, increasing the risks of local extinctions and decreasing the viability of many threatened species. Saving primates in such a context requires creative solutions and long-term commitments. I will draw on two decades of experience working with the UK-based charity The Aspinall Foundation on diverse projects saving primates around the world. Western gorillas have been reintroduced to the Batéké Plateau of Congo and Gabon, an area from which they had been extirpated in living memory, and greater bamboo lemurs have rebounded from the brink of extinction thanks to community-based conservation in Madagascar. Similar solutions are being applied to other lemur species in Madagascar and to isolated gibbon and langur populations in Indonesia. It is evident that when people act for conservation there is still hope for the survival of primates in tomorrow's world.

Eloisia Constance Rhoda Wild

@EloisiaWild

Investigating tourism impacts to the marine habitat and understanding community needs

The Perhentian Islands, within Terengganu Marine Protected Area, is an increasingly popular tourist destination and home to a once flourishing coral reef. The local community on the island rely on fishing and marine tourism as their main source of income. However, there are no current regulations for tourism and the extent of anthropological impact currently isn't known.

Over a 2 year period the study monitored visitor density and tourist behaviour across popular snorkel sites. During the field site visits quadrat sampling methods were used to survey coral loss and damage. The role of tourism and changes to the reef could be examined using data and Local Ecological Knowledge.

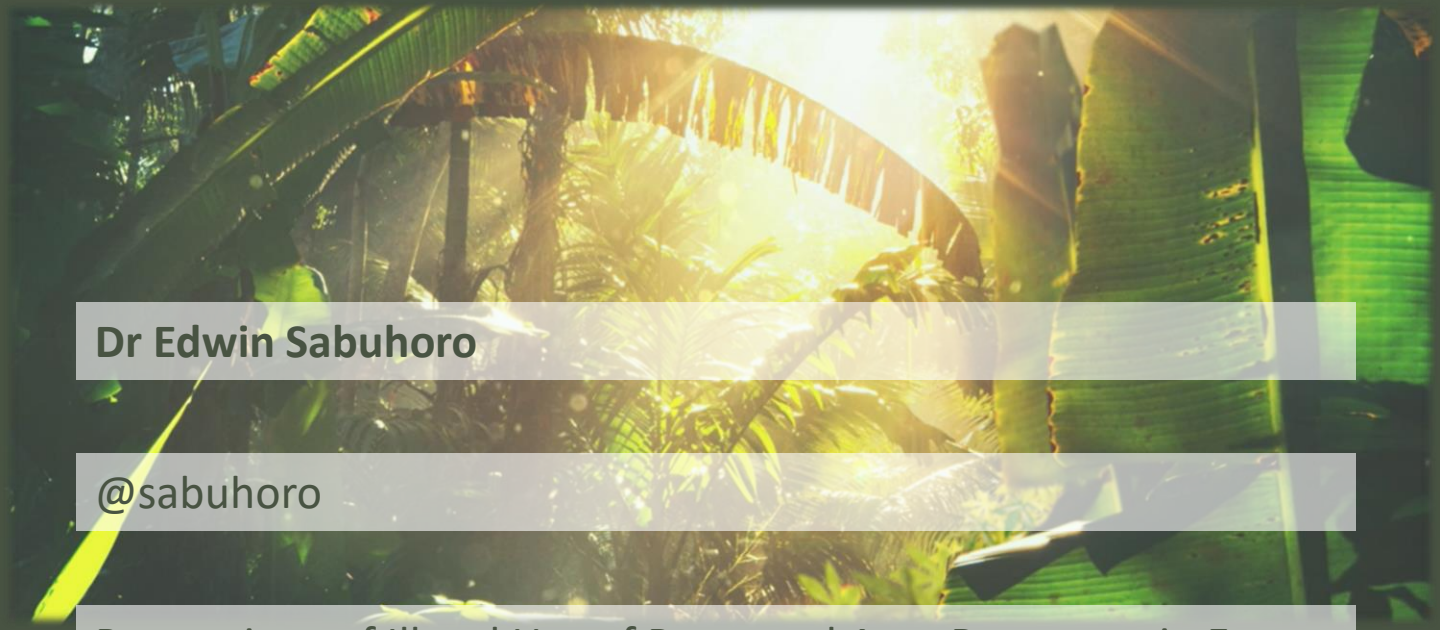
Results indicate that coral cover is depleting and there has been rapid damage to the marine habitat in correlation with the most popular tourist sites. Using projected tourism growth analysis, the study explored how local businesses could be negatively affected by further increases in unregulated tourism, suggesting current tourism practices are not sustainable for this small island community.

Dr Nico Gálvez

@NicolasGalvezR

Mesocarnivores in agricultural lands of southern Chile: implications for co-existence

Land use intensification that generates loss and fragmentation of habitat can have different impacts on wild species. The subdivision of land ownership is another driver of land use intensification, which also favours the introduction of domestic carnivores. However, the response of meso-carnivore community to land subdivision and how it might interact with habitat loss and fragmentation has not received enough attention. Through a camera trap study, we assessed the impact of forest habitat loss/fragmentation and land subdivision patterns on the occurrence of the meso-carnivore guild in a temperate agricultural area of southern Chile. We used a conditional two-species occupancy model and activity overlap analyses to investigate potential interactions in occupancy, detection and temporal activity between domestic and native meso-carnivores. Our results highlight the profound effect of land ownership subdivision on the meso-carnivore community which could be driving defaunation of the guild in agricultural areas. Native species are not only threatened by higher land use intensification, but also are being replaced by domestic carnivores. In response, our data reveal that native species are changing their behaviour for coexisting with more dominant and likely abundant domestic carnivores. Coexistence with wildlife will require improved ownership of free roaming dogs in order to achieve working landscapes.



Dr Edwin Sabuhoro

@sabuhoro

Perceptions of Illegal Use of Protected Area Resources in East Africa's Mountain Gorilla Landscape

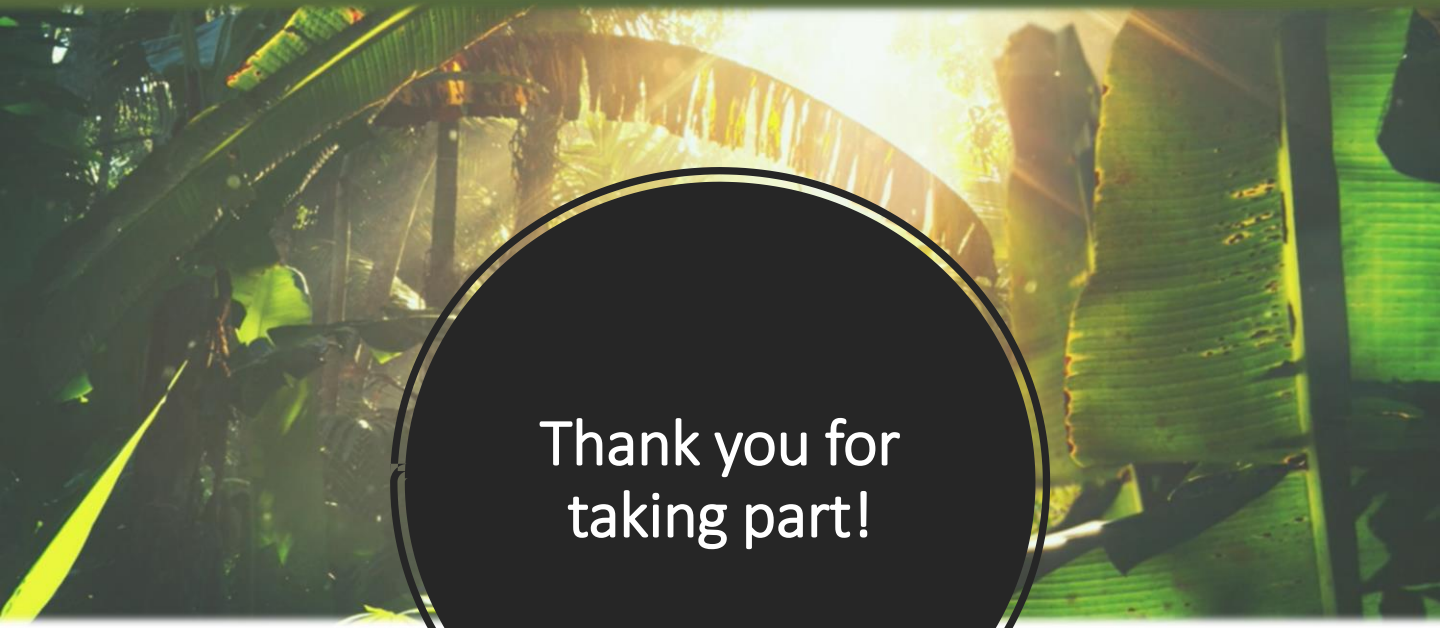
Illegal activities and use of park resources is one of the main challenges facing Mountain Gorilla conservation and the protection of their habitats in the Greater Virunga Transboundary Landscape (GVTL). Indigenous residents around GVTL are considered to be the primary illegal users of park resources. Despite this, there is limited understanding of the current and past perceptions of indigenous residents living in communities adjacent to GVTL parks; Volcanoes National Park in Rwanda and Mgahinga Gorilla National Park in Uganda. Equally, there is also limited understanding regarding the actual incidences of illegal activities inside both parks. Perception data were collected from indigenous residents adjacent to both parks, and Ranger based Monitoring (RbM) data from both parks were analyzed to determine actual number and types of illegal activities over the 9-year period. The findings indicated that residents perceived the prevalence of illegal activities to be decreasing across GVTL. They reported that currently, illegal activities were somewhat low, while illegal activities in the past were perceived to be much more significant. In contrast, RbM findings indicated that actual illegal activities were more prevalent in both parks. Among all illegal activities, poaching was, by far, the most prevalent illegal activity.

Kate Vannelli

@kvannelli89

Community participation in ecotourism and its effect on local perceptions of snow leopards

Local support and involvement is often essential for effective wildlife conservation. This study assessed the impact of local involvement in ecotourism schemes on perceptions of wildlife, promotion of conservation action, types of values that communities placed on wildlife, and contexts in which wildlife are considered to be most valuable. The study used qualitative semi-structured interviews conducted in seven villages in Ladakh, India, which is an important region of snow leopard (Panthera uncia) habitat. Results indicated that in these communities, ecotourism-based interventions encourage more positive perceptions of wildlife species, in particular the snow leopard. Achieving change in community perceptions of wildlife is key when implementing ecotourism schemes to enable more effective conservation, as well as generating local awareness and value for wildlife toward problematic keystone species such as the snow leopard, which are frequently the focus of human–wildlife conflict



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